

2007/2008 PROPOSED CHANGES TO THE INTERNATIONAL BUILDING CODE – MEANS OF EGRESS

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TENTATIVE ORDER OF DISCUSSION

2007-2008 PROPOSED CHANGES TO THE INTERNATIONAL BUILDING CODE MEANS OF EGRESS

The following is the tentative order in which the proposed changes to the code will be discussed at the public hearings. Proposed changes which impact the same subject have been grouped to permit consideration in consecutive changes.

Proposed change numbers that are indented are those which are being heard out of numerical order. Indentation **does not** necessarily indicate that one change is related to another. Proposed changes may be grouped for purposes of discussion at the hearing at the discretion of the chair. Note that some "IBC-E" code change proposals are not included on this list, as they are being heard by other committees. Please consult the Cross Index of Proposed Changes.

E1-07/08, Part I	G81-07/08	E94-07/08	E138-07/08
E2-07/08, Part I	E49-07/08	E95-07/08	E139-07/08
E3-07/08	E50-07/08	E96-07/08	E140-07/08
E4-07/08	E51-07/08	E97-07/08	G21-07/08, Part III
E6-07/08	E52-07/08	G61-07/08	E141-06/07
E7-07/08	E53-07/08	E98-07/08	E5-07/08
G39-07/08, Part II	E54-07/08	E99-07/08	E142-07/08, Part I
E8-07/08, Part I	E55-07/08	E100-07/08	E143-07/08, Part I
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E10-07/08, Part I	E58-07/08, Part I	E103-07/08	E146-07/08
E11-07/08	E59-07/08, Part I	E104-07/08	E147-07/08
E12-07/08	E60-07/08, Part I	E105-07/08	E148-07/08
E13-07/08	E61-07/08	E106-07/08	E149-07/08
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E15-07/08	E63-07/08	E108-07/08	E151-07/08
E16-07/08	E64-07/08	E109-07/08	E152-07/08
E17-07/08	E65-07/08	E110-07/08	E153-07/08
E18-07/08	E66-07/08	E111-07/08	E154-07/08
E19-07/08, Part I	E67-07/08	E112-07/08	E155-07/08
E20-07/08	E68-07/08	E113-07/08	E156-07/08
E21-07/08	E69-07/08	E114-07/08	E157-07/08
E22-07/08	E70-07/08	E115-07/08	E158-07/08
E23-07/08	E71-07/08	FS73-07/08, Part II	E159-07/08
E24-07/08	E72-07/08	E116-07/08	E160-07/08
E27-07/08	E73-07/08	E117-07/08	E161-07/08
E28-07/08	E74-07/08	E118-07/08	E162-07/08
E25-07/08	E75-07/08	E119-07/08	G215-07/08, Part I
E26-07/08	G62-07/08	E120-07/08	G214-07/08, Part I
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E30-07/08	G203-07/08, Part II	E122-07/08	E163-07/08
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E32-07/08	E78-07/08	E124-07/08	E165-07/08
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E34-07/08	G92-07/08	E126-07/08	E167-07/08
E35-07/08, Part I	E80-07/08	S42-07/08, Part II	E168-07/08
E36-07/08	E81-07/08	G66-07/08	E169-07/08
E37-07/08, Part I	E82-07/08	G67-07/08	E170-07/08
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E46-07/08	E91-07/08	E135-07/08	
E47-07/08	E92-07/08	E136-07/08	
E48-07/08	E93-07/08	E137-07/08	

E1-07/08

1001.1; (IFC [B] 1001.1)

Proponent: Bill Conner, Bill Conner Associates

THESE PROPOSALS ARE ON THE AGENDA OF THE IBC MEANS OF EGRESS AND THE IFC CODE DEVELOPMENT COMMITTEES AS 2 SEPARATE CODE CHANGES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IBC MEANS OF EGRESS

Revise as follows:

1001.1 General. Buildings or portions thereof shall be provided with a means of egress system as required by this chapter. The provisions of this chapter shall control the design, construction and arrangement of means of egress components required to provide an approved means of egress from structures and portions thereof. The provisions of this chapter shall control the design, construction and arrangement of all means of egress components.

PART II – IFC

Revise as follows:

1001.1 General. Buildings or portions thereof shall be provided with a means of egress system as required by this chapter. The provisions of this chapter shall control the design, construction and arrangement of means of egress components required to provide an approved means of egress from structures and portions thereof. The provisions of this chapter shall control the design, construction and arrangement of all means of egress components. Sections 1003 through 1026 shall apply to new construction. Section 1027 and 1028 shall apply to existing buildings.

Exception: Detached one- and two-family dwellings and multiple single-family dwellings (townhouses) not more than three stories above grade plane in height with a separate means of egress and their accessory structures shall comply with the *International Residential Code*.

Reason: There are two proposals – one for each side of the coin. The purpose is to clarify if non-required building components are required to comply with the requirements in this chapter. Based on my experiences, there is broad disagreement among building officials on this. The Code currently is moot on the issue and interpretations vary significantly. The reason to include it is to give clear guidance to officials and designers on whether or not a non-required component has to meet the same design requirements and have the same features as if the component were required. E1-07/08 last cycle proposed one option. Either a change as proposed above or amending this proposal to the opposite (see other proposal to this section), solves the problem.

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

PART I – IBC MEANS OF EGRESS

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

PART II – IFC

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

E2-07/08

1001.1; (IFC [B] 1001.1)

Proponent: Bill Conner, Bill Conner Associates

THESE PROPOSALS ARE ON THE AGENDA OF THE IBC MEANS OF EGRESS AND THE IFC CODE DEVELOPMENT COMMITTEES AS 2 SEPARATE CODE CHANGES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IBC MEANS OF EGRESS

Revise as follows:

1001.1 General. Buildings or portions thereof shall be provided with a means of egress system as required by this chapter. The provisions of this chapter shall control the design, construction and arrangement of means of egress components required to provide an approved means of egress from structures and portions thereof. The provisions of this chapter shall not control the design, construction and arrangement of means of egress components in excess of those required.

PART II – IFC

Revise as follows:

1001.1 General. Buildings or portions thereof shall be provided with a means of egress system as required by this chapter. The provisions of this chapter shall control the design, construction and arrangement of means of egress components required to provide an approved means of egress from structures and portions thereof. The provisions of this chapter shall not control the design, construction and arrangement of means of egress components in excess of those required. Sections 1003 through 1026 shall apply to new construction. Section 1027 and 1028 shall apply to existing buildings.

Exception: Detached one- and two-family dwellings and multiple single-family dwellings (townhouses) not more than three stories above grade plane in height with a separate means of egress and their accessory structures shall comply with the *International Residential Code*.

Reason: There are two proposals – one for each side of the coin. The purpose is to clarify if non-required building components are required to comply with the requirements in this chapter. Based on my experiences, there is broad disagreement among building officials on this. The Code currently is moot on the issue and interpretations vary significantly. The reason to include it is to give clear guidance to officials and designers on whether or not a non-required component has to meet the same design requirements and have the same features as if the component were required. E1-07/08 last cycle proposed one option. Either a change as proposed above or amending this proposal to the opposite (see other proposal to this section), solves the problem.

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

PART I – IBC – MEANS OF EGRESS

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

PART II – IFC

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

E3-07/08

1001.4 (New)

Proponent: David Fable, US General Services Administration

Add new text as follows:

1001.4 Fire safety and evacuation plans: Fire safety and evacuation plans shall be provided for all occupancies and buildings where required by the *International Fire Code*. Such fire safety and evacuation plans shall comply with the applicable provisions of Section 404 of the *International Fire Code*.

Reason: The purpose of this code change proposal is to provide consistent requirements for jurisdictions regarding requirements for fire safety and evacuation plans. We feel fire safety and evacuation plans are important issues that impact occupant egress during an emergency and therefore meets the intent of the IBC and needs to be addressed. In addition, many jurisdictions across the country currently have adopted the IBC, however many of these same jurisdictions have not adopted the IFC. This reference will ensure that at least the fire safety and evacuation plans of the IFC are adopted by reference. Enforcement of the provisions is not an issue. The provisions are clearly within the scope of the IFC.

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

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

E4-07/08

1001.4 (New)

Proponent: Paul K. Heilstedt, PE, Chair, representing ICC Code Technology Committee (CTC)

Add new text as follows:

1001.4 Fire safety and evacuation plans: Fire safety and evacuation plans shall be provided for all occupancies and buildings where required by the *International Fire Code*. Such fire safety and evacuation plans shall comply with the applicable provisions of the *International Fire Code*.

Reason: The ICC Board established the ICC Code Technology Committee (CTC) as the venue to discuss contemporary code issues in a committee setting which provides the necessary time and flexibility to allow for full participation and input by any interested party. The code issues are assigned to the CTC by the ICC Board as "areas of study". Information on the CTC, including: meeting agendas; minutes; reports; resource documents; presentations; and all other materials developed in conjunction with the CTC effort can be downloaded from the following website: <http://www.iccsafe.org/cs/cc/ctc/index.html>. Since its inception in April/2005, the CTC has held twelve meetings - all open to the public.

This proposed change is a follow-up to E2-07/08 which was a result of the CTC's investigation of the area of study entitled "Review of NIST WTC Recommendations". The scope of the activity is noted as:

Review the recommendations issued by NIST in its report entitled "Final Report on the Collapse of the World Trade Center Towers", issued September 2005, for applicability to the building environment as regulated by the I-Codes.

This proposal is intended to address the regulatory side of NIST recommendation 16. NIST Recommendation 16 specifically deals with public education concerning building occupants preparedness for evacuation. On the regulatory side, this is precisely what is covered in Chapter 4 of the IFC. The purpose of this code change proposal is to provide consistent requirements for jurisdictions regarding emergency planning and preparedness. Many jurisdictions across the country currently have adopted the IBC, however many of these same jurisdictions have not adopted the IFC. Hence, this proposed code change will provide consistent requirements for emergency planning and preparedness in all jurisdictions that adopt the IBC. Effectively, the IBC will adopt all of the emergency planning and preparedness provisions in the IFC.

As a follow-up to E2-07/08 it must be reinforced that this code change is indeed necessary. The committee action on E2 noted a concern over the location of the text - specifically Ch 10. While emergency planning is not a construction issue, it is clearly an issue which needs to at least be referenced in the building code in order for the designer to be aware that after the building is constructed, there are provisions in the IFC that will be applied on the day the building is occupied. Further, not all jurisdictions adopt the IFC. This reference will ensure that at least the fire safety and evacuation plans of the IFC are adopted by reference. Enforcement of the provisions is not an issue. The provisions are clearly within the scope of the IFC.

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

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

E5-07/08

1002.1 (IFC [B] 1002.1)

Proponent: Gerard Hathaway, New York State Department of State Building Codes Division, representing himself

Revise definitions as follows:

1002.1 (IFC [B] 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.

BLEACHERS. Tiered seating ~~facilities~~ supported on a dedicated structural system and two or more rows high and is not a building element (see Grandstands).

FOLDING AND TELESCOPIC SEATING. Tiered seating ~~facilities~~ having an overall shape and size that are capable of being reduced for purposes of moving or storing and is not a building element.

GRANDSTAND. Tiered seating ~~facilities~~ supported on a dedicated structural system and two or more rows high and is not a building element (see Bleachers).

Reason: : Bleachers, Grandstands and Folding and Telescopic Seating are addressed in ICC 300. The 2007 edition has been approved as the referenced document for the 2009 IBC. The definitions should be coordinated in both documents so that it is clear when the standard is applicable.

The definitions in the current IBC were submitted by the ICC 300 Development Committee in E68-02 and were based on the definitions in the 2002 edition of the ICC 300.

The purpose of the revised definition is to clarify that bleachers and grandstands are limited to items that are separate, independent structures from the buildings that they may be constructed within or from spaces constructed under or over (e.g. concessions booths, toilets, roofs). The ICC 300 is not intended to be utilized for single row seating that is supported directly by the floor system. . "And is not a building element" is proposed to be added to the three definitions to address the concerns that were expressed during last year's testimony that the proposed definitions needed this additional clarification. This definition for "building element" was added by FS4-07/08.

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

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

E6-07/08

1002.1 (IFC [B] 1002.1)

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

Revise definitions as follows:

1002.1 (IFC [B] 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. That portion of a means of egress system which is separated from other interior spaces of a building or structure by fire-resistance-rated construction and opening protectives as required to provide a protected path of egress travel between ~~the an~~ exit access and ~~the an~~ exit discharge. Exits include exterior exit doors at ground level, exit enclosures, exit passageways, exterior exit stairs, exterior exit ramps and horizontal exits.

EXIT ENCLOSURE. An exit component that is separated from other interior spaces of a building or structure by fire-resistance-rated construction and opening protectives, and provides for a protected path of egress travel in a primarily vertical ~~or horizontal~~ direction to ~~the an~~ exit discharge or ~~the a~~ public way.

EXIT PASSAGEWAY. An exit component that is separated from all other interior spaces of a building or structure by fire-resistance-rated construction and opening protectives, and provides for a protected path of egress travel in a primarily horizontal direction to ~~the an~~ exit discharge or the public way.

Reason: Currently, the only difference between the definitions of "exit enclosure" and "exit passageway" is that an exit enclosure provides a protected path of egress travel in a vertical or horizontal direction and an exit passageway provides a protected path of egress travel in a horizontal direction. An exit passageway, however, can provide a path of egress travel in a vertical direction for at least a portion of an exit passageway's length by the presence of a stairway along the path of the passageway. Definitions should be distinct from one other. As currently defined, an exit passageway is equivalent to an exit enclosure providing egress travel in a horizontal direction, which is a type of exit enclosure. Although, it is

possible for an exit enclosure to provide egress travel in a horizontal direction for at least a portion of its height, exit enclosures are commonly considered as providing egress travel in a vertical direction. The proposal resolves these anomalies by means of distinguishing between the paths of egress travel in an exit enclosure as being primarily vertical and an exit passageway as being primarily horizontal.

In the same definitions, "the" exit discharge or "the" public way are changed to "an" exit discharge or "a" public way to correlate with the current definition of "exit discharge," which is defined as being located "between the termination of an exit and a public way." Defining "exit enclosure" and "exit passageway" as leading to "the" public way implies there is only one public way adjacent to the lot where the building or structure is located but there could be multiple public ways adjacent to the same lot.

Similar changes to the definition of "exit" are proposed. In Section 1002.1, "exit access" is defined as "that portion of a means of egress system that leads from any occupied portion of a building or structure to an exit." In the typical building, there are multiple exit accesses all of which typically need to be served by an exit. Defining "exit" as serving "the" exit access implies there is only one exit access. Defining "exit" as leading to "the" exit discharge implies there is only one exit discharge in a building or structure but there should be one exit discharge for each exit.

This proposal was prepared in conjunction with related proposals on editorial revisions to the provisions for exit enclosures and exit passageways, the technical provisions for smokeproof enclosures and pressurized stairways, and exit passageways used to extend exit enclosures to an exit discharge or a public way.

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

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

E7-07/08

1002.1, 1020.1.1, 1021.4 (IFC [B] 1002.1, [B] 1020.1.1, [B] 1021.4)

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

Revise as follows:

1002.1 (IFC [B] 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. That portion of a means of egress system which is separated from other interior spaces of a building or structure by fire-resistance-rated construction and opening protectives as required to provide a protected path of egress travel between the exit access and the exit discharge. Exits include exterior exit doors at ground level, exit enclosures, exit passageways, exterior exit ~~stairs~~ stairways, exterior exit ramps and horizontal exits.

EXIT PASSAGEWAY. An exit component that is separated from all other interior spaces of a building or structure by fire-resistance-rated construction and opening protectives, and provides for a protected path of egress travel in a horizontal direction to the exit discharge or the public way.

1020.1.1 (IFC [B] 1020.1.1) Openings and penetrations. Exit enclosure opening protectives shall be in accordance with the requirements of Section 715.

~~Except as permitted in Section 402.4.6, openings~~ Openings in exit enclosures other than unprotected exterior openings shall be limited to those necessary for exit access to the enclosure from normally occupied spaces and for egress from the enclosure.

Where interior exit enclosures are extended to the exterior of a building by an exit passageway, the door assembly from the exit enclosure to the exit passageway shall be protected by a fire door assembly ~~conforming to~~ complying with the requirements in Section 715.4. Fire door assemblies in exit enclosures shall comply with Section 715.4.4.

Elevators shall not open into an exit enclosure.

1021.4 (IFC [B] 1021.4) Openings and penetrations. Exit passageway opening protectives shall be in accordance with the requirements of Section 715.

Except as permitted in Section 402.4.6, openings in exit passageways other than ~~unexposed~~ unprotected exterior openings shall be limited to those necessary for exit access to the exit passageway from normally occupied spaces and for egress from the exit passageway.

Where interior exit enclosures are extended to the exterior of a building by an exit passageway, the door assembly from the exit enclosure to the exit passageway shall be protected by a fire door ~~assembly conforming to~~ complying with the requirements in Section 715.4. Fire door assemblies in exit passageways shall comply with Section 715.4.4.

Elevators shall not open into an exit passageway.

Reason: The purpose for this proposal is primarily editorial and was prepared in conjunction with related proposals on definitions of the means of egress components, the technical provisions for smokeproof enclosures and pressurized stairways, and exit passageways used to extend exit enclosures to an exit discharge or a public way. In the definition for "exit" in Section 1002.1, exterior exit "stairs" is changed to "stairways" for

consistency with the provisions of Section 1022 on exterior exit ramps and stairways. In the definition for “exit passageway” in Section 1002.1, “all” is deleted for consistency with similar language in the definition for “exit enclosure and to eliminate what is judged to be superfluous.

The reference to Section 402.4.6 in the second paragraph of Section 1020.1.1 is deleted because it is not applicable to exit enclosures. Section 402.4.6 applies to service areas opening into exit passageways in covered mall buildings and is appropriately referenced in the second paragraph of Section 1021.4 on exit passageways.

In the third paragraph of Sections 1020.1.1 and 1021.4, “conforming to” is changed to “complying with” to eliminate nonmandatory language. In the second paragraph of Section 1021.4, “unexposed” is changed to “unprotected” for consistency with similar language in the second paragraph of Section 1020.1.1 and to eliminate a term that is vague and unenforceable. In the third paragraph of Section 1021.4, “fire door” is changed to “fire door assembly” for consistency with similar language in the third paragraph of Section 1020.1.1 and with the reference to “door assembly” in the same sentence of each code section.

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

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

E8–07/08

405.1, 405.4.1, 405.8.2, 1020.1.7 (IFC [B] 1020.1.7); IFC 903.2.1, 907.2.18 (IBC [F] 903.2.1, [F] 907.2.18); IEBC 705.4.3.1, 705.9, 705.10, 803.1

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

THESE PROPOSALS ARE ON THE AGENDA OF THE IBC MEANS OF EGRESS, IFC AND THE IEBC CODE DEVELOPMENT COMMITTEES AS 3 SEPARATE CODE CHANGES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IBC MEANS OF EGRESS

Revise as follows:

SECTION 405 UNDERGROUND BUILDINGS

405.1 (Supp) General. The provisions of this section apply to building spaces having a floor level used for human occupancy more than 30 feet (9144 mm) below the finished floor of the lowest level of exit discharge.

Exceptions:

1. One- and two-family dwellings, sprinklered in accordance with Section 903.3.1.3.
2. Parking garages with automatic sprinkler systems in compliance with Section 405.3.
3. Fixed guideway transit systems.
4. Grandstands, bleachers, stadiums, arenas and similar facilities.
5. Where the lowest story is the only story that would qualify the building as an underground building and has an area not exceeding 1,500 square feet (139 m²) and has an occupant load less than 10.
6. Pumping stations and other similar mechanical spaces intended only for limited periodic use by service or maintenance personnel.

405.4 Compartmentation. Compartmentation shall be in accordance with Sections 405.4.1 through 405.4.3.

405.4.1 Number of compartments. A building having a floor level more than 60 feet (18 288 mm) below the finished floor of the lowest level of exit discharge shall be divided into a minimum of two compartments of approximately equal size. Such compartmentation shall extend through the highest level of exit discharge serving the underground portions of the building and all levels below.

Exception: The lowest story need not be compartmented where the area does not exceed 1,500 square feet (139 m²) and has an occupant load of less than 10.

405.8.2 Smokeproof enclosure. Every required stairway serving floor levels more than 30 feet (9144 mm) below the finished floor of its level of exit discharge shall comply with the requirements for a smokeproof enclosure as provided in Section 1020.1.7.

1020.1 (IFC [B] 1020.1) (Supp) 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 in open parking structures that serve only the parking structure are not required to be enclosed.
5. Stairways in Group I-3 occupancies, as provided for in Section 408.3.6, are not required to be enclosed.
6. Means of egress stairways as required by Section 410.5.3 are not required to be enclosed.
7. Means of egress stairways from balconies, galleries and press boxes as provided for in Section 1025.5.1, are not required to be enclosed.

1020.1.7 (IFC [B] 1020.1.7) Smokeproof enclosures. In buildings required to comply with Section 403 or 405, each of the exits of a building that serves stories where the floor surface is located more than 75 feet (22 860 mm) above the lowest level of fire department vehicle access or more than 30 feet (9144 mm) below the finished floor of the level of exit discharge serving such floor levels shall be a smokeproof enclosure or pressurized stairway in accordance with Section 909.20.

PART II – IFC

Revise as follows:

903.2.1 (IBC [F] 903.2.1) (Supp) Group A. An automatic sprinkler system shall be provided throughout buildings and portions thereof used as Group A occupancies as provided in this section. For Group A-1, A-2, A-3 and A-4 occupancies, the automatic sprinkler system shall be provided throughout the floor area where the Group A-1, A-2, A-3 or A-4 occupancy is located, and in all floors ~~between~~ from the Group A occupancy and to, and including, the nearest level of exit discharge serving the Group A occupancy. For Group A-5 occupancies, the automatic sprinkler system shall be provided in the spaces indicated in Section 903.2.1.5.

907.2.18 (IBC [F] 907.2.18) (Supp) Deep underground buildings. Where the lowest level of a structure is more than 60 feet (18 288 mm) below the finished floor of the lowest level of exit discharge, the structure shall be equipped throughout with a manual fire alarm system, including an emergency voice/alarm communication system installed in accordance with Section 907.6.2.2.

PART III – IEBC

Revise as follows:

705.4.3.1 Supplemental requirements for door closing. Where the work area exceeds 50 percent of the floor area, doors shall comply with Section 705.4.3 throughout the exit stair from the work area to, and including, the level of exit discharge.

705.9 Handrails. The requirements of Section 705.9.1 and 705.9.2 shall apply to handrails from the work area floor to, and including, the level of exit discharge.

705.10 Guards. The requirements of Sections 705.10.1 and 705.10.2 shall apply to guards from the work area floor to, and including, the level of exit discharge but shall be confined to the egress path of any work area.

803.1 Existing shafts and vertical openings. Existing stairways that are part of the means of egress shall be enclosed in accordance with Section 703.2.1 ~~between from~~ the highest work area floor to, and including, the level of exit discharge and all floors below.

Reason: This code proposal is intended to be editorial in nature. My approved code proposal, E5-06/07, revised the definition of "Level of exit discharge" last cycle to read as follows:

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

With the above clarification of the definition of "level of exit discharge" in the 2007 I Codes Supplement, I reviewed all instances in the I Codes for the use of "level of exit discharge" for consistency with its past intended use as follows:

1. Code provisions under Items IBC/IFC Section 903.2.1, and IEBC Section 705.4.3.1, 705.0, 705.10 and 803.1, needed revisions for clarification by adding the verbiage such as "...including..." the level of exit discharge in order to include the "level of exit discharge" since the level of exit discharge definition was changed from a "horizontal plane" to a "story".

2. One code provision under IBC/IFC 1020.1 that needed the verbiage "...the story at..." removed since the definition of LED is now defined as a "story" and not a "horizontal plane".

3. Code provisions under IBC 405.1, 405.4.1, 405.8.2, and IBC/IFC 907.2.19 and 1020.1.7, that needed clarification of the vertical measurement in feet to the LED when a floor is below the LED by including the verbiage "...below the finished floor of the level of exit discharge...".

It is not my intent to change any of these existing requirements in the Code as they relate to the "level of exit discharge". Last year's code proposal, E5-06/07, along with this year's revisions to the above noted code sections, will complete the correlation of the I Codes' definition for "level of exit discharge" with the definition in NFPA 101, where the "level of exit discharge" concept originally came from.

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

PART I — IBC MEANS OF EGRESS

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

PART II — IFC

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

PART III — IEBC

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

E9-07/08

1002.1 (IFC [B]1002.1), 308.5.2 (IFC [B]202), 405.4.1, 1006.3 (IFC [B]1006.3), 1007.2.1 (IFC [B]1007.2.1), 1020.2 (IFC [B]1020.2), 1020.1 (IFC [B]1020.1), 1023.6 (IFC [B]1023.6), 1024.1 (IFC [B]1024.1); IFC 202, 404.2, Table 405.2, 903.2.1(IBC [F] 903.2.1), 903.2.1.1 – 903.2.1.4 (IBC [F] 903.2.1.1 – 903.2.1.4), 903.2.2 (IBC [F] 903.2.2), 907.2.2 (IBC [F] 907.2.2), 907.2.4 (IBC [F] 907.2.4), 907.2.7 (IBC [F] 907.2.7), 907.2.9.1 (IBC [F] 907.2.9.1), 907.2.18.1 (IBC [F] 907.2.18.1), 914.5.1 (IBC [F] 405.3), 1027.5, 1027.19

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

THESE PROPOSALS ARE ON THE AGENDA OF THE IBC MEANS OF EGRESS AND THE IFC CODE DEVELOPMENT COMMITTEES AS 2 SEPARATE CODE CHANGES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IBC MEANS OF EGRESS

Revise as follows:

1002.1 (IFC [B] 1002.1) (Supp) 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 ~~story~~ horizontal plane located at the point ~~at which~~ that an exit terminates and an exit discharge begins.

308.5.2 (IFC [B] 202) Child care facility. A facility that provides supervision and personal care on less than a 24-hour basis for more than five children 2-1/2 years of age or less shall be classified as Group I-4.

Exception: A child day care facility that provides care for more than five but no more than 100 children 2-1/2 years or less of age, when the rooms where such children are cared for are located ~~on the~~ at a story where a level of exit discharge serving such rooms is located and each of these child care rooms has an exit door directly to the exterior, shall be classified as Group E.

405.4.1 Number of compartments. A building having a floor level more than 60 feet (18 288 mm) below the lowest level of exit discharge shall be divided into a minimum of two compartments of approximately equal size. Such compartmentation shall extend through the story where the highest level of exit discharge serving the underground portions of the building is located and all ~~levels~~ stories below.

Exception: The lowest story need not be compartmented where the area does not exceed 1,500 square feet (139 m²) and has an occupant load of less than 10.

1006.3 (IFC [B] 1006.3) Illumination emergency power. The power supply for means of egress illumination shall normally be provided by the premise's electrical supply.

In the event of power supply failure, an emergency electrical system shall automatically illuminate all of the following areas:

1. Aisles and unenclosed egress stairways in rooms and spaces that require two or more means of egress.
2. Corridors, exit enclosures and exit passageways in buildings required to have two or more exits.
3. Exterior egress components at stories other than the where their levels of exit discharge are located until exit discharge is accomplished for buildings required to have two or more exits.
4. Interior exit discharge elements, as permitted in Section 1024.1, in buildings required to have two or more exits.
5. Exterior landings as required by Section 1008.1.5 for exit discharge doorways in buildings required to have two or more exits.

The emergency power system shall provide power for a duration of not less than 90 minutes and shall consist of storage batteries, unit equipment or an on-site generator. The installation of the emergency power system shall be in accordance with Section 2702.

1007.2.1 (IFC [B] 1007.2.1) Elevators required. In buildings where a story with required accessible floor spaces is located four or more stories above or below the story where a level of exit discharge is located, at least one required accessible means of egress shall be an elevator complying with Section 1007.4.

Exceptions:

1. In buildings equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2, the elevator shall not be required ~~on floors provided with a horizontal exit and located at or above~~ stories where the levels of exit discharge are located and where a horizontal exit is provided.
2. In buildings equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2, the elevator shall not be required on floors provided with a ramp conforming to the provisions of Section 1010.

1020.1 (IFC [B] 1020.1) (Supp) 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 Groups 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~~ where its level of exit discharge is located, or
- 1.2 The stairway is open to not more than one story below the story ~~at the~~ where its level of exit discharge is located.
2. 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.
3. Stairways in open parking structures that serve only the parking structure are not required to be enclosed.
4. Stairways in Group I-3 occupancies, as provided for in Section 408.3.6, are not required to be enclosed.
5. Means of egress stairways as required by Section 410.5.3 are not required to be enclosed.
6. Means of egress stairways from balconies, galleries and press boxes as provided for in Section 1025.5.1, are not required to be enclosed.

1023.6 (IFC [B] 1023.6) Exterior ramps and stairway protection. Exterior exit ramps and stairways shall be separated from the interior of the building as required in Section 1020.1. Openings shall be limited to those necessary for egress from normally occupied spaces.

Exceptions:

1. Separation from the interior of the building is not required for occupancies, other than those in Group R-1 or R-2, in buildings that are no more than two stories above grade plane where the level of exit discharge is located at the first story above grade plane.
2. Separation from the interior of the building is not required where the exterior ramp or stairway is served by an exterior ramp and/or balcony that connects two remote exterior stairways or other approved exits, with a perimeter that is not less than 50 percent open. To be considered open, the opening shall be a minimum of 50 percent of the height of the enclosing wall, with the top of the openings no less than 7 feet (2134 mm) above the top of the balcony.
3. Separation from the interior of the building is not required for an exterior ramp or stairway located in a building or structure that is permitted to have unenclosed interior stairways in accordance with Section 1020.1.
4. Separation from the interior of the building is not required for exterior ramps or stairways connected to open-ended corridors, provided that Items 4.1 through 4.4 are met:
 - 4.1. The building, including corridors and ramps and/or stairs, shall be equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2.
 - 4.2. The open-ended corridors comply with Section 1017.
 - 4.3. The open-ended corridors are connected on each end to an exterior exit ramp or stairway complying with Section 1023.
 - 4.4. At any location in an open-ended corridor where a change of direction exceeding 45 degrees (0.79 rad) occurs, a clear opening of not less than 35 square feet (3.3 m²) or an exterior ramp or stairway shall be provided. Where clear openings are provided, they shall be located so as to minimize the accumulation of smoke or toxic gases.

1024.1 (IFC [B] 1024.1) (Supp) 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 story where the level of exit discharge is located 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 stories where their levels of exit discharge are located.
4. Horizontal exits complying with Section 1022 shall not be required to discharge directly to the exterior of the building.

PART II – IFC

Revise as follows:

404.2 Where required. An approved fire safety and evacuation plan shall be prepared and maintained for the following occupancies and buildings.

1. Group A, other than Group A occupancies used exclusively for purposes of religious worship that have an occupant load less than 2,000.
2. Group B buildings having an occupant load of 500 or more persons or more than 100 persons above or below the story where the lowest level of exit discharge is located.
3. Group E.
4. Group H.
5. Group I.
6. Group R-1.
7. Group R-2 college and university buildings.
8. Group R-4.
9. High-rise buildings.
10. Group M buildings having an occupant load of 500 or more persons or more than 100 persons above or below the story where the lowest level of exit discharge is located.
11. Covered malls exceeding 50,000 square feet (4645 m²) in aggregate floor area.
12. Underground buildings.
13. Buildings with an atrium and having an occupancy in Group A, E or M.

TABLE 405.2 FIRE AND EVACUATION DRILL FREQUENCY AND PARTICIPATION

(Portions of table not shown remain unchanged))

- a. The frequency shall be allowed to be modified in accordance with Section 408.3.2.
- b. Fire and evacuation drills in residential care assisted living facilities shall include complete evacuation of the premises in accordance with Section 408.10.5. Where occupants receive habilitation or rehabilitation training, fire prevention and fire safety practices shall be included as part of the training program.
- c. Group B buildings having an occupant load of 500 or more persons or more than 100 persons above or below the story where the lowest level of exit discharge is located.
- d. Applicable to Group R-2 college and university buildings in accordance with Section 408.3.

903.2.1 (IBC [F] 903.2.1) (Supp) Group A. An automatic sprinkler system shall be provided throughout buildings and portions thereof used as Group A occupancies as provided in this section. For Group A-1, A-2, A-3 and A-4 occupancies, the automatic sprinkler system shall be provided throughout the floor area where the Group A-1, A-2, A-3 or A-4 occupancy is located, and ~~in at all floors~~ stories between the Group A occupancy and the story where the nearest level of exit discharge serving the Group A occupancy is located. For Group A-5 occupancies, the automatic sprinkler system shall be provided in the spaces indicated in Section 903.2.1.5.

903.2.1.1 (IBC [F] 903.2.1.1) Group A-1. An automatic sprinkler system shall be provided for Group A-1 occupancies where one of the following conditions exists:

1. The fire area exceeds 12,000 square feet (1115 m²).
2. The fire area has an occupant load of 300 or more.

3. The fire area is located ~~on~~ at a floor story other than the story where the level of exit discharge is located.
4. The fire area contains a multitheater complex.

903.2.1.2 (IBC [F] 903.2.1.2) Group A-2. An automatic sprinkler system shall be provided for Group A-2 occupancies where one of the following conditions exists:

1. The fire area exceeds 5,000 square feet (464.5m²).
2. The fire area has an occupant load of 100 or more.
3. The fire area is located ~~on~~ at a floor story other than the story where the level of exit discharge is located.

903.2.1.3 (IBC [F] 903.2.1.3) Group A-3. An automatic sprinkler system shall be provided for Group A-3 occupancies where one of the following conditions exists:

1. The fire area exceeds 12,000 square feet (1115 m²).
2. The fire area has an occupant load of 300 or more.
3. The fire area is located ~~on~~ at a floor story other than the story where the level of exit discharge is located.

Exception: Areas used exclusively as participant sports areas where the main floor area is located at the same level as the level of exit discharge of the main entrance and exit.

903.2.1.4 (IBC [F] 903.2.1.4) Group A-4. An automatic sprinkler system shall be provided for Group A-4 occupancies where one of the following conditions exists:

1. The fire area exceeds 12,000 square feet (1115m²).
2. The fire area has an occupant load of 300 or more.
3. The fire area is located ~~on~~ at a floor story other than the story where the level of exit discharge is located.

Exception: Areas used exclusively as participant sports areas where the main floor area is located at the same level as the level of exit discharge of the main entrance and exit.

903.2.2 (IBC [F] 903.2.2) (Supp) Group E. An automatic sprinkler system shall be provided for Group E occupancies as follows:

1. Throughout all Group E fire areas greater than 20,000 square feet (1858 m²) in area.
2. Throughout every portion of educational buildings below the story where the lowest level of exit discharge that serves serving that portion of the building is located.

Exception: An automatic sprinkler system is not required in any ~~fire area or~~ area below the story where the lowest level of exit discharge serving that area is located where every classroom throughout the building has at least one exterior exit door at ground level.

907.2.2 (IBC [F] 907.2.2) (Supp) Group B. A manual fire alarm system that activates the occupant notification system in accordance with Section 907.6 shall be installed in Group B occupancies where one of the following conditions exists:

1. The combined Group B occupant load of all floors is 500 or more.
2. The Group B occupant load is more than 100 persons above or below the story where the lowest level of exit discharge is located.

Exception: Manual fire alarm boxes are not required where the building is equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1 and the occupant notification appliances will activate throughout the notification zones upon sprinkler water flow.

907.2.4 (IBC [F] 907.2.4) (Supp) Group F. A manual fire alarm system that activates the occupant notification system in accordance with Section 907.6 shall be installed in Group F occupancies where both of the following conditions exist:

1. The Group F occupancy is two or more stories in height; and
2. The Group F occupancy has a combined occupant load of 500 or more above or below the story where the lowest level of exit discharge is located.

Exception: Manual fire alarm boxes are not required if the building is equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1 and the occupant notification appliances will activate throughout the notification zones upon sprinkler water flow.

907.2.7 (IBC [F] 907.2.7) (Supp) Group M. A manual fire alarm system that activates the occupant notification system in accordance with Section 907.6 shall be installed in Group M occupancies where one of the following conditions exists:

1. The combined Group M occupant load of all floors is 500 or more persons.
2. The Group M occupant load is more than 100 persons above or below the story where the lowest level of exit discharge is located.

Exceptions:

1. A manual fire alarm system is not required in covered mall buildings complying with Section 402 of the *International Building Code*.
2. Manual fire alarm boxes are not required where the building is equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1 and the occupant notification appliances will automatically activate throughout the notification zones upon sprinkler water flow.

907.2.9.1 (IBC [F] 907.2.9.1) (Supp) Manual fire alarm system. A manual fire alarm system that activates the occupant notification system in accordance with Section 907.6 shall be installed in Group R-2 occupancies where:

1. Any dwelling unit or sleeping unit is located three or more stories above the story where the lowest level of exit discharge is located;
2. Any dwelling unit or sleeping unit is located more than one story below the story where the highest level of exit discharge of exits serving the dwelling unit or sleeping unit is located; or
3. The building contains more than 16 dwelling units or sleeping units.

Exceptions:

1. Manual fire alarm boxes are not required where the building is equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2 and the occupant notification appliances will automatically activate throughout the notification zones upon a sprinkler water flow.
2. A manual fire alarm system is not required in buildings not more than two stories in height that do not have interior corridors serving dwelling units, provided that dwelling units either have a means of egress door opening directly to an exterior exit access that leads directly to the exits or are served by open-ended corridors designed in accordance with Section 1023.6, Exception 4.

907.2.18.1 (IBC [F] 907.2.18.1) (Supp) Public address system. Where a fire alarm system is not required by Section 907.2, a public address system shall be provided that shall be capable of transmitting voice communications to the story where the highest level of exit discharge serving the underground portions of the structure is located and all levels stories below.

914.5.1 (IBC [F] 405.3) Automatic sprinkler system. The story where the highest level of exit discharge serving the underground portions of the building is located and all levels stories below shall be equipped with an automatic sprinkler system installed in accordance with Section 903.3.1.1. Water-flow switches and control valves shall be supervised in accordance with Section 903.4.

1027.5 Illumination emergency power. The power supply for means of egress illumination shall normally be provided by the premises' electrical supply. In the event of power supply failure, illumination shall be automatically provided from an emergency system for the following occupancies where such occupancies require two or more means of egress:

1. Group A having 50 or more occupants.

Exception: Assembly occupancies used exclusively as a place of worship and having an occupant load of less than 300.

2. Group B buildings three or more stories in height, buildings with 100 or more occupants above or below ~~the~~ a story where the level of exit discharge serving the occupants is located, or buildings with 1,000 or more total occupants.

3. Group E in interior stairs, corridors, windowless areas with student occupancy, shops and laboratories.
4. Group F having more than 100 occupants.

Exception: Buildings used only during daylight hours which are provided with windows for natural light in accordance with the *International Building Code*.

5. Group I.
6. Group M.

Exception: Buildings less than 3,000 square feet (279 m²) in gross sales area on one story only, excluding mezzanines.

7. Group R-1.

Exception: Where each sleeping unit has direct access to the outside of the building at grade.

8. Group R-2.

Exception: Where each dwelling unit or sleeping unit has direct access to the outside of the building at grade.

9. Group R-4.

Exception: Where each sleeping unit has direct access to the outside of the building at ground level. The emergency power system shall provide power for not less than 60 minutes and consist of storage batteries, unit equipment or an on-site generator. The installation of the emergency power system shall be in accordance with Section 604.

1027.19 Exterior stairway protection. Exterior exit stairs shall be separated from the interior of the building as required in Section 1023.6. Openings shall be limited to those necessary for egress from normally occupied spaces.

Exceptions:

1. Separation from the interior of the building is not required for buildings that are two stories or less above grade where ~~the~~ a story where the level of exit discharge serving such occupancies is located is the first story above grade.
2. Separation from the interior of the building is not required where the exterior stairway is served by an exterior balcony that connects two remote exterior stairways or other approved exits, with a perimeter that is not less than 50 percent open. To be considered open, the opening shall be a minimum of 50 percent of the height of the enclosing wall, with the top of the opening not less than 7 feet (2134 mm) above the top of the balcony.
3. Separation from the interior of the building is not required for an exterior stairway located in a building or structure that is permitted to have unenclosed interior stairways in accordance with Section 1020.1.
4. Separation from the interior of the building is not required for exterior stairways connected to open-ended corridors, provided that:
 - 4.1. The building, including corridors and stairs, is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2.
The open-ended corridors comply with Section 1017.
 - 4.2. The open-ended corridors are connected on each end to an exterior exit stairway complying with Section 1023.1.
 - 4.3. At any location in an open-ended corridor where a change of direction exceeding 45 degrees occurs, a clear opening of not less than 35 square feet (3 m²) or an exterior stairway shall be provided. Where clear openings are provided, they shall be located so as to minimize the accumulation of smoke or toxic gases.

Reason: Proposal E5-07/08-AM changed the definition for the level of exit discharge from the "horizontal plane located at" to the "story at" the point at which an exit terminates and an exit discharge begins. This had the effect of changing the level of exit discharge from being a horizontal plane to being a vertical space (or volume). This assertion is based on the definition of "story" in Section 202, which is, in part, "that portion of a building included between the upper surface of a floor and the upper surface of the floor or roof next above." It is also in agreement with the reason statement that accompanied Proposal E5-07/08-AM.

The submittal of Proposal E5-07/08-AM was prompted, in part, by interpretations of the IFC by the ICC that sought to clarify how to apply the definition of the level of exit discharge when determining the number of stories above the level of exit discharge (lowest level in the case of the interpretations). What the interpretations do not address, however, is how to apply the definition of the level of exit discharge when determining the number of stories below the level of exit discharge. The approved change in the definition of the level of exit discharge had the effect of reducing the number of stories when they are located above the level of exit discharge but not changing the number of stories when they are located below the level of exit discharge.

Four diagrams accompany this proposal. Each one illustrates a building with four stories above grade plane and four stories below grade plane, eight stories total. Floor Level L1 is at the same elevation as grade plane. Stories #1 through #4 are below grade plane and Stories #5 through #8 are above grade plane.

The first diagram ("Level of Exit Discharge at Floor Level L1") illustrates the application of the definition before being modified by Proposal E5-07/08. The level of exit discharge is at Level L1. There are four stories above and four stories below the level of exit discharge. The second diagram ("Level of Exit Discharge at Story #5") illustrates the application of the definition after being modified by Proposal E5-07/08. The level of exit discharge is at Story #5. There are now three stories above, but four stories below, the level of exit discharge.

The third and fourth diagrams illustrate the application of the definition when there are multiple levels of exit discharge. The third diagram ("Levels of Exit Discharge at Floor Levels L2 and B1") illustrates the application of the definition before being modified by Proposal E5-07/08. The upper and lower levels of exit discharge are at Levels L2 and B1, respectively. There are five stories above the lowest level of exit discharge and five stories below the highest level of exit discharge. The fourth diagram ("Levels of Exit Discharge at Stories #6 and #4") illustrates the application of the definition after being modified by Proposal E5-07/08. The upper and lower levels of exit discharge are at Stories #6 and #4, respectively. There are now four stories above the lowest level of exit discharge but five stories below the highest level of exit discharge.

The diagrams may accurately depict the intent of Proposal E5-07/08 but that proposal and the IFC interpretations noted in its reason statement also do not address how to apply the definition of level of exit discharge when determining a vertical distance of a horizontal plane above or below a level of exit discharge. There are 14 code sections in the IBC and 19 code sections in the IFC that specify requirements based on a level of exit discharge (33 total). Of these, only three in the IBC (Sections 1007.2.1, 1020.1 and 1023.6) and two in the IFC (Sections 907.2.9.1 and 1027.19) impose requirements based on the number of stories above or below a level of exit discharge.

Of the remaining 28 code sections, many of them impose requirements based on a vertical distance, in feet. In these cases, the thresholds are determined by considering distances between horizontal planes. When the definition of level of exit discharge was changed from being a horizontal plane to be a vertical space (volume), the application of these provisions became difficult if not impossible. The requirements based on a vertical distance above or below a level of exit discharge are in IBC Sections 405.1, 405.4.1, 405.8.2 and 1010.1.7; and IFC Section 907.2.18.

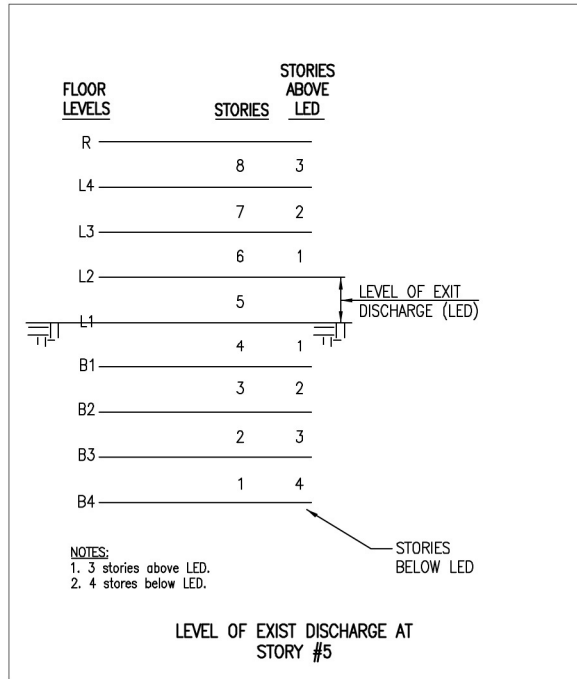
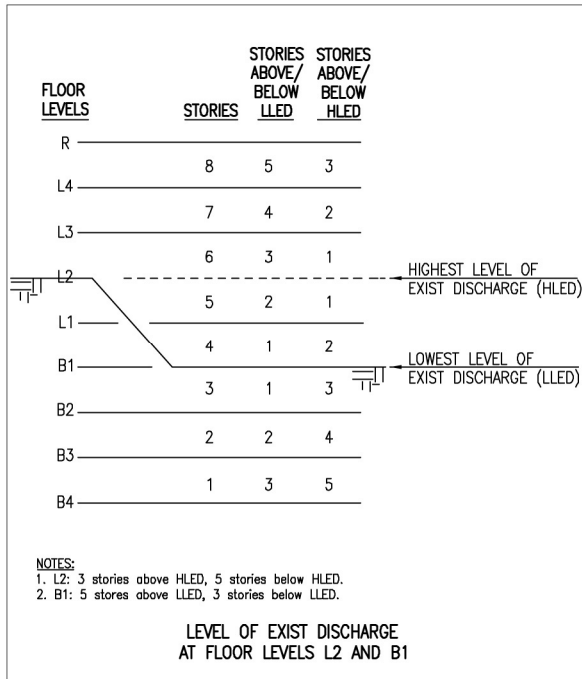
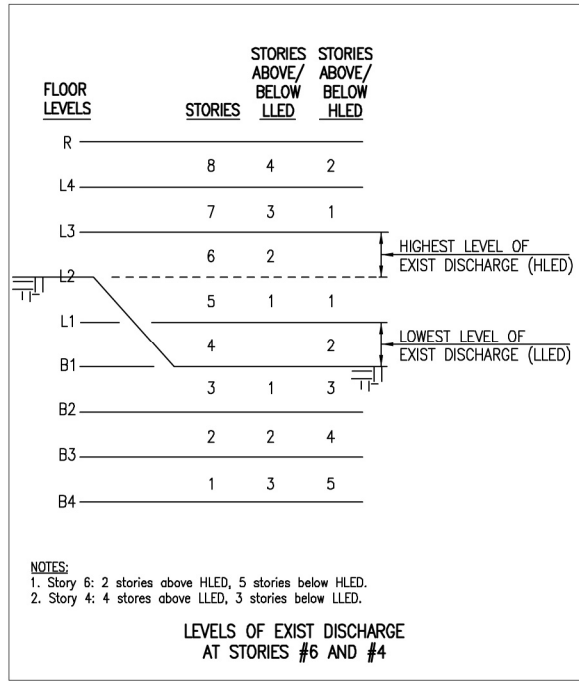
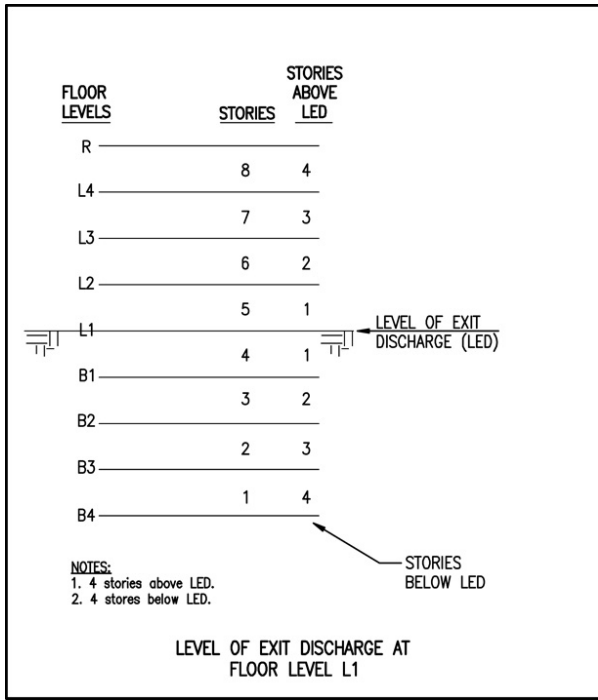
There are requirements based on occupant load above or below a level of exit discharge, which are found in IFC Sections 404.2, 907.2.2, 907.2.4, 907.2.7 and 1027.5, and Table 405.2. There are also requirements based floor levels not at a level of exit discharge and similar requirements, which are found in IBC Sections 308.5.2, 405.3, 1006.3, 1020.1.5 and 1024.1; and IFC Sections 903.2.1.1, 903.2.1.2, 903.2.1.3, 903.2.1.4, 903.2.2, 907.2.18.1, 914.5.1 and 1027.18. These provisions appear to be compatible with the definition before and after it was modified by Proposal E5-07/08 but many reference the level of exit discharge as if it were a horizontal plane.

Proposal E5-07/08-AM identified a problem with applying the definition of the level of exit discharge but the solution of revising the definition created other problems when applying the revised definition. What this proposal does is restore the level of exit discharge to being a horizontal plane. This distinguishes the level of exit discharge from a story, which is a vertical space. It also realigns the level of exit discharge with the lowest level of fire department vehicle access, which is also a horizontal plane (or line). Then, the proposal addresses what is judged to be the real problem with applying the definition of the level of exit discharge: the charging language where the level of exit discharge is cited. Typically, the text is revised from "the level of exit discharge" to "the story in which the level of exit discharge is located." Requirements based on the occupant load or number of stories above or below the level of exit discharge are revised to requirements based on the occupant load or number of stories above or below the story where the level of exit discharge is located. Requirements based on the height, in feet, above or below the level of exit discharge are unaffected by this proposal. The end result is (1) a return to the level of exit discharge as a horizontal plane, and (2) adjustments to the technical provisions based on the level of exit discharge consistent with the intent of Proposal E5-07/08-AM.

In Section 1007.2.1, a "required accessible floor" is changed to a "story with required accessible spaces" for consistency with the charging language in Section 1007.1 that requires at least one accessible means of egress for accessible spaces. Section 1007.2.1 is the only reference to accessible floors in the IBC. Note that Section 1103.1 requires sites, buildings, structures, facilities, elements and spaces to be accessible to persons with physical disabilities.

The codes sections where the level of exit discharge is cited but are unaffected by this proposal are IBC Sections 405.1, 405.8.2, 1020.1.5 and 1020.1.7; and IFC Sections 907.2.18 and 1027.18. These provisions typically apply to heights, in feet, above or below levels of exit discharge or levels of exit discharge from exit stairways.

This proposal was prepared in conjunction with a related proposal on multiple levels of exit discharge. The proposed revisions in the related proposal are included in this proposal where necessary to ensure that the revisions in this proposal are clearly understood when considered with the proposed revisions in the related proposal. The code sections in the related proposal that are not also in this proposal are: IBC Sections 1020.1.5 and 1020.1.7, and IFC Section 1027.18.



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

PART I – IBC MEANS OF EGRESS

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

PART II – IFC

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

E10-07/08

308.5.2 (IFC [B] 202), 1006.3 (IFC [B] 1006.3), 1007.2.1 (IFC [B] 1007.2.1), 1020.1 (IFC [B] 1020.1), 1020.1.5 (IFC [B] 1020.1.5), 1020.1.7 (IFC [B] 1020.1.7), 1023.6 (IFC [B] 1023.6), 1024.1 (IFC [B] 1024.1); IFC 903.2.1.1- 903.2.1.4 (IBC [F] 903.2.1.1- 903.2.1.4), 903.2.2 (IBC [F] 903.2.2), 1027.5, 1027.18, 1027.19

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

THESE PROPOSALS ARE ON THE AGENDA OF THE IBC MEANS OF EGRESS AND THE IFC CODE DEVELOPMENT COMMITTEES AS 2 SEPARATE CODE CHANGES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I — IBC MEANS OF EGRESS

Revise as follows:

308.5.2 (IFC [B] 202) Child care facility. A facility that provides supervision and personal care on less than a 24-hour basis for more than five children 2-1/2 years of age or less shall be classified as Group I-4.

Exception: A child day care facility that provides care for more than five but no more than 100 children 2-1/2 years or less of age, ~~when~~ where the rooms ~~where such~~ in which the children are cared for are located on ~~the~~ a level of exit discharge servicing such rooms and each of these child care rooms has an exit door directly to the exterior, shall be classified as Group E.

1006.3 (IFC [B] 1006.3) Illumination emergency power. The power supply for means of egress illumination shall normally be provided by the premise's electrical supply.

In the event of power supply failure, an emergency electrical system shall automatically illuminate all of the following areas:

1. Aisles and unenclosed egress stairways in rooms and spaces that require two or more means of egress.
2. Corridors, exit enclosures and exit passageways in buildings required to have two or more exits.
3. Exterior egress components at other than ~~the~~ their levels of exit discharge until exit discharge is accomplished for buildings required to have two or more exits.
4. Interior exit discharge elements, as permitted in Section 1024.1, in buildings required to have two or more exits.
5. Exterior landings as required by Section 1008.1.5 for exit discharge doorways in buildings required to have two or more exits.

The emergency power system shall provide power for a duration of not less than 90 minutes and shall consist of storage batteries, unit equipment or an on-site generator. The installation of the emergency power system shall be in accordance with Section 2702.

1007.2.1 (IFC [B] 1007.2.1) Elevators required. In buildings where a required accessible floor is four or more stories above or below a level of exit discharge, at least one required accessible means of egress shall be an elevator complying with Section 1007.4.

Exceptions:

1. In buildings equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2, the elevator shall not be required on floors provided with a horizontal exit and located at or above the levels of exit discharge.
2. In buildings equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2, the elevator shall not be required on floors provided with a ramp conforming to the provisions of Section 1010.

1020.1 (IFC [B] 1020.1) (Supp) 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 Groups 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~~ its level of exit discharge, or
 - 1.2. The stairway is open to not more than one story below the story at ~~the~~ its 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 in open parking structures that serve only the parking structure are not required to be enclosed.
5. Stairways in Group I-3 occupancies, as provided for in Section 408.3.6, are not required to be enclosed.
6. Means of egress stairways as required by Section 410.5.3 are not required to be enclosed.
7. Means of egress stairways from balconies, galleries and press boxes as provided for in Section 1025.5.1, are not required to be enclosed.

1020.1.5 (IFC [B] 1020.1.5) Discharge identification. A stairway in an exit enclosure shall not continue below ~~the~~ its level of exit discharge unless an approved barrier is provided at the level of exit discharge to prevent persons from unintentionally continuing into levels below. Directional exit signs shall be provided as specified in Section 1011.

1020.1.7 (IFC [B] 1020.1.7) Smokeproof enclosures. In buildings required to comply with Section 403 or 405, each of the exits of a building that serves stories where the floor surface is located more than 75 feet (22 860 mm) above the lowest level of fire department vehicle access or more than 30 feet (9144 mm) below ~~the~~ a level of exit discharge serving such floor levels shall be a smokeproof enclosure or pressurized stairway in accordance with Section 909.20.

1023.6 (IFC [B] 1023.6) Exterior ramps and stairway protection. Exterior exit ramps and stairways shall be separated from the interior of the building as required in Section 1020.1. Openings shall be limited to those necessary for egress from normally occupied spaces.

Exceptions:

1. Separation from the interior of the building is not required for occupancies, other than those in Group R-1 or R-2, in buildings that are no more than two stories above grade plane where ~~the~~ a level of exit discharge servicing such occupancies is the first story above grade plane.
2. Separation from the interior of the building is not required where the exterior ramp or stairway is served by an exterior ramp and/or balcony that connects two remote exterior stairways or other approved exits, with a perimeter that is not less than 50 percent open. To be considered open, the opening shall be a minimum of 50 percent of the height of the enclosing wall, with the top of the openings no less than 7 feet (2134 mm) above the top of the balcony.
3. Separation from the interior of the building is not required for an exterior ramp or stairway located in a building or structure that is permitted to have unenclosed interior stairways in accordance with Section 1020.1.
4. Separation from the interior of the building is not required for exterior ramps or stairways connected to open-ended corridors, provided that Items 4.1 through 4.4 are met:
 - 4.1. The building, including corridors and ramps and/or stairs, shall be equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2.
 - 4.2. The open-ended corridors comply with Section 1017.
 - 4.3. The open-ended corridors are connected on each end to an exterior exit ramp or stairway complying with Section 1023.
 - 4.4. At any location in an open-ended corridor where a change of direction exceeding 45 degrees (0.79 rad) occurs, a clear opening of not less than 35 square feet (3.3 m²) or an exterior ramp or stairway shall be provided. Where clear openings are provided, they shall be located so as to minimize the accumulation of smoke or toxic gases.

1024.1 (IFC [B] 1024.1) (Supp) 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~~ their levels of exit discharge.
4. Horizontal exits complying with Section 1022 shall not be required to discharge directly to the exterior of the building.

PART II — IFC

Revise as follows:

903.2.1.1 (IBC [F] 903.2.1.1) Group A-1. An automatic sprinkler system shall be provided for Group A-1 occupancies where one of the following conditions exists:

1. The fire area exceeds 12,000 square feet (1115 m²).
2. The fire area has an occupant load of 300 or more.
3. The fire area is located on a floor other than ~~the~~ a level of exit discharge servicing such occupancies.
4. The fire area contains a multitheater complex.

903.2.1.2 (IBC [F] 903.2.1.2) Group A-2. An automatic sprinkler system shall be provided for Group A-2 occupancies where one of the following conditions exists:

1. The fire area exceeds 5,000 square feet (464.5m²).
2. The fire area has an occupant load of 100 or more.
3. The fire area is located on a floor other than ~~the~~ a level of exit discharge servicing such occupancies.

903.2.1.3 (IBC [F] 903.2.1.3) Group A-3. An automatic sprinkler system shall be provided for Group A-3 occupancies where one of the following conditions exists:

1. The fire area exceeds 12,000 square feet (1115 m²).
2. The fire area has an occupant load of 300 or more.
3. The fire area is located on a floor other than ~~the~~ a level of exit discharge servicing such occupancies.

Exception: Areas used exclusively as participant sports areas where the main floor area is located at the same level as the level of exit discharge of the main entrance and exit.

903.2.1.4 (IBC [F] 903.2.1.4) Group A-4. An automatic sprinkler system shall be provided for Group A-4 occupancies where one of the following conditions exists:

1. The fire area exceeds 12,000 square feet (1115m²).
2. The fire area has an occupant load of 300 or more.

3. The fire area is located on a floor other than ~~the~~ a level of exit discharge servicing such occupancies.

Exception: Areas used exclusively as participant sports areas where the main floor area is located at the same level as the level of exit discharge of the main entrance and exit.

903.2.2 (IBC [F] 903.2.2) (Supp) Group E. An automatic sprinkler system shall be provided for Group E occupancies as follows:

1. Throughout all Group E fire areas greater than 20,000 square feet (1858 m²) in area.
2. Throughout every portion of educational buildings below the lowest level of exit discharge ~~that serves~~ servicing that portion of the building.

Exception: An automatic sprinkler system is not required in any ~~fire area or~~ area below the lowest level of exit discharge servicing that area where every classroom throughout the building has at least one exterior exit door at ground level.

1027.5 Illumination emergency power. The power supply for means of egress illumination shall normally be provided by the premises' electrical supply. In the event of power supply failure, illumination shall be automatically provided from an emergency system for the following occupancies where such occupancies require two or more means of egress:

1. Group A having 50 or more occupants.

Exception: Assembly occupancies used exclusively as a place of worship and having an occupant load of less than 300.

2. Group B buildings three or more stories in height, buildings with 100 or more occupants above or below ~~the~~ a level of exit discharge servicing the occupants, or buildings with 1,000 or more total occupants.
3. Group E in interior stairs, corridors, windowless areas with student occupancy, shops and laboratories.
4. Group F having more than 100 occupants.

Exception: Buildings used only during daylight hours which are provided with windows for natural light in accordance with the *International Building Code*.

5. Group I.
6. Group M.

Exception: Buildings less than 3,000 square feet (279 m²) in gross sales area on one story only, excluding mezzanines.

7. Group R-1.

Exception: Where each sleeping unit has direct access to the outside of the building at grade.

8. Group R-2.

Exception: Where each dwelling unit or sleeping unit has direct access to the outside of the building at grade.

9. Group R-4.

Exception: Where each sleeping unit has direct access to the outside of the building at ground level. The emergency power system shall provide power for not less than 60 minutes and consist of storage batteries, unit equipment or an on-site generator. The installation of the emergency power system shall be in accordance with Section 604.

1027.18 Stairway discharge identification. A stairway in an exit enclosure which continues below ~~the~~ its level of exit discharge shall be arranged and marked to make the direction of egress to a public way readily identifiable.

Exception: Stairs that continue one-half story beyond ~~the~~ their levels of exit discharge need not be provided with barriers where the exit discharge is obvious.

1027.19 Exterior stairway protection. Exterior exit stairs shall be separated from the interior of the building as required in Section 1023.6. Openings shall be limited to those necessary for egress from normally occupied spaces.

Exceptions:

1. Separation from the interior of the building is not required for buildings that are two stories or less above grade where the a level of exit discharge servicing such occupancies is the first story above grade.
2. Separation from the interior of the building is not required where the exterior stairway is served by an exterior balcony that connects two remote exterior stairways or other approved exits, with a perimeter that is not less than 50 percent open. To be considered open, the opening shall be a minimum of 50 percent of the height of the enclosing wall, with the top of the opening not less than 7 feet (2134 mm) above the top of the balcony.
3. Separation from the interior of the building is not required for an exterior stairway located in a building or structure that is permitted to have unenclosed interior stairways in accordance with Section 1020.1.
4. Separation from the interior of the building is not required for exterior stairways connected to open-ended corridors, provided that:
 - 4.1. The building, including corridors and stairs, is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2.
 - 4.2. The open-ended corridors comply with Section 1017.
 - 4.3. The open-ended corridors are connected on each end to an exterior exit stairway complying with Section 1023.1.
 - 4.4. At any location in an open-ended corridor where a change of direction exceeding 45 degrees occurs, a clear opening of not less than 35 square feet (3 m²) or an exterior stairway shall be provided. Where clear openings are provided, they shall be located so as to minimize the accumulation of smoke or toxic gases.

Reason: This proposal is a continuation of Proposal F85-07/08-AMPC1. The reason statement accompanying the proposal pointed out that buildings on sloping sites often have more level of exit discharge. The proposal addressed references to "the level of exit discharge" in IFC Sections 903.2.1 and 903.2.2 but there are other sections in the IBC and IFC that contain the identical phrase. The purpose of this proposal is to adjust the phrase in those sections so that buildings with multiple levels of exit discharge are clearly accounted for while still preserving the current intent of their provisions.

"The" level of exit discharge in the Exception for child care facilities in IBC Section 308.5.2 and IFC Section 202 is changed to "a" level of exit discharge "servicing such rooms." The change in occupancy classification from Group I-4 to Group E is dependent on the rooms used for the care of children being located on the level of exit discharge. The change will permit the rooms to be located on one of the levels of exit discharge serving the rooms. The other revisions are editorial, changing "when" to "where" in referring to the rooms providing the day care.

"The" level of exit discharge in Exception #1 to IBC Section 1007.2.1 on elevators as accessible means of egress is changed to the "levels" of exit discharge. An elevator is required to be an accessible means of egress where the building is four or more stories above or below one of the levels of exit discharge. The change will make it clear that the elevator exemption is limited to floors at or above all the levels of exit discharge (i.e., prevent compliance based only on the higher of two levels of exit discharge). Note that "a" level of exit discharge is cited in the charging language and is unchanged in this proposal.

"The" level of exit discharge in IBC Section 1020.1.7 on smokeproof enclosures is changed to "a" level of exit discharge serving such floor levels. In high-rise and underground buildings, each exit serving a story whose floor surface is more than 30 feet below the level of exit discharge (one of two conditions) serving the story is required to be a smokeproof enclosure or pressurized stairway. The change will make it clear that the requirement applies to exits whose floor surfaces are more than 30 feet below any of the levels of exit discharge serving that story (i.e., prevent compliance based only on the higher of two levels of exit discharge).

"The" level of exit discharge in Exception #1 to IBC Section 1023.6 on protection of exterior ramps and stairways is changed to "a" level of exit discharge "servicing such occupancies." Separation of exterior ramps and stairways from occupancies other than Group R-1 or R-2 is not required in buildings that are no more than two stories above grade plane where the level of exit discharge is the first story above grade plane. The change will permit the occupancies to be located on one of the levels of exit discharge serving the occupancies.

"The" level of exit discharge in Item #3 of IFC Sections 903.2.1.1, 903.2.1.2, 903.2.1.3 and 903.2.1.4 on automatic sprinkler systems in Group A occupancies is changed to "a" level of exit discharge "servicing such occupancies." One of the three conditions for requiring an automatic sprinkler system in a Group A occupancy other than Group A-5 is that the fire area is located on a floor other than the level of exit discharge. The change will exempt the occupancy from the requirement provided it is located on a floor other than one of the levels of exit discharge serving the occupancy. Note that "the" level of exit discharge of the main entrance and exit is cited in the Exception to Sections 903.2.1.3 and 903.2.1.4 but is unchanged in this proposal.

The "level" of exit discharge in the Exception to IFC Section 903.2.2 on automatic sprinkler systems in Group E occupancies is changed to the "lowest" level of exit discharge "serving that area" for consistency with the requirement in Item #2 for which the Exception modifies. "Fire area" is deleted because it is seen as superfluous. The Exception currently applies to "areas" below the level of exit discharge, which include "fire areas." Note that Item #2 of Section 903.2.2 specifies the "lowest level of exit discharge that serves that portion of the building" and is unchanged in this proposal except for an editorial change for consistency with the proposed change to the Exception.

The "level of exit discharge" in the Exception to IFC Section 1027.5 on emergency power for egress illumination is changed to "a" level of exit discharge "servicing the occupants." One of the conditions for requiring emergency power for egress illumination in existing buildings is that there are 100 or more occupants above or below the level of exit discharge. The change will exempt the building from the requirement provided there are less than 100 occupants above and below any of the levels of exit discharge serving any of the occupants (i.e., prevent compliance based only on the higher level of exit discharge for occupants below or the lower level of exit discharge for occupants above).

"The" level of exit discharge in Exception #1 to IFC Section 1027.19 on exterior stairway protection is changed to "a" level of exit discharge "servicing such occupancies." Separation of exterior stairways from the interior is not required in buildings that are no more than two stories above grade when the level of exit discharge is the first story above grade. The change will permit the occupancies to be located on one of the levels of exit discharge serving the occupancies.

The provision of IBC Sections 1006.3 (Item 3); 1020.1 (Exception 1, Items 1.1 and 1.2); 1020.1.5; and 1024.1 (Exception 3); and IFC Section 1027.18 typically apply to exit stairways and other means of egress components with distinct levels of exit discharge. Multiple levels of exit discharge are not possible. The building, however, could have multiple levels of exit discharge. Consequently, "the" level of exit discharge is changed to "its level" or "their levels" of exit discharge depending on the context.

IBC Sections 405.1, 405.3, 405.4.1 and 405.8.2; IFC Table 405.2; and IFC Sections 404.2, 903.2.1, 907.2.2, 907.2.4, 907.2.7, 907.2.9.1, 907.2.18, 907.2.18.1 and 914.5.1; are not included in this proposal because they reference the lowest, highest or nearest level of exit discharge. IBC Section 1019.2 (Item 3) is not included because the subject of the provision is a single-level building.

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

PART I – IBC MEANS OF EGRESS

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

PART II – IFC

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

E11–07/08

1003.2 (IFC [B] 1003.2)

Proponent: John Berry, Cole + Russell Architects, Inc.

Revise as follows:

1003.2 (IFC [B] 1003.2) (Supp) 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.
7. The clear height of floor levels in vehicular and pedestrian traffic areas in parking garages in accordance with Section 406.2.2.

Reason: The intent of this proposal is to coordinate the new ceiling height requirements of this section with the clear floor height allowed in parking garages per Section 406.2.2. Without this exception, it can easily be interpreted that the clear floor height in parking garages is to be 7'-6". I have solicited the opinion of the ICC Staff on this issue and have received a response that Section 406.2.2 should be considered for this issue in parking garages.

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

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

E12-07/08

1003.2 (IFC [B] 1003.2)

Proponent: Maureen Traxler, City of Seattle, representing Washington Association of Building Officials Technical Code Development Committee

Revise as follows:

1003.2 (IFC [B] 1003.2) (Supp) 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.
7. Areas above and below mezzanine floors in accordance with Section 505.1.

Reason: This proposal resolves an inconsistency between Section 505.1 and 1003.2. The mezzanine provisions of Section 505.1 allow a ceiling height of 7 feet, but 1003.2 requires ceiling height of 7 feet 6 inches throughout the means of egress, which includes areas above and below mezzanines.

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

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

E13-07/08

1003.5 (IFC [B] 1003.5)

Proponent: John Williams, Washington State Department of Health, Construction Review Services, representing Washington Association of Building Officials Technical Code Development Committee

Revise as follows:

1003.5 (IFC [B] 1003.5) Elevation change. Where changes in elevation of less than 12 inches (305 mm) exist in the means of egress, sloped surfaces shall be used. Where the slope is greater than one unit vertical in 20 units horizontal (5-percent slope), ramps complying with Section 1010 shall be used. Where the difference in elevation is 6 inches (152 mm) or less, the ramp shall be equipped with either handrails or floor finish materials that contrast with adjacent floor finish materials.

Exceptions:

1. A single step with a maximum riser height of 7 inches (178 mm) is permitted for buildings with occupancies in Groups F, H, R-2, R-3, S and U at exterior doors not required to be accessible by Chapter 11.
2. A stair with a single riser or with two risers and a tread is permitted at locations not required to be accessible by Chapter 11, provided that the risers and treads comply with Section 1009.3, the minimum depth of the tread is 13 inches (330 mm) and at least one handrail complying with Section 1012 is provided within 30 inches (762 mm) of the centerline of the normal path of egress travel on the stair.
3. A step is permitted in aisles serving seating that has a difference in elevation less than 12 inches (305 mm) at locations not required to be accessible by Chapter 11, provided that the risers and treads comply with Section 1025.11 and the aisle is provided with a handrail complying with Section 1025.13.

~~Any change in elevation in a corridor serving nonambulatory persons in a Group I-2 occupancy~~ Throughout a story in a Group I-2 occupancy, any change in elevation in portions of the exit access that serve nonambulatory persons shall be by means of a ramp or sloped walkway.

Reason: The purpose of this code change is to clarify the intent of the current code. The purpose of this section is to prevent a condition where a patient on a hospital bed or stretcher would be required to maneuver a stair or step. Quick horizontal movement of stretchers and beds is imperative during the routine operation of a healthcare facility. I-2 occupancies also use a "protect in place" concept which relies on horizontal evacuation of patient on beds and stretchers during a fire event.

Most hospitals take advantage of the suite provisions within IBC 1014.2.2, which creates passageways that are not classified as a corridors. These passageways often serve nonambulatory traffic, but the current code would not apply to them. A broader term such as "exit access" is necessary to capture all of the areas that see nonambulatory traffic. The existing qualifier "serving nonambulatory persons" remains to prevent this from being applied to mechanical spaces and other staff only areas. The term "story" is used to clarify that this section applies to movement along a level plane; not movement between stories.

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

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

E14-07/08

1003.7 (IFC [B] 1003.7), 3008 (New); IFC 903.3.1.1.1 (IBC [F] 903.3.1.1.1)

Proponent: David W Frable, US General Services Administration, Gerald H Jones, representing himself

THESE PROPOSALS ARE ON THE AGENDA OF THE IBC MEANS OF EGRESS AND THE IFC CODE DEVELOPMENT COMMITTEES AS 2 SEPARATE CODE CHANGES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IBC MEANS OF EGRESS

1. Revise as follows:

1003.7 (IFC [B] 1003.7) Elevators, escalators and moving walks. Elevators, escalators and moving walks shall not be used as a component of a required means of egress from any other part of the building.

Exceptions:

1. Elevators used as an accessible means of egress in accordance with Section 1007.4.
2. Elevators when designed in accordance with Section 3008 for use as general egress as approved by the building official.

2. Add new text as follows:

SECTION 3008 **OCCUPANT EVACUATION ELEVATORS.**

3008.1 General. Elevators arranged in accordance with this section shall be permitted to be used for occupant egress in fires and other emergencies.

3008.2 Operation. The occupant evacuation elevators shall be used for occupant-controlled evacuation only in the normal elevator operating mode prior to Phase I Emergency Recall Operation in accordance with the requirements in ASME A17.1.

3008.3 New egress capacity. The total required capacity of the exit stairs on each floor can be reduced by not more than 50% where occupant evacuation elevators are provided. The amount of reduction of the required capacity of the exit stairs shall be determined by an approved egress analysis that demonstrates that the total egress time for occupants using the combination of evacuation elevators and exit stairs is not more than the total egress time for occupants only using the required exit stairs.

3008.4 Number of Occupant Evacuation Elevators. Each accessible floor that is one or more stories above or below the level of exit discharge shall be provided with a minimum of one bank or group of occupant evacuation elevators. All elevators within that bank or group of elevators, other than the fire service access elevators installed in accordance with Section 3007, shall be occupant evacuation elevators.

3008.5 Fire safety and evacuation plan. The building shall have an approved fire safety and evacuation plan in accordance with the applicable requirements of Section 404 of the International Fire Code. The subject fire safety and evacuation plan shall incorporate specific procedures for the occupants using evacuation elevators and exit stairs

3008.6 Emergency voice/alarm communication system. The building shall be provided with an emergency voice/alarm communication system. The emergency voice/alarm communication system shall be accessible to the fire department. The system shall be provided in accordance with Section 907.2.12.2.

3008.6.1 Notification appliances. A minimum of one audible and one visible notification appliance shall be installed within each occupant evacuation elevator lobby.

3008.7 Automatic sprinkler system. The building shall be protected throughout by an approved, electrically-supervised automatic sprinkler system in accordance with Section 903.3.1.1, except as otherwise permitted by Section 903.3.1.1.1.

3008.7.1 Sprinkler system monitoring. The sprinkler system shall have a sprinkler control valve and water flow device provided for each floor that is monitored by the building's emergency voice/alarm communication system.

3008.8 High hazard content areas. No building areas shall contain high hazard contents exceeding the maximum allowable quantities per control area as addressed in Section 414.2.

3008.9 Shunt breakers. Shunt breakers shall not be installed on elevator systems used for occupant evacuation elevators.

3008.10 Hoistway enclosure protection. The occupant evacuation elevators shall be located in a shaft enclosure complying with Section 707.

3008.11 Water protection. The occupant evacuation elevator hoistway and associated elevator landings shall be designed by an approved method to prevent water from infiltrating into the shaft enclosure from the operation of the automatic sprinkler system or firefighting activities.

3008.12 Occupant evacuation elevator lobby. The occupant evacuation elevators shall open into an elevator lobby in accordance with Sections 3008.12.1 through 3008.12.5.

3008.12.1 Access. The occupant evacuation elevator lobby shall have direct access to an exit enclosure.

3008.12.2 Lobby enclosure. The occupant evacuation elevator lobby shall be enclosed with a smoke barrier having a minimum 1-hour fire-resistance rating, except that lobby doorways shall comply with Section 3008.12.3.

Exception: Enclosed occupant evacuation elevator lobbies are not required at the street floor.

3008.12.2.1 Lobby construction materials. The construction materials of the lobby enclosure shall have a minimum classification level 2 rating in accordance with the requirements of ASTM C1629/C1629M.

3008.12.3 Lobby doorways. Each occupant evacuation elevator lobby shall be provided with a doorway that is protected with a 3/4-hour fire door assembly complying with Section 715.4.

3008.12.3.1 Vision panel. A vision panel shall be installed in each fire door assembly protecting the lobby doorway. The vision panel shall consist of fire protection-rated glazing and located to furnish clear vision of the occupant evacuation elevator lobby.

3008.12.3.2 Door closing. Each fire door assembly protecting the lobby doorway shall be automatic closing upon receipt of any fire alarm signal from the emergency voice/alarm communication system serving the building.

3008.12.4 Lobby size. Each occupant evacuation elevator lobby shall have minimum floor area as follows:

1. The occupant evacuation elevator lobby floor area shall accommodate, at 3 ft² (0.28 m²) per person, a minimum of 25 percent of the occupant load of the floor area served by the lobby.
2. The occupant evacuation elevator lobby floor area also shall accommodate one wheelchair space of 30 in. by 48 in. (760 mm by 1220 mm) for each 50 persons, or portion thereof, of the occupant load of the floor area served by the lobby.

3008.12.5 Lobby status indicator. Each occupant evacuation elevator lobby shall be equipped with a status indicator arranged to display the following information:

1. A green light and the message, "Elevators available for occupant evacuation".
2. A yellow light and the message, "Elevators operating under fire department control to assist occupants with disabilities".
3. A red light and the message, "Elevators out of service, use exit stairs".

3008.13 Two-way communication system. Each occupant evacuation elevator car and elevator lobby shall be provided with a two-way communication system for communication between each elevator car and landing and the fire command center or a central control point location approved by the fire department. The two-way communication system shall include both audible and visible signals.

3008.13.1 Directions. Directions for the use of the two-way communication system, instructions for summoning assistance via the two-way communication system, and written identification of the location, shall be posted adjacent to the two-way communication system.

3008.14 Standpipe hose connection. A Class I standpipe hose connection in accordance with Section 905 shall be provided in the exit enclosure having direct access from the occupant evacuation elevators lobby.

3008.15 Elevator system monitoring. The occupant evacuation elevators shall be continuously monitored at the fire command center or a central control point approved by the fire department by a standard emergency service interface system meeting the requirements of NFPA 72 and arranged to display the following information:

1. Floor location of each elevator car
2. Direction of travel of each elevator car
3. Status of each elevator car with respect to whether it is occupied
4. Status of normal power to the elevator equipment, elevator controller cooling equipment, and elevator machine room ventilation and cooling equipment
5. Status of standby power to the elevator equipment, elevator controller cooling equipment, and elevator machine room ventilation and cooling equipment
6. Activation of any fire alarm initiating device in any elevator hoistway (if provided), elevator lobby, or elevator machine room
7. Occurrence of an impending over temperature condition (IOT) condition within the elevator controllers

3008.15.1 Elevator system over-ride. The fire command center or a central control point approved by the fire department shall be provided with the means to override normal elevator operation and to initiate manually a Phase I Emergency Recall of the occupant evacuation elevators in accordance with ASME A17.1.

3008.16 Electrical power. The following features serving each occupant evacuation elevators shall be supplied by both normal power and Type 60/Class 2/Level 1 standby power:

1. Elevator equipment.
2. Elevator machine room ventilation and cooling equipment.
3. Elevator controller cooling equipment.

3008.16.1 Protection of wiring or cables. Wires or cables that provide normal and standby power, control signals, communication with the car, lighting, heating, air conditioning, ventilation and fire-detecting systems to fire service access elevators shall be protected by construction having a minimum 1-hour fire-resistance rating or shall be circuit integrity cable having a minimum 1-hour fire-resistance rating.

PART II – IFC

Revise as follows:

903.3.1.1.1 (IBC [F] 903.3.1.1.1) Exempt locations. Automatic sprinklers shall not be required in the following rooms or areas where such rooms or areas are protected with an approved automatic fire detection system in accordance with Section 907.2 that will respond to visible or invisible particles of combustion. Sprinklers shall not be omitted from any room merely because it is damp, of fire-resistance rated construction or contains electrical equipment.

1. Any room where the application of water, or flame and water, constitutes a serious life or fire hazard.
2. Any room or space where sprinklers are considered undesirable because of the nature of the contents, when approved by the fire code official.

3. Generator and transformer rooms separated from the remainder of the building by walls and floor/ceiling or roof/ceiling assemblies having a fire-resistance rating of not less than 2 hours.
4. Rooms or areas that are of noncombustible construction with wholly noncombustible contents.
5. Fire service access elevators machine rooms and machinery spaces.
6. Machine rooms and machinery spaces for occupant evacuation elevators designed in accordance with Section 3008.

Reason: The use of elevators for occupant egress is a significant change that will have many impacts in regulation and in building design. This proposal is intended to introduce requirements for the arrangement and design of protected elevators for occupant egress into the code without mandating them anywhere. The result would be that they can be used where approved and justified through an engineering analysis. This is no different than acceptance through a variance or performance approach as currently permitted under the code. The difference is that the requirements included in this section provide guidance on safe implementation. The inclusion of this information in the code will permit code officials and designers to develop a comfort level with the technology and to facilitate improvements to the requirements in the Code and referenced technical standards.

The current concept is being addressed by the ASME A17 Task Group on Use of Elevator for Occupant Egress the Occupant evacuation elevators that will incorporate a special evacuation protocol that will be specified in ASME A17.1. While not currently finalized, it is likely to involve the immediate evacuation of the fire floor and two floors above and below the fire floor, then awaiting a decision by the Incident Commander of whether to initiate a full building evacuation. The protocol would be terminated by the activation of Phase I recall as currently required. This protocol requires that the system recognize the floor of origin to begin the process. This would probably be initiated by the (required) sprinkler system if it is arranged to indicate sprinkler flow by floor.

For the record, GSA is committed to this endeavor and been funding research at the National Institute of Standards & Technology (NIST) for the past several years for the development of performance requirements for the use of elevators for occupant egress during a fire emergency prior to Phase I Emergency Recall. GSA has also been participating in the ASME A17 Task Groups on Use of Elevators by Firefighters and Use of Elevator for Occupant Egress regarding this subject matter.

Item # 1

1. RE: 1003.7 - This paragraph provides new code requirement that permits the use of elevators for general egress if approved by the building official.

Item # 2

(Major Issues)

1. RE: 3008 – This paragraph provides new Section of requirements that permits the use of elevators for general egress if approved by the building official.
2. RE: 3008.2 – This paragraph permits occupants to use elevators during a fire emergency prior to Phase I Emergency Recall Operation.
3. RE: 3008.3 – This paragraph permits the building official to reduce capacity of exit stairs. Experience in Asia (Taipei 101 and Petronas Towers) with egress systems that combine elevators and exit stairs has demonstrated in drills that occupant evacuation elevators can provide a safe means of egress in emergencies including fires for all occupants (including those with disabilities) and represent the only means of timely egress for occupants of very tall buildings. Where elevators are the primary means of egress in emergencies it is reasonable that the exit stair capacity can be reduced, while maintaining at least two exit stairs of adequate width and remoteness. It should be permitted to reduce stair capacity as long as the total egress time is shown by a proper egress analysis not to increase over that provided by the exit stairs alone.
4. RE: 3008.12.2 - This paragraph addresses the enclosure requirements for the lobby. A smoke barrier is the appropriate reference since it is designed to resist fire and smoke spread and is intended to create an area of refuge. The new exception addresses the need for not requiring an enclosed lobby on the street floor.
5. RE: 3008.12.2.1 – This paragraph addresses a minimum impact resistance rating for the construction materials of the lobby enclosure.
6. RE: 3008.12.4 - This paragraph addresses a minimum floor area for a lobby based on occupant load factors. Information based on current elevator lobby capacity requirements for towers in the National Fire Protection Association, Life Safety Code.
7. RE: 3008.12.5 – This paragraph addresses information that will be displayed within the occupant evacuation elevator lobby
8. RE: 3008.13 – This paragraph addresses the two-way communication system to be provided between each elevator car and landing and the fire command center or a central control point location.
9. RE: 3008.14 – This paragraph addresses requirements for a standpipe hose connection in non-required or additional exit stairways.
10. RE: 3008.15 – This paragraph addresses the minimum information to be displayed within the fire command center or a central control point location for monitoring the occupant evacuation elevators.
11. RE: 3008.15.1 - This paragraph addresses requirements for the fire command center or a central control point approved by the fire department be provided with the means to override normal elevator operation and to initiate manually a Phase I Emergency Recall of the occupant evacuation elevators in accordance with ASME A17.1.

Item # 3

1. RE 903.3.1.1.1 - This new exception permits automatic sprinkler protection to be exempt in occupant evacuation machine rooms and machinery spaces.

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

PART I – IBC MEANS OF EGRESS

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

PART II – IFC

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

E15-07/08

1003.8 (New) [IFC [B] 1003.8 (New)]

Proponent: Anthony C. Apfelbeck, City of Altamonte Springs Building/Fire Safety Division, representing Florida Fire Marshals and Inspectors Association

Add new text as follows:

1003.8 (IFC [B] 1003.8) Smoke and fog security systems. Equipment and systems that intentionally produces artificial smoke or fog that obscures the means of egress shall be prohibited.

Exception: Equipment and systems that produce artificial smoke or fog used in the testing or commissioning of building systems, or as part of an approved theatrical or other performance shall be permitted.

Reason: Security systems which release dense smoke within the premises when activated are being marketed for installation in retail establishments. Such activation would restrict the ability of occupants from being able to exit the building in a timely manner if necessary, and may result in disoriented occupants being injured in the smoke. These systems are not currently listed by a nationally recognized testing lab for their overall safety, or to verify that they are not likely to activate while the building is occupied. This proposal provides the code official with the tools necessary to prevent the installation of these systems.

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

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

E16-07/08

Table 1004.1.1, (IFC [B] Table 1004.1.1)

Proponent: Tom Lariviere, Madison Fire Department, representing Joint Fire Service Review Committee

Revise table as follows:

**TABLE 1004.1.1 (IFC [B] TABLE 1004.1.1)
MAXIMUM FLOOR AREA ALLOWANCES PER OCCUPANT**

FUNCTION OF SPACE	FLOOR AREA IN SQ. FT. PER OCCUPANT
Assembly without fixed seats	
Concentrated (chairs only – not fixed)	7 net
Standing space	5 7 net
Unconcentrated (tables and chairs)	15 net

(Portions of the table and footnotes not shown remain unchanged).

Reason: During the code adoption cycle for the 2006 Edition, IBC Section 1004.2 was revised to restrict the maximum increased occupant load to 7 square feet per occupant as opposed to the previous requirement of 5 square feet per occupant. The proponent indicated that decreasing the density to 7 square feet per occupant increased the rate of movement by approximately 40%.

The submittal was approved as submitted by the Committee with the following reason: "Using 5 square feet per person as an increased occupant load is a hazard for occupants. The increase to 7 square feet is appropriate to avoid overcrowding, especially in assembly type occupancies". This revision is currently in Section 1004.2.

The current Table 1004.1.1 allows a factor of 5 square feet per occupant for standing spaces in Assembly occupancies without fixed seats. Based on the fact that the Committee indicated that 5 square feet per occupant is hazardous to occupants, especially in assembly occupancies, the table should be revised so that the maximum density is 7 square feet per occupant.

This proposal will correlate the requirements between the two code sections

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

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

E17-07/08

Table 1004.1.1, (IFC [B] Table 1004.1.1)

Proponent: David Fable, US General Services Administration

Revise as follows:

**TABLE 1004.1.1 (IFC [B] TABLE 1004.1.1)
MAXIMUM FLOOR AREA ALLOWANCES PER OCCUPANT**

FUNCTION OF SPACE	FLOOR AREA IN SQ. FT. PER OCCUPANT
Business areas	100 175 gross

For SI: 1 square foot – 0.0929 m²

(Portions of table not shown remain unchanged)

Reason: The intent of this code change proposal is to revise the current maximum floor area allowance per occupant in Table 1004.1.1 for business occupancies from 100 ft²/person (gross) to 175 ft²/person (gross) for determining the means of egress requirements in Group B occupancies. Our rationale is based on several past research studies that have concluded that the 100 ft²/person (gross) occupant load factor for business occupancies is very conservative which has led to requiring Group B occupancies and office buildings in general to have additional egress capacity and a greater number of exits to accommodate an "over-estimated" building population. We believe the increase from 100 ft²/person (gross) to 175 ft²/person (gross) for business occupancies is still a conservative figure; yet reasonable, based on recent changes in office building design as well as changes in the North American workplace and work style trends; such as work station configurations, flexible work schedules, telecommuting, work at home, etc.

The existing occupant load factor of 100 ft²/person (gross) for business occupancies first appeared in the 3rd edition of the *Building Exits Code* that was published in 1934. The occupant load factor of 100 ft²/person (gross) was specified for office, factory, and workrooms. All occupant load factors were based on the gross floor area of the building, such that no deduction was permitted for corridors, closets, restrooms, or other subdivisions.

To our knowledge there is no formal record indicating the basis of the occupant load factors included in the 1934 Buildings Exits Code. However, it seems likely that the results from a National Bureau of Standards (NBS) [now referred to as National Institute of Standards and Technology (NIST)] study published in 1935 were the most likely basis of the occupant load factors adopted into the 1934 Code.

However, since the initial NBS study in 1935, several other studies have been conducted to determine the occupant load factors for various occupancies. One common similarity of each of the studies was that all of the subsequent studies have concluded that the 100 ft²/person (gross) occupant load factor for business occupancies is conservative. Studies conducted between 1966 and 1992 have indicated that occupant load factors in business occupancies ranged from 150 ft²/person (gross) to 278 ft²/person (gross). In addition, a 1995 study of 23 Federal sector and private sector office buildings also indicated a mean occupant load factor of 248 ft²/person for all office buildings.

Based on all these points stated above and the occupant load factor ranges cited in recent studies, we believe it would be reasonable to increase the occupant load factor of 100 ft²/person (gross) in Table 1004.1 of IBC for determining the means of egress requirements in Group B business occupancies to 175 ft²/person (gross).

Reference: Milke, James, A., and Caro, Tony, "Evaluation of Survey Procedures for Determining Occupant Load Factors in Contemporary Office Buildings", National Institute of Standards and Technology, NIST-GCR-96-698, June 1996

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

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

E18-07/08

1005.1, (IFC [B] 1005.1)

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

Revise as follows:

1005.1 (IFC [B] 1005.1) Minimum required egress width. The means of egress width shall not be less than required by this section. The total width of means of egress in inches (mm) shall not be less than the total occupant load served by the means of egress multiplied by the factors in Table 1005.1 and not less than specified elsewhere in this code. Multiple means of egress shall be sized such that the loss of any one means of egress shall not reduce the available capacity width to less than 50 percent of the required capacity width. The maximum capacity required width based on the occupant load served from any story of a building shall be maintained to the termination of the means of egress.

Exception: Means of egress complying with Section 1025.

Reason: Section 1005.1 prescribes the general provisions for the proper determination of means of egress width. It includes minimum width determination procedures as well as apportionment and maintenance of width requirements. The term "width" should be consistently applied throughout the section. Currently, the term "capacity" is inappropriately used in three locations. The term "capacity" is not defined and has no formal significance in IBC means of egress requirements. The term is used within the NFPA 101 means of egress system. In fact, NFPA 101 uses the term "capacity" in lieu of the term "width." The fundamental nature of Section 1005.1 necessitates consistency in terminology. A similar proposal was submitted during the previous code development cycle and the code development committee raised a valid concern about the maintenance of width provision in the last sentence. That has since been corrected. Approval of this proposal will clarify means of egress code provisions and assist in the uniform interpretation of these basic provisions.

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

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

E19-07/08

Table 1005.1 (IFC [B]1005.1), 3403.5(New), 3410.6.11, Table 3410.6.11(1) (New), Table 3410.6.11, [IEBC [B]302.5(New), [B]1306.11.1(New), [B]Table 1306.11.1(1) (New), Table 1306.11.1]; IFC 1027.2(New), Table 1027.2(New); IEBC 604.2(New), Table 604.2(New), 912.4.1, 912.4.2

Proponent: David Fable, US General Services Administration

THESE PROPOSALS ARE ON THE AGENDA OF THE IBC MEANS OF EGRESS, IFC AND THE IEBC CODE DEVELOPMENT COMMITTEES AS 3 SEPARATE CODE CHANGES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IBC MEANS OF EGRESS

1. Delete and substitute as follows:

**TABLE 1005.1 (IFC [B] 1005.1) (Supp)
 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	Not permitted	Not permitted	0.3	0.2
Institutional: I-2	Not permitted	Not permitted	0.3	0.2

For SI: 1 inch – 25.4 mm.

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

**TABLE 1005.1 (IFC [B] TABLE 1005.1)
 EGRESS WIDTH PER OCCUPANT SERVED**

OCCUPANCY	STAIRWAYS (INCHES PER OCCUPANT)	OTHER EGRESS COMPONENTS (INCHES PER OCCUPANT)
All occupancies	0.3	0.2

For SI: 1 inch – 25.4 mm.

3403.5 (IEBC 302.5) Means of egress capacity factors. Alterations to any existing building or structure shall not be affected by the egress width factors in Table 1005.1 for new construction in determining the minimum egress widths or the minimum number of exits in an existing building or structure. The minimum egress widths for the components of the means of egress shall be based on the means of egress width factors in the building code under which the building was constructed, and shall be considered as complying means of egress for any alteration if, in the opinion of the building official, they do not constitute a distinct hazard to life.

2. Revise as follows:

3410.6.11 (IEBC [B] 1301.6.11) Means-of-egress capacity and number. Evaluate the means-of-egress capacity and the number of exits available to the building occupants. In applying this section, the means of egress are required to conform to the following sections of the *International Building Code*: 1003.7, 1004, 1005.1, 1014.2, 1014.3, 1015.2, 1019, 1024.1, 1024.2, 1024.6, 1025.2, 1024.3, 1024.4 and 1026 (except that the minimum width required by this section shall be determined solely by the width for the required capacity in accordance with Table 3410.6.11(1)). The number of exits credited is the number that is available to each occupant of the area being evaluated. Existing fire escapes shall be accepted as a component in the means of egress when conforming to Section 705.3.1.2. Under the categories and occupancies in Table 1301.6.11(2), determine the appropriate value and enter that value into Table 1301.7 under Safety Parameter 1301.6.11, Means-of-Egress Capacity, for means of egress and general safety.

**TABLE 3410.6.11(1) [IEBC TABLE 1306.11.1(1)]
EGRESS WIDTH PER OCCUPANT SERVED**

OCCUPANCY	WITHOUT SPRINKLER SYSTEM		WITH SPRINKLER SYSTEM^a	
	<u>Stairways (inches per occupant)</u>	<u>Other egress components (inches per occupant)</u>	<u>Stairways (inches per occupant)</u>	<u>Other egress components (inches per occupant)</u>
<u>Occupancies other than those listed below</u>	<u>0.3</u>	<u>0.2</u>	<u>0.2</u>	<u>0.15</u>
<u>Hazardous: H-1, H-2, H-3 and H-4</u>	<u>Not permitted</u>	<u>Not permitted</u>	<u>0.3</u>	<u>0.2</u>
<u>Institutional: I-2</u>	<u>Not permitted</u>	<u>Not permitted</u>	<u>0.3</u>	<u>0.2</u>

For SI: 1 inch – 25.4 mm.

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

**TABLE 3410.6.11(2) [IEBC TABLE 1306.11.1(2)]
MEANS OF EGRESS VALUES**

(No change to table – change reference to table in)

PART II – IFC

Add new text as follows:

1027.2 Minimum required egress width. The means of egress width shall not be less than required by this section. The total width of means of egress in inches (mm) shall not be less than the total occupant load served by the means of egress multiplied by the factors in Table 1027.2 and not less than specified elsewhere in this section. Multiple means of egress shall be sized such that the loss of any one means of egress shall not reduce the available capacity to less than 50 percent of the required capacity. The maximum capacity required from any story of a building shall be maintained to the termination of the means of egress.

**TABLE 1027.2
EGRESS WIDTH PER OCCUPANT SERVED**

OCCUPANCY	WITHOUT SPRINKLER SYSTEM		WITH SPRINKLER SYSTEM^a	
	<u>Stairways (inches per occupant)</u>	<u>Other egress components (inches per occupant)</u>	<u>Stairways (inches per occupant)</u>	<u>Other egress components (inches per occupant)</u>
<u>Occupancies other than those listed below</u>	<u>0.3</u>	<u>0.2</u>	<u>0.2</u>	<u>0.15</u>
<u>Hazardous: H-1, H-2, H-3 and H-4</u>	<u>Not permitted</u>	<u>Not permitted</u>	<u>0.3</u>	<u>0.2</u>
<u>Institutional: I-2</u>	<u>Not permitted</u>	<u>Not permitted</u>	<u>0.3</u>	<u>0.2</u>

For SI: 1 inch – 25.4 mm.

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

PART III – IEBC

1. Add new text as follows:

604.2 Minimum required egress width. The means of egress width shall not be less than required by this section. The total width of means of egress in inches (mm) shall not be less than the total occupant load served by the means of egress multiplied by the factors in Table 604.2 and not less than specified elsewhere in this section. Multiple means of egress shall be sized such that the loss of any one means of egress shall not reduce the available capacity to less than 50 percent of the required capacity. The maximum capacity required from any story of a building shall be maintained to the termination of the means of egress.

**TABLE 604.2
EGRESS WIDTH PER OCCUPANT SERVED**

OCCUPANCY	WITHOUT SPRINKLER SYSTEM		WITH SPRINKLER SYSTEM^a	
	<u>Stairways (inches per occupant)</u>	<u>Other egress components (inches per occupant)</u>	<u>Stairways (inches per occupant)</u>	<u>Other egress components (inches per occupant)</u>
<u>Occupancies other than those listed below</u>	<u>0.3</u>	<u>0.2</u>	<u>0.2</u>	<u>0.15</u>
<u>Hazardous: H-1, H-2, H-3 and H-4</u>	<u>Not permitted</u>	<u>Not permitted</u>	<u>0.3</u>	<u>0.2</u>
<u>Institutional: I-2</u>	<u>Not permitted</u>	<u>Not permitted</u>	<u>0.3</u>	<u>0.2</u>

For SI: 1 inch – 25.4 mm.

a. Buildings equipped throughout with an automatic sprinkler system in accordance with the *International Building Code* Section 903.3.1.1 or 903.3.1.2.

2. Revise as follows:

912.4.1 Means of egress for change to higher hazard category. When a change of occupancy classification is made to a higher hazard category (lower number) as shown in Table 912.4, the means of egress shall comply with the requirements of Chapter 10 of the *International Building Code*.

Exceptions:

1. Stairways shall be enclosed in compliance with the applicable provisions of Section 803.1.
2. Existing stairways including handrails and guards complying with the requirements of Chapter 8 shall be permitted for continued use subject to approval of the code official.
3. Any stairway replacing an existing stairway within a space where the pitch or slope cannot be reduced because of existing construction shall not be required to comply with the maximum riser height and minimum tread depth requirements.
4. Existing corridor walls constructed of wood lath and plaster in good condition or 1/2-inch-thick (12.7 mm) gypsum wallboard shall be permitted.
5. Existing corridor doorways, transoms, and other corridor openings shall comply with the requirements in Sections 705.5.1, 705.5.2, and 705.5.3.
6. Existing dead-end corridors shall comply with the requirements in Section 705.6.
7. An existing operable window with clear opening area no less than 4 square feet (0.38 m²) and with minimum opening height and width of 22 inches (559 mm) and 20 inches (508 mm), respectively, shall be accepted as an emergency escape and rescue opening.
8. Existing corridors shall be permitted to comply with the egress width capacity as determined by Table 604.2.

912.4.2 Means of egress for change of use to equal or lower hazard category. When a change of occupancy classification is made to an equal or lesser hazard category (higher number) as shown in Table 912.4, existing elements of the means of egress shall comply with the requirements of Section 805 for the new occupancy classification. Newly constructed or configured means of egress shall comply with the requirements of Chapter 10 of the *International Building Code*.

Exceptions:

1. Any stairway replacing an existing stairway within a space where the pitch or slope cannot be reduced because of existing construction shall not be required to comply with the maximum riser height and minimum tread depth requirements.
2. Existing corridors shall be permitted to comply with the egress width capacity as determined by Table 604.2.

Reason: PART I - IBC Table 1005.1: The intent of this code change is to ensure coordination of requirements within the IBC. This is Part 4 of addressing the proposed new egress width factors in Table 1005.1 of the IBC (see PART 1) such that the impact of such revisions to Table 1005.1 will not be detrimental to existing building stock across the country when utilizing compliance alternatives in Chapter 34 of the IBC.

3403.5/IEBC 302.5: The intent of this code change is to ensure coordination of requirements within the IBC. This is Part 3 of addressing the proposed new egress width factors in Table 1005.1 such that the impact of such revisions to Table 1005.1 of the IBC (see PART 1) will not be detrimental to existing building stock across the country when making alterations in accordance with the requirements in Chapter 34 of the IBC.

3410.6.11/IEBC 1306.11: The intent of this code change is to revise the egress width factors in Table 1005.1 such that the concept of determining egress capacity for the components of the means of egress within a building is not a function of whether or not a building is protected throughout by an automatic fire sprinkler system. Not all building emergencies that necessitate occupant egress either out of a building or within a building to a safe area are dependent on a fire sprinkler system. Please also note that the occupancy factors are still unchanged for I-2 and H occupancies since all I-2 and H occupancies are required to be protected by an automatic fire sprinkler system.

PART II - The intent of this code change is to ensure coordination between the requirements in the IBC and the IFC. This is Part II of addressing the proposed new egress width factors in Table 1005.1 of the IBC (see PART I) such that the impact of such revisions to Table 1005.1 will not be detrimental to existing building stock across the country when enforcing the requirements of the IFC.

PART III - The intent of this code change is to ensure coordination between the requirements in the IBC and the IEBC. This is Part III of addressing the proposed new egress width factors in Table 1005.1 of the IBC (see PART I) such that the impact of such revisions to Table 1005.1 will not be detrimental to existing building stock across the country when enforcing the requirements of the IFC.

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

Analysis: IBC Section 3410.6.11 was revised to coordinate with IEBC Section 1301.6.11 by the CCC committee at their Sept. 2007 meeting. EB62-04/05 revise the general reference to IBC Chapter 10 in IEBC 1301.6.11 to the specific sections dealing with means of egress capacity and number.

PART I – IBC MEANS OF EGRESS

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

PART II – IFC

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

PART III – IEBC

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

**E20–07/08
1005.2 (IFC [B] 1005.2)**

Proponent: Philip Brazil, Reid Middleton, representing himself

Revise as follows:

1005.2 (IFC [B] 1005.2) (Supp) Encroachment. Doors, when fully opened, and handrails shall not reduce the required means of egress 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~~ shall be permitted to project into the required width a maximum of 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.

Reason: The purpose of the proposal is to more clearly convey the intent of the changes approved by Proposal E18-07/08-AM by eliminating nonmandatory language and establishing a more objective limit on nonstructural projections.

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

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

E21-07/08

1006.1 (IFC [B] 1006.1)

Proponent: Dave Collins, AIA, The Preview Group, Inc., representing the AIA Codes Committee

Revise as follows:

1006.1 (IFC [B] 1006.1) Illumination required. The means of egress, including the exit discharge, shall be illuminated at all times the building space served by the means of egress is occupied.

Exceptions:

1. Occupancies in Group U.
2. Aisle accessways in Group A.
3. Dwelling units and sleeping units in Groups R-1, R-2 and R-3.
4. Sleeping units of Group I occupancies.

Means of egress lighting shall be controlled by motion sensors and shall turn on the egress lighting system in the corridor, stair or exit discharge only when the corridor, stair or exit discharge or other such egress element is occupied.

Reason: The use of motion sensors or other activating devices to help control the amount of energy used in buildings is gaining in use and popularity. Making it clear that the egress lighting can be activated when persons enter the element of the means of egress is an important clarification of the code. ASHRAE 90.1 has called for the use of this type of energy savings in occupied spaces and to carry that forward to the egress lighting in literally millions of buildings will have a significant impact on energy savings in buildings.

In a related change to the IECC, we are requiring a 50% reduction in the energy use of buildings. To achieve this will require significantly more aggressive design solutions for buildings of all types. Requiring that the corridor, stair or exterior light be illuminated even when it is not being used is counter productive to a policy of energy savings at all levels

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

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

E22-07/08

1006.2 (IFC [B] 1006.2)

Proponent: Tom Lariviere, Madison Fire Department; representing Joint Fire Service Review Committee

Revise as follows:

1006.2 (IFC [B] 1006.2) Illumination level. The means of egress illumination level shall not be less than 1 foot-candle (11 lux) at the walking surface. Illumination shall be provided such that the failure of any single bulb will not reduce the illumination level below 0.2 foot-candle (2.15 lux).

Exception: For auditoriums, theaters, concert or opera halls and similar assembly occupancies, the illumination at the walking surface is permitted to be reduced during performances to not less than 0.2 foot-candle (2.15 lux), provided that the required illumination is automatically restored upon activation of a premises' fire alarm system where such system is provided.

Reason: This will ensure that no area is left in darkness should a single bulb fail within the means of egress. When areas are lit by only a single bulb and that bulb no longer operates, the area then is unlit. This will provide for a minimum level in lighting even after the failure of a bulb.

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

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

E23-07/08

1006.3 (IFC [B] 1006.3)

Proponent: Lawrence G. Perry, AIA, representing Building Owners and Managers Association (BOMA) International

Revise as follows:

1006.3 (IFC [B] 1006.3) Illumination emergency power. The power supply for means of egress illumination shall normally be provided by the premises' electrical supply.

In the event of power supply failure, an emergency electrical system shall automatically illuminate the following areas:

1. Aisles and unenclosed egress stairways in rooms and spaces that require two or more means of egress.
2. Corridors, exit enclosures and exit passageways in buildings required to have two or more exits.

Exception: An emergency electrical system is not required to automatically illuminate exit enclosures and exit passageways that are provided with exit path markings in accordance with Section 1027.

3. Exterior egress components at other than the level of exit discharge until exit discharge is accomplished for buildings required to have two or more exits.
4. Interior exit discharge elements, as permitted in Section 1024.1, in buildings required to have two or more exits.
5. Exterior landings, as required by Section 1008.1.5, for exit discharge doorways in buildings required to have two or more exits.

The emergency power system shall provide power for a duration of not less than 90 minutes and shall consist of storage batteries, unit equipment or an on-site generator. The installation of the emergency power system shall be in accordance with Section 2702.

Reason: This proposal seeks to eliminate the requirement for emergency illumination in exit enclosures and exit passageways where photoluminescent exit path markings are provided. With the approval of a public comment to Code Change E84-07/08 at the Rochester Final Action Hearings, there is now a requirement for photoluminescent exit path markings in all exit enclosures and exit passageways in new high-rise buildings. If these newly required systems perform as well as the proponents have indicated, it is an unnecessary initial and ongoing expense to also provide emergency lighting in the same enclosures and passageways.

As written, this proposal would also provide the option for non high-rise buildings to provide photoluminescent exit path marking complying with Section 1027 in lieu of emergency lighting.

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

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

E24-07/08

1007.1 (IFC [B] 1007.1)

Proponent: Maureen Traxler, City of Seattle, representing Washington Association of Building Officials Technical Code Development Committee

Revise as follows:

1007.1 (IFC [B] 1007.1) (Supp) Accessible means of egress required. Accessible means of egress shall comply with this section. Accessible spaces that are required to be provided with an accessible route 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 areas with sloped or stepped aisles, one accessible means of egress is permitted where the common path of travel is accessible and meets the requirements in Section 1025.8.

Reason: Certain areas of buildings are required to be accessible according to Section 1103, but are not required to be served by an accessible route. Examples include accessible restrooms on mezzanines subject to Section 1104.4 exception 1. Because they are accessible, these spaces are required to have an accessible means of egress by Section 1007. The intent behind Section 1007.1 was to require accessible means of egress to spaces to which an accessible route is required. It would be unreasonable to require accessible egress from spaces that don't have accessible access

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

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

E25-07/08

1007.1 (IFC [B] 1007.1)

Proponent: Daniel Weed, CBO, City of Central, CO, representing himself

Revise as follows:

1007.1 (IFC [B] 1007.1) (Supp) 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. When two accessible means of egress are required, the two exits shall also meet the requirements in Sections 1014.3, 1015.2.1 and 1016.1.

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 areas with sloped or stepped aisles, one accessible means of egress is permitted where the common path of travel is accessible and meets the requirements in Section 1025.8.

Reason: The purpose of this code change is to allow the handicapped the same amount of protection in getting to an exit that able-bodied people are allowed. Currently, there is nothing in the code that requires the accessible means of egress to be limited in common path of egress travel or to have a maximum travel distance for the two accessible means of egress when they are required.

It is currently possible for able bodied people to run from a room in an emergency and go out into a corridor, whereupon they have a choice of two paths, each leading to an exit that they may use. The distance they may travel within the room is limited by common path of egress travel, as is the total travel distance from within the room until they reach an exit.

But the disabled person in the same room may make their way more slowly to the corridor, and the accessible means of egress may force them in only one direction. They may have to go until they get to the far end of the building, several hundred feet away. There they may find one of the two accessible exits that were provided. One may be blocked by fire, and the only other accessible exit may be right beside it because separation of exits is not required as it is for able bodied people.

Section 1104.5 states that "Accessible routes shall coincide with or be located in the same area as a general circulation path". Both accessible means of egress should also stay in line with this intent, and follow common circulation paths.

The same protection for disabled people regarding placement of exits should be provided that is provided for able bodied people. This code change will help the disabled to get to an exit quickly and will make sure that when two accessible means of egress are required, there is still a useable exit available if one is blocked. They should not be made to travel undetermined distances without limit on their way to a useable exit, and they should not have to travel an undetermined common path of egress travel distance before they have a choice of two ways to go. Finally, their useable exits should be far enough apart that if one is blocked; the other is a safe distance from the blockage so as to affect escape.

Hopefully this code change will prevent any accidents and lawsuits in the future regarding unequal treatment of the disabled.

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

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

E26-07/08

1007.1 (IFC [B] 1007.1), 1007.5 (IFC [B] 1007.5), 1007.5.1 (IFC [B] 1007.5.1), 3409.6 (IEBC [B] 308.6), 3409.7 (IEBC [B] 308.7), 3409.8.3 (IEBC [B] 308.8.3); IEBC 605.1, 605.1.3, 605.2

Proponent: Steve Lomske, American Craftsman Builders and Renovators

THESE PROPOSALS ARE ON THE AGENDA OF THE IBC MEANS OF EGRESS AND THE EXISTING BUILDING CODE DEVELOPMENT COMMITTEES AS 2 SEPARATE CODE CHANGES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IBC MEANS OF EGRESS

Revise as follows:

1007.1 (IFC [B] 1007.1) (Supp) 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 unless technically infeasible. Where compliance with the new construction requirements for accessible means of egress is technically infeasible, the altered space or structure shall provide accessible means of egress to the maximum extent technically feasible.
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 areas with sloped or stepped aisles, one accessible means of egress is permitted where the common path of travel is accessible and meets the requirements in Section 1025.8.

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

Exceptions:

1. The altered element or space is not required to be on an accessible route or have accessible means of egress, unless required by Section 3409.7.
- ~~2. Accessible means of egress required by Chapter 10 are not required to be provided in existing buildings and facilities.~~
- ~~3. 2.~~ The alteration to Type A individually owned dwelling units within a Group R-2 occupancy shall meet the provision for a Type B dwelling unit and shall comply with the applicable provisions in Chapter 11 and ICC A117.1.
- ~~4. 3.~~ Type A dwelling units or sleeping units required by Section 1107 are not required to be provided in existing building and facilities being altered.

3409.7 (IEBC [B] 308.7) Alterations affecting an area containing a primary function. Where an alteration affects the accessibility to a, or contains an area of, primary function, the route to the primary function area shall be accessible. The accessible route to the primary function area shall include toilet facilities or drinking fountains serving the area of primary function. Accessible means of egress shall be provided from the altered area in accordance with Section 1007.

Exceptions:

1. The costs of providing the accessible route and accessible means of egress are not required to exceed 20 percent of the costs of the alterations affecting the area of primary function.
2. This provision does not apply to alterations limited solely to windows, hardware, operating controls, electrical outlets and signs.
3. This provision does not apply to alterations limited solely to mechanical systems, electrical systems, installation or alteration of fire protection systems and abatement of hazardous materials.
4. This provision does not apply to alterations undertaken for the primary purpose of increasing the accessibility of an existing building, facility or element.

1007.5 (IFC [B] 1007.5) Platform lifts. Platform (wheelchair) lifts shall not serve as part of an accessible means of egress, except where allowed as part of a required accessible route in Section 1109.7, Items 1 through 9. Standby power shall be provided in accordance with Section 2702.2.6 for platform lifts permitted to serve as part of a means of egress.

Exception: Platform lifts shall be permitted to serve as part of an accessible means of egress in existing buildings.

1007.5.1 (IFC [B] 1007.5.1) Openness. Platform lifts on an accessible means of egress shall not be installed in a fully enclosed or fire-rated shaft.

Exception: Platform lifts that serve as part of an accessible means of egress in existing buildings.

3409.8.3 (IEBC [B] 308.8.3) Platform lifts. Platform (wheelchair) lifts complying with ICC A117.1 and installed in accordance with ASME A18.1 shall be permitted as a component of an accessible route. Platform (wheelchair) lifts provided with standby power in accordance with Section 2702.2.6 are permitted to serve as part of an accessible means of egress.

PART II – IEBC

Revise as follows:

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

A building, facility or element that is constructed or altered to be accessible shall be maintained accessible during occupancy.

Exceptions:

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

605.2 Alterations affecting an area containing a primary function. Where an alteration affects the accessibility to a, or contains an area of, primary function, the route to the primary function area shall be accessible. The accessible route to the primary function area shall include toilet facilities or drinking fountains serving the area of primary function. Accessible means of egress shall be provided from the altered area in accordance with the *International Building Code* Section 1007.

Exceptions:

1. The costs of providing the accessible route and accessible means of egress are not required to exceed 20 percent of the costs of the alterations affecting the area of primary function.
2. This provision does not apply to alterations limited solely to windows, hardware, operating controls, electrical outlets and signs.
3. This provision does not apply to alterations limited solely to mechanical systems, electrical systems, installation or alteration of fire protection systems and abatement of hazardous materials.
4. This provision does not apply to alterations undertaken for the primary purpose of increasing the accessibility of an existing building, facility or element.

605.1.3 Platform lifts. Platform (wheelchair) lifts complying with ICC A117.1 and installed in accordance with ASME A18.1 shall be permitted as a component of an accessible route. Platform (wheelchair) lifts provided with standby power in accordance with Section 2702.2.6 are permitted to serve as part of an accessible means of egress.

Reason: The reason for the change is to provide safer means of egress for physically challenged occupants and provide clarity to the code. Many existing buildings only provide one accessible way into a building and therefore only provide one path of egress for disabled occupants. Where that accessible route into the building includes elevators or platform lifts, there may not even be one accessible means of egress. Whereas, ambulatory occupants have many means of egress, by code, available to them in case of an emergency, if the accessible route in is blocked, there also needs to be a second accessible means of egress. The current code text is being interpreted many different ways by various code administrators. Under the current code text when a means of egress element or the exit is being altered it allows the, code official, building owner, project designer or contractor to ignore the need to provide a safe means of egress for physically challenged occupants even if it is possible to provide the required accessible exit elements as part of the alteration. (i.e. install a ramp at the exit vs. stairs. Or provide an area for assisted rescue within or at an exit discharge within the scope of the altered space.) This code revision at the least attempts to bring attention to the fact that the need for accessible means of egress should be considered in the, budgeting, planning, design and code review stages of the project.

By the inclusion of the means of egress in the existing building route requirements, a reasonable cost is associated with providing this additional feature. Also provisions that will allow for a platform lift to serve as part of the accessible route is needed since in many situations in existing buildings this may be the only option for access. Commonly these platform lifts are located within existing stair towers, thus the need for the exception for the shaft enclosure in 1007.5.1.

Cost Impact: The code change may have a cost increase on construction, however it may save a life of a physically challenged occupant during a building evacuation.

PART I – IBC MEANS OF EGRES

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

PART II – IEBC

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

E27–07/08

1007.1 (IFC [B] 1007.1)

Proponent: Lawrence G. Perry, AIA, representing Building Owners and Managers Association (BOMA) International

Revise as follows:

1007.1 (IFC [B] 1007.1) (Supp) 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 from rooms, spaces or floor levels not located on an accessible route, as permitted by Section 1103.2.
- ~~1. 2.~~ Accessible means of egress are not required in alterations to existing buildings.
- ~~2. 3.~~ One accessible means of egress is required from an accessible mezzanine level in accordance with Section 1007.3, 1007.4 or 1007.5.
- ~~3. 4.~~ In assembly areas with sloped or stepped aisles, one accessible means of egress is permitted where the common path of travel is accessible and meets the requirements in Section 1025.8.

Reason: This proposal seeks to add a clear exception indicating that accessible means of egress need not be provided from rooms, spaces or floor levels that are not located on an accessible route. If an individual is able to reach a room, space or floor that is not required to be served by an accessible route (and therefore would typically require travel via stairs), it is reasonable to assume that the same individual would be able to leave the room, space or floor level in the event of an emergency requiring evacuation.

The fundamental question on this issue is whether accessible means of egress should be provided to all spaces unless they qualify for a complete exception from all accessibility provisions, or if they should only be required when there is a requirement to provide an accessible route to gain access to the space.

There have been different readings of the current provisions. It is the opinion of this proponent that the intent of the original BCMA report addressing accessibility and accessible means of egress, the legacy codes, current ADAAG, and current IBC text is as stated in the proposed new exception. However, because the current code text at 1007.1 states that 'accessible spaces' shall be provided with accessible means of egress, it can also be read to mean that although an exception may be provided from the requirement to provide an accessible route between levels, other accessibility requirements (height of controls, toilet room features, etc.) still apply to the level, and therefore still require an accessible means of egress. It is a question as to whether a space without an accessible route to get to it is 'accessible enough' to warrant the additional requirement for accessible means of egress.

The proposed exception has been linked to Section 1103.2, which includes all the linkage needed for rooms, spaces, or floors that may not be required to be on an accessible route. The list of exceptions in 1103.2 includes an exception for rooms, spaces or floors that are 'exempted' from being on an accessible route in Sections 1104 through 1110. If a room, space, or floor qualified for one of the exceptions, but an accessible route were provided anyway, this proposed exception would require compliance with the accessible means of egress provisions, as the exception is tied to whether or not an accessible route is provided, rather than if the route was required.

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

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

E28-07/08

1007.1 (IFC [B] 1007.1)

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

Revise as follows:

1007.1 (IFC [B] 1007.1) (Supp) 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 areas with sloped or stepped aisles, one accessible means of egress is permitted where the common path of travel is accessible and meets the requirements in Section 1025.8.
4. An accessible means of egress are not required from accessible spaces that are not required by Section 1104 to be provided with accessible route.

1104.4 (Supp) 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. Vertical 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.

Reason: Section 1104 requires accessible routes within the site to accessible facilities and building entrances and to each portion of the buildings with accessible building entrances on the site. Section 1104.4, for example, requires each accessible level, including mezzanines, in multilevel buildings and facilities to be connected by at least one accessible route. Exception #1, however, exempts stories and mezzanines above or below accessible levels from the requirement for an accessible route provided their aggregate area is limited to 3,000 square feet (not permitted for certain uses as specified). Section 1007.1 requires accessible spaces to be provided with at least one accessible means of egress (two if more than one means of egress is required). Section 1103.1 requires buildings, structures, facilities, elements and spaces to be accessible unless exempted by

Section 1103.2. Some code users have interpreted these provisions as meaning an accessible space (i.e., required to be accessible by Section 1103) that is exempt from the requirement for an accessible route is still required to be provided with at least one accessible means of egress. This is judged to be a conflict and not the intent. A similar case can be made for the other exemptions from the requirement for an accessible route in Section 1104.

This proposal solves the conflict by adding an exception to Section 1007.1 stating that accessible means of egress are not required from accessible spaces that are not required by Section 1104 to be provided with an accessible route. The accessible spaces would still need to comply with all other requirements for accessibility. They would only be exempted from the requirement for accessible means of egress. An accessible means of egress is typically intended to serve persons unable to use a stairway for egress. A person that has gained access to an accessible space by a stairway is assumed able to egress from the space by the same stairway.

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

Analysis: There is no change proposed to Section 1104.4 (Supp). This text is reprinted in order to facilitate evaluation of the proposed exception.

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

E29-07/08

1007.3 (IFC [B] 1007.3)

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

Revise as follows:

1007.3 (IFC [B] 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 or 903.3.1.2.
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. 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. 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.
7. The areas of refuge are not required in Group R-2 occupancies.

Reason: The phrase "or facilities" as used in this section is ambiguous. "Facility" is defined in Section 1102 broadly enough to include everything from a "portion of buildings" to "all ... structures... located on a site." The definition raises the question whether, in order to use these exceptions, a sprinkler system is required in the entire building, in a portion of the building, or throughout the entire site. Removing "facilities" makes it clear that the entire building is required to be sprinklered, which is the most likely interpretation of the existing language. This interpretation is supported by the 2006 International Building Code Commentary that says, in reference to exception 2 of the 2006 IBC (which is now exception 1) "...for an unenclosed exit stairway ... in a building sprinklered in accordance with NFPA 13, an area of refuge is not required." In regard to exception 3 (which is now exception 2), the Commentary says "Exception 3 exempts the 48-inch (1219 mm) width requirement in buildings sprinklered in accordance with NFPA 13 or NFPA 13R for both enclosed and unenclosed stairways." (emphasis added.)

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

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

E30-07/08

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

Proponent: Greg Lake, Sacramento Metropolitan Fire District, representing the California Fire Chiefs Association (Cal Chiefs)

Revise as follows:

1007.3 (IFC [B] 1007.3) (Supp) 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 or 903.3.1.2.
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. Where an automatic sprinkler system is installed in accordance with Section 903.3.1.1 or 903.3.1.2, 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 complying with either of the following:
 - 3.1. Buildings or facilities not more than three stories in height with not more than two basements, or
 - 3.2. Buildings or facilities of Type I, IIA, IIIA, IV, or VA construction where any of the following conditions are met:
 - 3.2.1. A smoke barrier complying with Section 709 is provided to subdivide each story located four or more stories above or below the level of exit discharge into at least two smoke compartments complying with Section 407.4.2; or
 - 3.2.2. A smoke control system is provided in accordance with Section 909 and is capable of continued operation after detection of the fire event for a period of not less than one hour; or
 - 3.2.3. An elevator complying with Section 1007.4 is provided.
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.
7. The areas of refuge are not required in Group R-2 occupancies.
8. Areas of refuge are not required at exit stairways in any story where a horizontal exit is provided.

1007.4 (IFC [B] 1007.4) (Supp) 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 or and facilities of Type I, IIA, IIA, IV or VA construction equipped throughout by an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2 where any of the following conditions are met:
 - 2.1. A smoke barrier complying with Section 709 is provided to subdivide each story located four or more stories above or below a level of exit discharge into at least two smoke compartments complying with Section 407.4.2;
 - 2.2. A smoke control system is provided in accordance with Section 909 and is capable of continued operation after detection of the fire event for a period of not less than 1 hour;
 - 2.3. An enclosed elevator lobby is provided at each floor landing to separate the elevator shaft enclosure doors from each floor by smoke barriers complying with Section 709.

2.4. In buildings having occupied floors located not more than 75 feet (22,860 mm) above the lowest level of fire department vehicle access an enclosed elevator lobby is provided at each floor landing to separate the elevator shaft enclosure doors from each floor by smoke partitions complying with Section 710 and having door openings protected by doors meeting the requirements of Sections 710.5.2 and 710.5.3 and duct penetrations protected with smoke dampers complying with Section 716.3.2.

3. 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~~.
4. 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.
5. Elevators are not required to be accessed from an area of refuge in any story where a horizontal exit is provided.

Reason: Cal Chiefs is submitting this code change proposal in response to the approval of Code Change E25-07/08 during the last code development cycle. That code change reinstated the automatic sprinkler system tradeoff that deleted the areas of refuge and the requirement that accessible elevators be accessed from areas of refuge or a horizontal exit when the building is sprinklered with either an NFPA 13 or NFPA 13R sprinkler system. In effect, that code change overturned the membership action taken during the ICC Final Action Hearings held in Detroit during the code development cycle previous to the last cycle where the membership overwhelmingly approved the code change proposal that completely deleted the sprinkler tradeoff.

We are especially concerned that the proposed reasons for reinstating the sprinkler trade-off were based on the fact that an "operational" automatic sprinkler system would be provided. That assumes the sprinkler system will be operational and effectively function 100% of the time. That is entirely unrealistic. Please note that these accessible means of egress and areas of refuge are intended to protect occupants with disabilities until such time as they can be safely evacuated from the building by emergency responders.

The supporting statement for Code Change E25-07/08 which reinstated the sprinkler trade-off indicated that sprinklers operate successfully 93% of the time for those fires in sprinklered buildings where the fire was judged large enough to have activated the sprinkler system. However, a more recent analysis of the sprinkler statistics compiled by the National Fire Protection Association (NFPA) as documented in a report by William E. Koffel, P.E. of Koffel Associates dated January 2006 and subsequently verified by Dr. John Hall of NFPA indicates that the overall operational reliability of automatic sprinkler systems based on the most recent data is 89%. This reflects a difference of the sprinkler system failing in one fire in every nine fires based on an 89% reliability factor versus one fire in every fourteen fires based on a 93% reliability factor. This is a significant difference (>50%) and should seriously be considered when determining whether to allow such a sprinkler exception for the protection of occupants with disabilities.

We believe the best protection for disabled occupants in buildings can be provided by the combination of an automatic sprinkler system and built-in passive fire-resistive protection or smoke control. We don't believe that areas of refuge and accessible elevators with elevator lobbies should be completely traded off for automatic sprinklers. It should also be noted that this sprinkler tradeoff will apply to buildings of any height including high-rise buildings and super high-rise buildings (those greater than 420 feet in height). Is that a reasonable sprinkler tradeoff for the protection of occupants with disabilities? We don't think so.

However, we do realize that automatic sprinkler protection does provide some benefit and should be recognized when addressing the need for areas of refuge and accessible elevators for the disabled community. It is within that spirit that we have developed this code change proposal which in essence allows the complete sprinkler tradeoff for areas of refuge in any building not more than 3 stories in height above grade plane and also having not more than two basements. We feel this is reasonable since the responding fire department or other emergency personnel should be able to reasonably rescue and/or assist in getting any disabled persons to evacuate such buildings when protected with an automatic sprinkler system without subjecting those occupants to a significant risk. However, for buildings that are four or more stories in height or have three or more basements we believe that some additional protection is necessary in addition to the automatic sprinkler system in order to allow for the omission of the area of refuge. Those conditions include the fact that the building is required to be of a fire-resistance rated type of construction so that the building has a minimum one-hour fire-resistive protection built in for the floors and their supports to provide a degree of passive protection for the disabled occupants awaiting rescue or evacuation assistance. In addition to the fire-resistive construction requirements for these buildings, we also propose to require at least one other condition to be satisfied in order to provide a reasonable level of safety for the disabled occupants. These alternate conditions include the following:

1. A smoke barrier meeting the requirements of Section 407.4 for Group I-2 Occupancies, which basically requires every floor to be subdivided by a smoke barrier, is provided.
2. A smoke control system is provided in accordance with Section 909 with the additional requirement that it be capable of continuous operation for not less than one hour rather than the 20 minutes described in Section 909. This is to provide for an additional level of protection for those disabled occupants who may have to wait more than 20 minutes to be evacuated or relocated to a safe area in the building.
3. An elevator is provided in compliance with Section 1007.4. This also ties in well with the revisions we have proposed to Section 1007.4 Elevators to modify the automatic sprinkler system tradeoff for that section.

We believe the additional conditions provided for these buildings more than four stories in height or having three or more basements are reasonable alternatives to the deletion of the areas of refuge under the current code (2007 Supplement) for a sprinklered building.

Regarding the modifications to Section 1007.4, in looking for a compromise between a complete sprinkler tradeoff for the area of refuge for accessible elevators, we have similarly made revisions to the sprinkler tradeoff. However, it should be noted that the accessible elevator is not required until a story in the building is located more than four stories above or below any level of exit discharge. So there is no need to provide a story height trigger similar to that provided for the revisions proposed to Section 1007.3 Exit Stairways. But we have included the same additional condition that these buildings, which will generally be more than four stories in height above grade plane, must be of a fire resistance rated type of construction for the same reasons. In addition, we also prescribe that at least one other condition be satisfied out of a list of four potential options. Two of the options are identical to the first two options proposed to Section 1007.3. The other two options are as follows:

1. The elevator lobby is enclosed at each floor landing using a smoke barrier complying with Section 709.
2. For buildings that are not considered high rise buildings, the elevator lobby is enclosed using a smoke partition that complies with Section 710 with the additional proviso that the door openings are protected with latches and self-closing devices and the ducts penetrating the smoke partition are protected with a smoke damper, in addition to the other requirements in Section 710 for Smoke Partitions.

Again, we believe that the additional conditions are suitable for taller buildings where disabled occupants are likely to be found and who will need some additional degree of protection in conjunction with the automatic sprinkler system that allows the elimination of the area of refuge. It should be noted that the current sprinkler tradeoff in the 2007 Supplement for the area of refuge for accessible elevators eliminates the requirement that where an elevator lobby is used as an area of refuge, the elevator shaft and the elevator lobby are required to comply with Section 1020.1.7 Smokeproof Enclosures.

They are intended to provide an environment which is relatively smoke free in which the physically disabled persons utilizing the area of refuge during a fire emergency can remain until they can be safely evacuated from the building. This function requires a greater level of fire-resistive fire protection, as well as smoke protection, than that required for elevator lobbies.

For example, the smokeproof enclosure requirements specify that the vestibule that forms the elevator lobby for the area of refuge be required to have a minimum 2-hour fire-resistance rating and be constructed as a fire barrier. The doors opening into this area of refuge from any occupied areas would require a 1 ½ - hour fire protection rating. Also, the vestibule/elevator lobby requires significant ventilation that prevents the accumulation of smoke.

The requirements for elevator lobbies in Section 707.14.1, however, specify that the lobby enclosure need only be a fire partition having a fire-resistance rating equal to the corridor. At best, this would be a 1-hour fire-resistance rating. In buildings that are sprinklered, corridors in almost all occupancies would not be required to have a fire-resistance rating. Furthermore, there are six exceptions to the elevator lobby enclosure requirement. Current Exception 4 allows for the elimination of elevator lobbies in sprinklered buildings that are not considered high-rise buildings. Exception 5 will allow the use of a smoke partition in lieu of a fire partition when the building is sprinklered. It should be noted that smoke partitions do not require closers or latches on the doors and duct penetrations are not required to be protected with fire and/or smoke dampers. Also, smoke partitions are not required to have a fire-resistance rating. And, finally, Exception 6 allows for the omission of the elevator lobby enclosure if the elevator shaft is pressurized.

Currently, Section 1007.6 will allow the omission of the special elevator lobby requirements meeting those for smokeproof enclosures where the elevators are located in an area of refuge formed by a horizontal exit or a smoke barrier. A horizontal exit is required to have a minimum 2-hour fire-resistance rating with all openings protected with 1 ½ -hour fire doors and fire dampers. Smoke barriers are required to have a minimum 1-hour fire-resistance rating with door openings protected with 20 minute smoke and draft control door assemblies and any duct openings protected with combination fire and smoke dampers.

We believe the options we've provided for in the sprinkler tradeoff exception will provide comparable protection to this requirement where an automatic sprinkler system is provided throughout.

In conclusion, we have attempted to develop a reasonable compromise for the complete elimination of areas of refuge in buildings protected with automatic sprinkler systems for the disabled occupants of the building. We believe this code change proposal will provide a reasonably equivalent level of fire and life safety without a total reliance on the successful operation of the automatic sprinkler system. This is of special concern to us in California where we have a significant potential for major earthquakes to occur that will likely disrupt the water supplies to buildings and which afterwards fires will occur in buildings where the sprinkler systems will not likely function as designed. Therefore, it is very important that additional protection features be provided to achieve a reasonable balance of fire and life safety for the disabled occupants who may be occupying or using these buildings.

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

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

E31-07/08

1007.3 (IFC [B] 1007.3)

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

Revise as follows:

1007.3 (IFC [B] 1007.3) (Supp) 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 or 903.3.1.2.
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. 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. 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.
7. The areas of refuge are not required in Group R-2 occupancies for stories where the dwelling and sleeping unit separations and the corridors serving an occupant load greater than 10 have a fire-resistance rating of not less than 1 hour and those stories contain no other occupancies having an occupant load greater than 10.

Reason: This code change proposal is a follow up to the Public Comment the Masonry Alliance for Codes and Standards (MACS) submitted to Code Change E29-07/08 which requested disapproval for the addition of the Exception 7 of the Group 7 for Group R-2 Occupancies which allowed the elimination of the required areas of refuge at exit stairways which are part of the accessible means of egress specified in Section 1007.3 Exit Stairways. During the ICC Final Action Hearings held this past May in Rochester, NY, we discussed our Public Comment with the proponent of the Code Change E29-07/08 and agreed to withdraw our Public Comment on the basis that we would come back in the current code development cycle with revisions to Exception 7 to further clarify when the exception to the area of refuge would be appropriate to apply to Group R-2 occupancies.

We have modified Exception 7 to incorporate several conditions that have to be satisfied before the areas of refuge for the accessible means of egress exit stairways can be omitted in Group R-2 occupancies.

One of the conditions is that the story in which the areas of refuge are allowed to be omitted does not contain other occupancies beside the Group R-2 occupancy which has an occupant load greater than 10. That is because those occupancies may be occupied by persons when a fire event occurs and they may not have access to a dwelling or sleeping unit where they can take refuge. We chose an occupant load of greater than 10 so that a very small accessory occupancy would not eliminate the exception. The occupancy load of greater than 10 also relates to the requirement that triggers a 1-hour fire-resistance rating for corridors in Group R occupancies in accordance with Table 1017.1.

Another condition to allow Exception 7 to apply on those stories which does not contain any other occupancies is that the dwelling unit and sleeping unit separations maintain the 1-hour fire-resistance rating specified in Section 708.1 without allowing the automatic sprinkler system trade-off that reduces the separations to a one-half hour fire-resistance rating in buildings of Types IIB, IIIB, and VB construction.

And, finally, the last condition is that the corridors on these stories that do not have other occupancies but serve an occupant load of more than 10 also maintain the 1-hour fire-resistance rating that would otherwise be required by Table 1017.1 without the automatic sprinkler system trade-off reducing it to one-half hour.

We believe that the retention of the 1-hour fire-resistance ratings is appropriate where the areas of refuge are omitted since the purpose of allowing the omission of the area of refuge is that the occupants of the building will have an adequate fire-resistive enclosure in which they can remain in place and wait out the fire or until such time as they are rescued by the responding fire department or other emergency personnel. Group R-2 occupancies are highly compartmented and maintain those compartment separations at 1-hour will provide the equivalent protection to the areas of refuge for those disabled occupants who remain within their dwelling units during the fire emergency. In fact, in many local jurisdictions the preferred response for the occupants in Group R-2 occupancies that have adequate fire-resistive separations between dwelling units and corridors is to have the occupants of the dwelling units remain in place during the fire emergency until such time as the fire has been extinguished or emergency personnel have instructed them to take other actions. Obviously, this performs a similar function to that of the intent of the areas of refuge for exit stairways and accessible means of egress for physically disabled occupants.

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

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

E32-07/08

1007.6.2 (IFC [B] 1007.6.2)

Proponent: Ed Roether, HOK SVE

Revise as follows:

1007.6.2 (IFC [B] 1007.6.2) (Supp) 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 1022. Each area of refuge shall be designed to minimize the intrusion of smoke.

Exceptions:

1. Areas of refuge located within an exit enclosure.
2. Smoke partitions complying with Section 710 are permitted where the area of refuge is pressurized to maintain a minimum positive pressure of 0.04 inches of water column and a maximum positive pressure of 0.06 inches of water column with respect to adjacent occupied space on all floors. The supply air intake shall be from an outside, uncontaminated source located a minimum distance of 20 feet (6096 mm) from any air exhaust system or outlet.

Reason: An area of refuge separated with a smoke partition can provide higher visual connection with the surrounding spaces. This is not readily possible with smoke barriers. However, smoke partitions in tandem with pressurization would provide a similar level of protection as a space only separated with smoke barriers. The visual connection proposed in this change would offer occupants greater awareness of the locations of an area of refuge than currently allowed in the building code.

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

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

E33-07/08

1007.6.3, 1007.7 (New) [IFC [B] 1007.6.3, [B] 1007.7 (New)]

Proponent: Mathew J. Bardin, Housing Devices, Inc.

1. Revise as follows:

1007.6.3 (IFC [B] 1007.6.3) Two-way communication. Areas of refuge shall be provided with a two-way communication system in accordance with Section 1007.7. ~~between the area of refuge and a central control point. If the central control point is not constantly attended, the area of refuge shall also have controlled access to a public telephone system. Location of the central control point shall be approved by the fire department. The two-way communication system shall include both audible and visible signals.~~

2. Add new text as follows:

1007.7 (IFC [B] 1007.7) Two-way communication. Two-way communication systems shall be provided in all multi-story buildings at stairways and elevators that serve as part of the accessible means of egress. Where areas of refuge are not provided, two-way communication systems shall be located adjacent to stairway entrances and adjacent to the elevator doors. Where areas of refuge are provided, two way communication systems shall be located within the area of refuge. These systems shall communicate with a central control point. Location of the central control point shall be approved by the fire department. When the central control point is not constantly attended it shall have a timed automatic telephone dial-out capability to a monitoring location or 911. The two-way communication system shall include both audible and visible signals.

Exception: Two way communication systems are not required on the story that serves as the level of exit discharge.

Reason: The purpose of this proposed code change is to require two-way communication at stairways and elevators where people may be waiting for assisted rescue during emergencies. This proposed change is written in accordance with what we believe was the original intention of the Americans with Disabilities Act which was to provide two-way communications for any disabled person needing assistance regardless of circumstance or presence of any other life safety systems. This two-way communications system should also be for the use of any temporarily disabled person or any person needing assistance. This system should provide assistance in case of fire, chemical, biological, seismic, terrorist, criminal, or medical threat as well as any other reason a person may need assistance. We also feel that all multi-story buildings should be included whether they have a designated area of refuge or not. When exceptions to the area of refuge requirements were adopted for fully sprinklered buildings, we feel the two-way communications provisions were inadvertently included incorrectly. Due to the very low cost of these systems (approximately \$1000 per floor installed), the benefits of having this communications capability far outweigh the costs. One additional benefit to building owners is the added liability protection

Cost Impact: The code change proposal will increase the cost of construction for fully sprinklered buildings only by approximately \$1000 per floor installed.

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

E34-07/08

1007.6.3, 1007.6.4, 1007.9(New), 1007.9.1(New), 1007.9.2(New), [IFC [B]1007.6.3, [B]1007.6.4, [B]1007.9(New), [B]1007.9.1(New), [B]1007.9.2(New)]

Proponent: David Frable US General Services Administration

1. Add new sections as follows:

1007.9 (IFC [B] 1007.9) Two-way communication. A two-way communication system shall be provided at the elevator landing on each accessible floor that is one or more stories above or below the story of exit discharge complying with Sections 1007.9.1 and 1007.9.2.

Exceptions:

1. Two-way communication systems are not required at the elevator landing where the two-way communication system is provided within areas of refuge in accordance with Section 1007.6.3.

2. Two-way communication systems are not required on floors provided with exit ramps conforming to the provisions of Section 1010.

1007.9.1 (IFC 1007.9.1) System requirements. Two-way communication systems shall provide communication between each required location and the fire command center or a central control point location approved by the fire department. Where the central control point is not constantly attended, a two way communication system is permitted to be provided by a controlled access to a public telephone system. The two-way communication system shall include both audible and visible signals.

1007.9.2 (IFC [B] 1007.9.2) Directions. Directions for the use of the two-way communication system, instructions for summoning assistance via the two-way communication system, and written identification of the location, shall be posted adjacent to the two-way communication system.

2. Revise as follows:

1007.6.3 (IFC [B] 1007.6.3) Two-way communication. ~~Areas of refuge shall be provided with a two-way communication system between the area of refuge and a central control point. If the central control point is not constantly attended, the area of refuge shall also have controlled access to a public telephone system. Location of the central control point shall be approved by the fire department. The two way communication system shall include both audible and visible signals, complying with Sections 1007.9.1 and 1007.9.2.~~

1007.6.4 (IFC [B] 1007.6.4) Instructions. ~~In areas of refuge that have a two-way emergency communications system, instructions on the use of the area under emergency conditions shall be posted adjoining the communications system. The instructions shall include all of the following:~~

1. Directions to find other means of egress.
2. Persons able to use the exit stairway do so as soon as possible, unless they are assisting others.
3. ~~Information on planned availability of assistance in the use of stairs or supervised operation of elevators and how to summon such assistance.~~
4. ~~Directions for use of the emergency communications system.~~

Reason: The intent of this code change is to address an issue that has been raised by the disability community regarding the need to provide a two-way communication system on a floor for individuals unable to negotiate exit stairways during an emergency.

Current text only requires two-way communication systems within areas of refuge. Exceptions to Section 1007.3 and 1007.4 allow for the elimination of the area of refuge. This proposal will require two-way communication systems at the elevators on accessible levels other than the level of exit discharge. Exception 1 would avoid requiring a two-way communication system at the elevator when two-way communication was provided in the area of refuge. Exception 2 would avoid requiring a two-way communication system at the elevator when the floor level had ramps that allowed for independent evacuation, such as in a sports stadium.

In high rise building, typically, building occupant emergency plans use the elevator landings on each floor of a building as a staging area for individuals unable to negotiate exit stairways in an emergency. The new text proposed will provide an effective means for those individuals unable to negotiate exit stairways to communicate their location via a two-way communication system to either the fire command center or a central control point during an emergency condition. Signage will provided with directions for operation of the system when provided at elevators and within areas of refuge.

The changes to Section 1007.6.3 and 1007.6.4 are for correlation only. Putting the two-way communication requirements in one section instead of repeating in two sections will eliminate possible conflicts in the future.

Another change addresses the issue of signage. These two changes will work separately or as a package.

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

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

E35-07/08

1007.6.4, 1007.6.5, 1007.7, 1007.8.3, 1007.9(New), 1007.10(New), 1011.3, 1110.1, 1110.2, 1110.3, [IFC [B] 1007.6.4, [B]1007.6.5, [B]1007.7, [B]1007.8.3, [B]1007.9 (New), [B] 1007.10(New)]; IFC 404.3.2

Proponent: David Frable US General Services Administration

THESE PROPOSALS ARE ON THE AGENDA OF THE IBC MEANS OF EGRESS AND THE IFC CODE DEVELOPMENT COMMITTEES AS 2 SEPARATE CODE CHANGES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IBC

1. Add new sections as follows:

1007.9 (IFC [B] 1007.9) Signage. Signage indicating special accessibility provisions shall be provided as shown:

1. Each door providing access to an area of refuge from an adjacent floor area shall be identified by a sign stating: AREA OF REFUGE.
2. Each door providing access to an exterior areas for assisted rescue shall be identified by a sign stating: EXTERIOR AREA FOR ASSISTED RESCUE.

Signage shall comply with the ICC A117.1 requirements for visual characters and including the International Symbol of Accessibility. Where exit sign illumination is required by Section 1011.2, the signs shall be illuminated. Additionally, tactile signage complying with ICC A117.1 shall be located at each door to an area of refuge and exterior area for assisted rescue in accordance with Section 1011.3.

1007.10 (IFC [B] 1007.10) Directional signage. Direction signage indicating the location of the other means of egress and which are accessible means of egress shall be provided at the following:

1. At exits serving a required accessible space but not providing an approved accessible means of egress.
2. At elevator landings.
3. Within areas of refuge.

2. Revise as follows:

~~1007.6.4 (IFC [B] 1007.6.4)~~ **1007.12 (IFC [B] 1007.12) Instructions.** In areas of refuge and exterior areas for assisted rescue that have a two-way emergency communications system, instructions on the use of the area under emergency conditions shall be posted ~~adjoining the communications system~~. The instructions shall include all of the following:

- ~~1. Directions to find other means of egress.~~
2. 1. Persons able to use the exit stairway do so as soon as possible, unless they are assisting others.
3. 2. Information on planned availability of assistance in the use of stairs or supervised operation of elevators and how to summon such assistance.
4. 3. Directions for use of the emergency two-way communications system where provided.

~~1007.6.5 (IFC [B] 1007.6.5) Signage.~~ Each door providing access to an area of refuge from an adjacent floor area shall be identified by a sign complying with ICC A117.1, stating: AREA OF REFUGE, and including the International Symbol of Accessibility. Where exit sign illumination is required by Section 1011.2, the area of refuge sign shall be illuminated. Additionally, tactile signage complying with ICC A117.1 shall be located at each door to an area of refuge.

~~1007.7 (IFC [B] 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.

~~1007.8.3 (IFC [B] 1007.8.3) Identification.~~ Exterior areas for assisted rescue shall have identification as required for area of refuge that complies with Section 1007.6.5.

1011.2 (IFC [B] 1011.2) Illumination. Exit signs shall be internally or externally illuminated.

Exception: Tactile signs required by Section 1011.3 need not be provided with illumination.

1011.3 (IFC [B] 1011.3) Tactile exit signs. A tactile sign stating EXIT and complying with ICC A117.1 shall be provided adjacent to each door to an area of refuge, an exterior area for assisted rescue, an egress stairway, an exit passageway and the exit discharge.

SECTION 1110 SIGNAGE

1110.1 Signs. Required accessible elements shall be identified by the International Symbol of Accessibility at the following locations:

1. Accessible parking spaces required by Section 1106.1 except where the total number of parking spaces provided is four or less.
2. Accessible passenger loading zones.
- ~~3. Accessible areas of refuge required by Section 1007.6.~~
4. 3. Accessible rooms where multiple single-user toilet or bathing rooms are clustered at a single location.
- ~~5.~~ 4. Accessible entrances where not all entrances are accessible.

1. Accessible check-out aisles where not all aisles are accessible. The sign, where provided, shall be above the check-out aisle in the same location as the check-out aisle number or type of check-out identification.
2. Unisex toilet and bathing rooms.
3. Accessible dressing, fitting and locker rooms where not all such rooms are accessible.
4. Accessible areas of refuge in accordance with Section 1007.9
5. Exterior areas for assisted rescue in accordance with Section 1007.9.

1110.2 Directional signage. Directional signage indicating the route to the nearest like accessible element shall be provided at the following locations. These directional signs shall include the International Symbol of Accessibility:

1. Inaccessible building entrances.
2. Inaccessible public toilets and bathing facilities.
3. Elevators not serving an accessible route.
4. At each separate-sex toilet and bathing room indicating the location of the nearest unisex toilet or bathing room where provided in accordance with Section 1109.2.1.
5. At exits ~~and elevators~~ and exit stairways serving a required accessible space, but not providing an approved accessible means of egress, signage shall be provided in accordance with Section ~~1007.7~~ 1007.10.

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 area of refuge, an exterior area for assisted rescue, 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 and 1007.9.
4. At exterior areas for assisted rescue, signage shall be provided in accordance with Section ~~1007.8.3~~ 1007.9.
5. At two way communication systems, signage shall be provided in accordance with Section 1007.12.

PART I – IFC

Revise text as follows.

404.3.2 (Supp) Fire safety plans. Fire safety plans shall include the following:

1. The procedure for reporting a fire or other emergency.
2. The life safety strategy and procedures for notifying, relocating, or evacuating occupants, including occupants who need assistance.
3. Site plans indicating the following:
 - 3.1. The occupancy assembly point.
 - 3.2. The locations of fire hydrants.
 - 3.3. The normal routes of fire department vehicle access.
4. Floor plans identifying the locations of the following:
 - 4.1. Exits.
 - 4.2. Primary evacuation routes.
 - 4.3. Secondary evacuation routes.
 - 4.4. Accessible egress routes.
 - 4.5. Areas of refuge.
 - 4.6. Exterior areas for assisted rescue.
 - 4.7. Designated locations for persons unable to use the general means of egress unassisted per the facilities fire evacuation plan
 - 4.7. ~~4.8~~ Manual fire alarm boxes.
 - 4.8. ~~4.9~~ Portable fire extinguishers.
 - 4.9. ~~4.10~~ Occupant-use hose stations.
 - 4.10. ~~4.11~~ Fire alarm annunciators and controls.

5. A list of major fire hazards associated with the normal use and occupancy of the premises, including maintenance and housekeeping procedures.
6. Identification and assignment of personnel responsible for maintenance of systems and equipment installed to prevent or control fires.
7. Identification and assignment of personnel responsible for maintenance, housekeeping and controlling fuel hazard sources.

Reason: The reason for this code change proposal is to address an issue that has been raised by the disability community regarding the availability of information for individuals unable to negotiate exit stairways during an emergency. Exceptions to Section 1007.3 and 1007.4 allow for the elimination of the area of refuge. With the deletion of the area of refuge, there is limited information for people on where assistance for evacuation will be provided.

The intent of this proposal is to provide signage at the following locations.

- Since most people will tend to go back to the elevator first, information must be available at the elevator that indicates to persons that they can stay there for assistance or directional signage to where they can go for assistance (e.g. stairways, areas of refuge, exterior areas for rescue assistance).
- Signage must be provided at area or refuge and exterior areas of rescue assistance.
- Directional signage must be provided at any exit or exit stairway that does not serve as part of an accessible means of egress.

The signage information needed for accessible means of egress has been grouped in a new Section 1007.9 and 1007.10. This information would be coordinated with the fire and safety evacuation plans (IFC Section 404.3). Changes to Section 1011 are coordination only.

Another change addresses the two-way communication. These two changes will work separately or as a package.

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

PART I – IBC MEANS OF EGRESS

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

PART II – IFC

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

E36–07/08

1008.1.1, 1008.1.4, 1008.1.5, 1008.1.6, 1008.1.7, 1008.1.8, 1003.5 (IFC [B]1008.1.1, [B]1008.1.4, [B]1008.1.5, [B]1008.1.6, [B]1008.1.7, [B]1008.1.8, [B]1003.5)

Proponent: Scott Crossfield, Theatre Projects Consultants, Inc., representing himself

Revise as follows:

1008.1.1 (IFC [B] 1008.1.1) Size of doors. The minimum width of each door opening shall be sufficient for the occupant load thereof and shall provide a minimum clear width of ~~not less than~~ 32 inches (813 mm). Clear openings of doorways with swinging doors shall be measured between the face of the door and the stop, with the door open 90 degrees (1.57 rad). Where this section requires a minimum clear width of 32 inches (813 mm) and a door opening includes two door leaves without a mullion, one leaf shall provide a clear opening width of 32 inches (813 mm). The maximum width of a swinging door leaf shall be 48 inches (1219 mm) nominal. Means of egress doors in a Group I-2 occupancy used for the movement of beds shall provide a minimum clear width of ~~not less than~~ 41.5 inches (1054 mm). The height of doors shall not be less than 80 inches (2032 mm). The size of doors within Type B dwelling units or sleeping units required by Section 1107 shall comply with ICC A117.1, Chapter 10.

Exceptions: Other than along accessible routes required by Section 1007 and Chapter 11, the following exceptions are permitted:

1. In Group R-2 and R-3 occupancies, at the minimum and maximum width shall not apply to door openings that are not part of the required means of egress in Group R-2 and R-3 occupancies, the width of door leaves shall not be limited.
2. In Group I-3 occupancies, door openings to resident sleeping units in Group I-3 occupancies shall have a minimum clear width of not less than 28 inches (711 mm).
3. At storage closets less than 10 square feet (0.93 m²) in area, door openings to storage closets less than 10 square feet (0.93 m²) in area shall not be limited by the minimum width.
4. At revolving doors that comply with Section 1008.1.3.1, the width of door leaves in revolving doors that comply with Section 1008.1.3.4 shall not be limited.

5. ~~Within a dwelling unit or sleeping unit, door openings within a dwelling unit or sleeping unit shall not be less than 78 inches (1981 mm) in height.~~
6. ~~At dwelling unit or sleeping unit, the exterior door openings in dwelling units and sleeping units, other than the required exit door, shall not be less than 76 inches (1930 mm) in height.~~
7. ~~In Groups I-1, and R-2 and R-3 occupancies, in other than Group R-1 occupancies, the minimum widths shall not apply to interior egress doors within a dwelling unit or sleeping unit that is not required to be an Accessible unit, Type A unit or Type B unit. shall not be limited by the minimum width.~~
8. ~~Door openings required to be accessible within Type B units shall have a minimum clear width of 31.75 inches (806 mm).~~

1008.1.4 (IFC [B] 1008.1.4) Floor elevation. There shall be a floor or landing on each side of a door. Such floor or landing shall be at the same elevation on each side of the door. Landings shall be level except for exterior landings, which are permitted to have a slope not to exceed 0.25 unit vertical in 12 units horizontal (2-percent slope). The floor elevation on each side of doors within Type B dwelling units or sleeping units required by Section 1107 shall comply with ICC A117.1, Chapter 10.

Exceptions: Other than at doors that are along an accessible route required by Section 1007 and Chapter 11:

1. Doors serving individual dwelling units in Groups R-2 and R-3 where the following apply:
 - 1.1. A door is permitted to open at the top step of an interior flight of stairs, provided the door does not swing over the top step.
 - 1.2. Screen doors and storm doors are permitted to swing over stairs or landings.
2. Exterior doors as provided for in Section 1003.5, Exception 1, and Section 1018.2, ~~which are not on an accessible route.~~
3. In Group R-3 occupancies ~~not required to be Accessible units, Type A units or Type B units~~, the landing at an exterior doorway shall not be more than 7.75 inches (197 mm) below the top of the threshold, provided the door, other than an exterior storm or screen door, does not swing over the landing.
4. Variations in elevation due to differences in finish materials, but not more than 0.5 inch (12.7 mm).
5. ~~Exterior decks, patios or balconies that are part of Type B dwelling units have impervious surfaces and that are not more than 4 inches (102 mm) below the finished floor level of the adjacent interior space of the dwelling unit.~~

1008.1.5 (IFC [B] 1008.1.5) Landings at doors. Landings shall have a width not less than the width of the stairway or the door, whichever is greater. Doors in the fully open position shall not reduce a required dimension by more than 7 inches (178 mm). When a landing serves an occupant load of 50 or more, doors in any position shall not reduce the landing to less than one-half its required width. Landings shall have a length measured in the direction of travel of not less than 44 inches (1118 mm).

Exception: Other than at dwelling units and sleeping units required by Section 1107 to be Accessible, Type A or Type B units landing length in the direction of travel in Groups R-3 and U and within individual units of Group R-2 need not exceed 36 inches (914 mm).

1008.1.6 (IFC [B] 1008.1.6) Thresholds. Thresholds at doorways shall not exceed 0.75 inch (19.1 mm) in height for sliding doors serving dwelling or sleeping units or 0.5 inch (12.7 mm) for other doors. Raised thresholds and floor level changes greater than 0.25 inch (6.4 mm) at doorways shall be beveled with a slope not greater than one unit vertical in two units horizontal (50-percent slope).

Exception: Other than at dwelling units and sleeping units required by Section 1107 to be Accessible, Type A or Type B units, in Groups R-2 or R-3, the threshold height shall be limited to 7.75 inches (197 mm) where the occupancy is Group R-2 or R-3; the door is an exterior door that is not a component of the required means of egress; and the door, other than an exterior storm or screen door does not swing over the landing or step; and the doorway is not on an accessible route as required by Chapter 11 and is not part of an Accessible unit, Type A unit or Type B unit.

1008.1.7 (IFC [B] 1008.1.7) Door arrangement. Space between two doors in a series shall be 48 inches (1219 mm) minimum plus the width of a door swinging into the space. Doors in a series shall swing either in the same direction or away from the space between the doors.

Exceptions:

1. The minimum distance between horizontal sliding power-operated doors in a series shall be 48 inches (1219 mm).
2. In Group R, storm and screen doors serving individual dwelling or sleeping units in Groups R-2 and R-3 need not be spaced 48 inches (1219 mm) from the other door.
3. In Groups R-2 and R-3, doors within individual dwelling or sleeping units need not be spaced 48 inches (1219 mm) from the other door in Groups R-2 and R-3 other than within Type A dwelling units.

In Group R occupancies, at doors serving and doors within Accessible and Type A dwelling and sleeping units required by Section 1107, door arrangement shall comply with ICC A117.1 Chapter 10.

Exception: Storm and screen doors serving individual dwelling or sleeping units need not be spaced 48 inches (1219 mm) from the other door.

1008.1.8 (IFC [B] 1008.1.8) Hardware. Door handles, pulls, latches, locks and other operating devices on doors ~~required to be accessible by Chapter 11~~ shall not require tight grasping, tight pinching or twisting of the wrist to operate.

1003.5 (IFC [B] 1008.1.8) Elevation change. Where changes in elevation of less than 12 inches (305 mm) exist in the means of egress, sloped surfaces shall be used. Where the slope is greater than one unit vertical in 20 units horizontal (5-percent slope), ramps complying with Section 1010 shall be used. Where the difference in elevation is 6 inches (152 mm) or less, the ramp shall be equipped with either handrails or floor finish materials that contrast with adjacent floor finish materials.

Exceptions: Other than along accessible routes required by Section 1007 and Chapter 11, the following exceptions are permitted:

1. A single step with a maximum riser height of 7 inches (178 mm) is permitted at exterior doors for buildings with occupancies in Groups F, H, R-2, R-3, S and U ~~at exterior doors not required to be accessible by Chapter 11.~~
2. A stair with a single riser or with two risers and a tread is permitted at locations not required to be accessible by Chapter 11, provided that the risers and treads comply with Section 1009.3, the minimum depth of the tread is 13 inches (330 mm) and at least one handrail complying with Section 1012 is provided within 30 inches (762 mm) of the centerline of the normal path of egress travel on the stair.
3. A step is permitted in aisles serving seating that has a difference in elevation less than 12 inches (305 mm) at locations not required to be accessible by Chapter 11, provided that the risers and treads comply with Section 1025.11 and the aisle is provided with a handrail complying with Section 1025.13.

Any change in elevation in a corridor serving nonambulatory persons in a Group I-2 occupancy shall be by means of a ramp or sloped walkway. The elevation change in the means of egress within dwelling units or sleeping units required by Section 1107 to be Accessible, Type A and Type B units shall comply with ICC A117.1, Chapter 10.

Reason: The intent of this proposal is to required doors along accessible routes required for ingress (Chapter 11) or egress (Section 1007) to meet the provisions for accessible doorways in ICC A117.1 in addition to any base requirements in Section 1008. A general reference to ICC A117.1 for doorways would not be sufficient, since there are safety concerns for means of egress doors that may or may not be consistent with the accessibility provisions in ICC A117.1 (e.g. direction of door swing is a means of egress issue that is not addressed in the ICC A117.1). When the requirements are consistent (e.g. thresholds) a reference is not required. In addition, not all exceptions for Group R-2 and R-3 for doors make it clear that the requirements in Accessible, Type A or Type B units may be more restrictive in ICC A117.1.

E39-07/08 had proposed to delete the exception to Section 1008.1.6 believing that it was redundant language in 1008.1.4. Based on testimony from the door and window manufactures during the hearings we now understand this is not the case and instead have limited the revision to making it clear that this exception is not permitted Accessible, Type A and Type B units in Group R-2 and R-3.

Many people with arthritis in their hands have difficulty with door knobs instead of lever hardware on doors. Section 1008.1.8 should be applicable to all doors, and "required to be accessible by Chapter 11" should be struck.

The committee cited statements that the revisions deleted the allowances for Group R-4 as a reason to disapprove E39-07/08. Group R-4 is not specifically addressed in any door section in the current text. Please note that Section 310.1 states that Group R-3 requirements should be utilized for Group R-4 unless noted otherwise.

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

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

E37-07/08

1008.1.1, (IFC [B] 1008.1.1); IRC R311.2

Proponent: Julie Ruth, JRuth Code Consulting, representing American Architectural Manufacturers Association (AAMA)

THESE PROPOSALS ARE ON THE AGENDA OF THE IBC MEANS OF EGRESS AND THE IRC BUILDING/ENERGY CODE DEVELOPMENT COMMITTEES AS 2 SEPARATE CODE CHANGES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IBC MEANS OF EGRESS

Revise as follows:

1008.1.1 (IFC [B] 1008.1.1) Size of doors. The minimum width of each door opening shall be sufficient for the occupant load thereof and shall provide a minimum clear width of 32 inches (813 mm). Clear openings of doorways with swinging doors shall be measured between the face of the door and the stop, with the door open 90 degrees (1.57 rad). Where this section requires a minimum clear width of 32 inches (813 mm) and a door opening includes two door leaves without a mullion, one leaf shall provide a clear opening width of 32 inches (813 mm). The maximum width of a swinging door leaf shall be 48 inches (1219 mm) nominal. Means of egress doors in a Group I-2 occupancy used for the movement of beds shall provide a clear width not less than 41.5 inches (1054 mm). The minimum clear height of ~~doors~~ door openings shall ~~not~~ be less than ~~80~~ 78 inches (~~2032~~ 1981 mm).

Exceptions:

1. The minimum and maximum width shall not apply to door openings that are not part of the required means of egress in Group R-2 and R-3 occupancies.
2. Door openings to resident sleeping units in Group I-3 occupancies shall have a clear width of not less than 28 inches (711 mm).
3. Door openings to storage closets less than 10 square feet (0.93m²) in area shall not be limited by the minimum width.
4. Width of door leaves in revolving doors that comply with Section 1008.1.3.1 shall not be limited.
5. Door openings within a dwelling unit or sleeping unit shall not be less than 78 inches (1981 mm) in height.
6. Exterior door openings in dwelling units and sleeping units, other than the required exit door, shall not be less than 76 inches (1930 mm) in height.
7. In other than Group R-1 occupancies, the minimum widths shall not apply to interior egress doors within a dwelling unit or sleeping unit that is not required to be an Accessible unit, Type A unit or Type B unit.

PART II – IRC BUILDING AND ENERGY

Revise as follows:

R311.2 (Supp) Egress door. At least one egress door shall be provided for each dwelling unit. The egress door shall be side-hinged, ~~not less than 3 feet (914 mm) in width and~~ and shall provide a minimum clear width of 32 inches (813 mm) when measured between the face of the door and the stop, with the door open 90 degrees (1.57 rad). The minimum clear height of the door opening shall not be less than 6 feet 8 inches (2032 mm) 78 inches (1981 mm) in height measured from the top of the threshold to the bottom of the stop. Other doors shall not be required to comply with these minimum dimensions. Egress doors shall be readily operable from inside the dwelling without the use of a key or special knowledge or effort.

Reason: This proposal clarifies the requirements of the IBC and IRC in regards to the measurement of door size, and provides consistency between the two codes.

At the present time the IRC requires the egress door to be "not less than 3 feet in width", but it is not clear how this measurement is to be taken. Traditionally the 3 feet is interpreted as being applicable to the width of the door slab, but there can be confusion in regards to this.

The IBC focuses on the more significant measurement, which is the width of the opening created when the door is open. This proposal replaces the more confusing language of the IRC with regard to door opening width with the more enforceable language of the IBC. Typically a 36 inch wide door slab would be required to achieve a minimum 32 inch width opening. Door slabs are manufactured in width increments of 2 inches (32 inches, 34 inches, 36 inches, etc). Once the thickness of the door slab (usually 1 3/4 inch for exterior doors), thickness of the door stop and allowance for hinges or other hardware are combined the difference between the width of the door slab and the resultant opening size is greater than 2 inches. Therefore a 34 inch wide door slab would not provide a 32 inch wide door opening required, and a 36 inch wide slab would need to be used.

In a similar fashion, the 80 inch door height requirement is replaced with a 78 inch height of opening requirement, with the height of the opening measured from the bottom of the door stop to the top of the threshold. Since door slabs are also manufactured in height increments of 2 inches, it is not anticipated that this proposal would result in a reduction in actual door size.

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

PART I – IBC MEANS OF EGRESS

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

PART II – IRC BUILDING AND ENERGY

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

E38–07/08

1008.1.1 (IFC [B] 1008.1.1)

Proponent: Tom Lariviere, Madison Fire Department, representing Joint Fire Service Review Committee

Revise as follows:

1008.1.1 (IFC [B] 1008.1.1) Size of doors. The minimum width of each door opening shall be sufficient for the occupant load thereof and shall provide a clear width of not less than 32 inches (813 mm). Clear openings of doorways with swinging doors shall be measured between the face of the door and the stop, with the door open 90 degrees (1.57 rad). Where this section requires a minimum clear width of 32 inches (813 mm) and a door opening includes two door leaves without a mullion, one leaf shall provide a clear opening width of 32 inches (813 mm). The maximum width of a swinging door leaf shall be 48 inches (1219 mm) nominal. Means of egress doors in a Group I-2 occupancy used for the movement of beds shall provide a clear width not less than 41.5 inches (1054 mm). In Group I-2 occupancies, where doors are installed across corridors used for the movement of beds, such doors shall provide a clear width not less than 83 inches (2110 mm). The height of doors shall not be less than 80 inches (2032 mm).

Exceptions:

1. The minimum and maximum width shall not apply to door openings that are not part of the required means of egress in Group R-2 and R-3 occupancies.
2. Door openings to resident sleeping units in Group I-3 occupancies shall have a clear width of not less than 28 inches (711 mm).
3. Door openings to storage closets less than 10 square feet (0.93m²) in area shall not be limited by the minimum width.
4. Width of door leaves in revolving doors that comply with Section 1008.1.3.1 shall not be limited.
5. Door openings within a dwelling unit or sleeping unit shall not be less than 78 inches (1981 mm) in height.
6. Exterior door openings in dwelling units and sleeping units, other than the required exit door, shall not be less than 76 inches (1930 mm) in height.
7. In other than Group R-1 occupancies, the minimum widths shall not apply to interior egress doors within a dwelling unit or sleeping unit that is not required to be an Accessible unit, Type A unit or Type B unit.
8. Door openings required to be accessible within Type B units shall have a minimum clear width of 31.75 inches (806 mm).

Reason: When doors cross a corridor and essentially provide the width of two doors, they need to provide a minimum clear width of 83" which is equivalent to two doors at 41.5" each. Additionally, sliding doors are more frequently being installed in Group I-2 configurations. Currently there are no specific requirements for horizontal sliding doors in this configuration. This proposal will provide the guidance necessary to ensure proper design and maintain egress requirements.

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

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

E39-07/08

1008.1.2, 1008.1.2.1 (New) (IFC [B] 1008.1.2, [B] 1008.1.2.1 (New))

Proponent: Gary Miller, City of Irving, TX, representing North Texas Chapter of ICC

1. Revise as follows:

1008.1.2 (IFC [B] 1008.1.2) (Supp) Door swing. Egress doors shall be of the pivoted or side-hinged swinging type.

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.

2. Add new text as follows:

1008.1.2.1 (IFC [B] 1008.1.2.1) Double-acting doors. Double-acting doors shall not be used as doors in a means of egress where any of the following conditions exist:

1. The occupant load served by the door is 100 or more.
2. The door is part of a fire door assembly.
3. The door is part of an opening in a smoke barrier.
4. Panic hardware is required or provided on the door.

A double-acting door shall be provided with a view panel of not less than 200 square inches (0.129 m²).

Reason: This proposal will clarify and add new requirements to the Code. As this section is currently written, egress doors equipped with pivot hardware are prohibited from use, and double-acting doors are allowed without any limiting or clarifying language.

Although pivot doors and side-hinged doors function in a nearly identical manner, they are different devices with pivot hardware typically being installed on the bottom and top edges of doors rather than on the side. The omission of pivot type doors from the door swing section of the IBC has been consistent since the 2000 Edition, but they were included as an allowed door type in at least one of the legacy codes (UBC). The 2006 IBC includes at least two direct references and one indirect reference to pivot hardware: (1) Section 715.4.1 designates test standards for "Side-hinged and pivoted swinging doors"; (2) Section 1002 includes a reference to "double-pivoted hardware" in the definition of the term "balanced door"; (3) Section 1008.1.9 identifies installation criteria "If balanced doors are used and panic hardware is required . . ." – the implied assumption being that pivots serve as the hinge device of the balanced door. Pivot doors are commonly used, especially on glass doors, and should be allowed as long as they meet the other applicable code provisions such as opening force and clear opening width.

Double-acting doors are doors that swing in both directions, are also in common usage, and should continue to be allowed, but with some restrictions. Proposed Section 1008.1.2.1 is wording that is taken from the 1997 UBC with minor terminology updates. Restriction #1 addresses a practical threshold beyond which the use of double-acting doors would create a potentially unsafe emergency exiting condition; restrictions #2 & #3 address practical limitations since double-acting doors are incapable of providing positive latching; restriction #4 adds another practical restriction in that doors equipped with panic hardware should only swing in one direction. The last sentence in this section requires the installation of a view panel in order to lessen the chance of a person being struck by the door which is being blindly pushed open from the opposite side.

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

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

E40-07/08

1008.1.2, 1008.1.3.3 (IFC [B] 1008.1.2, [B] 1008.1.3.3)

Proponent: Gregory J. Cahanin, Cahanin Fire & Code Consulting, representing Skyfold

Revise as follows:

1008.1.2 (IFC [B] 1008.1.2) (Supp) 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 or vertical 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.

1008.1.3.3 ([B] 1008.1.3.3) Horizontal or vertical sliding doors. In other than Group H occupancies, horizontal or vertical sliding doors permitted to be a component of a means of egress in accordance with Exception 6 to Section 1008.1.2 shall comply with all of the following criteria:

1. The doors shall be power operated in accordance with Section 1008.1.3.2 and shall be capable of being operated manually in the event of power failure.
2. The doors shall be openable by a simple method from both sides without special knowledge or effort.
3. The force required to operate the door shall not exceed 30 pounds (133 N) to set the door in motion and 15 pounds (67 N) to close the door or open it to the minimum required width.
4. The door shall be openable with a force not to exceed 15 pounds (67 N) when a force of 250 pounds (1100 N) is applied perpendicular to the door adjacent to the operating device.
5. The door assembly shall comply with the applicable fire protection rating and, where rated, shall be self-closing or automatic closing by smoke detection in accordance with Section 715.4.7.3, shall be installed in accordance with NFPA 80 and shall comply with Section 715.
6. The door assembly shall have an integrated standby power supply.
7. The door assembly power supply shall be electrically supervised.
8. The door shall open to the minimum required width within 10 seconds after activation of the operating device.
9. The door, where not installed in a fire-resistance rated assembly or smoke partition, but within the egress path, shall open upon activation of the building fire alarm system, automatic sprinkler systems, or fire detection system, where provided. The door shall remain in the open position until the fire alarm system has been reset.

Exception: Manual exit devices used to open horizontal or vertical sliding doors shall be permitted in lieu of manual operation.

1. Manual exit devices shall be located 40 inches to 48 inches vertically above the floor and a maximum of 5 feet horizontally of the egress door. Ready access shall be provided to the manual unlocking device and the device shall be clearly identified by a sign that reads "Push to Exit". When operated, the manual exit device shall result in the opening of the door.
2. Standby power supplies for manual exit devices shall be capable of providing power for 10 opening and closing cycles.

Reason: This change recognizes doors other than side-swinging for exit egress may be not just horizontal in operation, but also vertical in operation. The 8 established requirements for horizontal sliding doors apply equally to doors in the vertical orientation as well.

A direct reference to 1008.3.2 for power-operated door requirements is inserted in provision 1 in recognition that both horizontal and vertical doors have motorized systems for operating the doors upon smoke or fire detection.

A new # 9 provision is for doors in the egress path which are not fire or smoke rated that may be horizontal or vertical sliding doors. Under this new provision no opening protective closure is mandated, so the horizontal or vertical sliding door can retract upon the activation of automatic sprinklers in the building, upon smoke detection in the area of the sliding door, or upon the activation of the fire alarm system. Under this provision the sliding door will be in the fully open position without any occupant action required.

A new exception seeks to allow the use of manual unlocking devices also described as manual exit devices in the commentary for Access-controlled egress doors in Section 1008.1.3.4. The automatic operation of the sliding door in lieu of a manual-only operation of the door requires a power supply with the ability to cycle the sliding door a minimum of 10 times is provided for in this change

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

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

E41-07/08

1008.1.3.4 (IFC [B] 10081.3.4)

Proponent: John Williams, Washington State Department of Health, Construction Review Services, representing Washington Association of Building Officials, Technical Code Development Committee

Revise as follows:

1008.1.3.4 (IFC [B] 1008.1.3.4) Access-controlled egress doors. The entrance doors in a means of egress in buildings with an occupancy in Group A, B, E, I-2, M, R-1 or R-2 and entrance doors to tenant spaces in occupancies in Groups A, B, E, I-2, M, R-1 and R-2 are permitted to be equipped with an approved entrance and egress access control system which shall be installed in accordance with all of the following criteria:

1. A sensor shall be provided on the egress side arranged to detect an occupant approaching the doors. The doors shall be arranged to unlock by a signal from or loss of power to the sensor.
2. Loss of power to that part of the access control system which locks the doors shall automatically unlock the doors.
3. The doors shall be arranged to unlock from a manual unlocking device located 40 inches to 48 inches (1016mm to 1219 mm) vertically above the floor and within 5 feet (1524 mm) of the secured doors. Ready access shall be provided to the manual unlocking device and the device shall be clearly identified by a sign that reads "PUSH TO EXIT." When operated, the manual unlocking device shall result in direct interruption of power to the lock— independent of the access control system electronics—and the doors shall remain unlocked for a minimum of 30 seconds.
4. Activation of the building fire alarm system, if provided, shall automatically unlock the doors, and the doors shall remain unlocked until the fire alarm system has been reset.
5. Activation of the building automatic sprinkler or fire detection system, if provided, shall automatically unlock the doors. The doors shall remain unlocked until the fire alarm system has been reset.
6. Entrance doors in buildings with an occupancy in Group A, B, E or M shall not be secured from the egress side during periods that the building is open to the general public.

Reason: The purpose of this code change is to clarify the intent of the current code. Healthcare facilities are being asked by the Department of Homeland Security to "harden their facilities" and plan for biological, radiological or epidemic disasters. Hospitals need to control access into their facilities by funneling the arriving public through a planned triage point, such as an emergency department. Without this control, infected or contaminated persons could enter at various unsecured points and spread contamination throughout the building as they made their way to the emergency room. Access control systems, such as the one described in section 1008.1.3.4, can be used to mitigate this circumstance. However, this section does not list these systems as allowable in I-2 occupancies. This is overly restrictive and inconsistent with other sections of this code.

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

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

E42-07/08

1008.1.4, 1008.1.6 (IFC [B] 1008.1.4, [B] 1008.1.6)

Proponent: Julie Ruth, JRuth Code Consulting, representing herself

Revise as follows:

1008.1.4 (IFC [B] 1008.1.4) Floor elevation. There shall be a floor or landing on each side of a door. Such floor or landing shall be at the same elevation on each side of the door. Landings shall be level except for exterior landings, which are permitted to have a slope not to exceed 0.25 unit vertical in 12 units horizontal (2-percent slope).

Exceptions:

1. Doors serving individual dwelling units in Groups R-2 and R-3 where the following apply:
 - 1.1. A door is permitted to open at the top step of an interior flight of stairs, provided the door does not swing over the top step.
 - 1.2. Screen doors and storm doors are permitted to swing over stairs or landings.
2. Exterior doors as provided for in Section 1003.5, Exception 1, and Section 1018.2, which are not on an accessible route.
3. In Group R-2 and R-3 occupancies not required to be Accessible units, Type A units or Type B units, the landing at an exterior doorway shall not be more than 7.75 inches (197 mm) below the top of the threshold, provided the door, other than an exterior storm or screen door, does not swing over the landing.
4. Variations in elevation due to differences in finish materials, but not more than 0.5 inch (12.7 mm).
5. In Type B dwelling units, the floor of exterior decks, patios or balconies that are part of the Type B dwelling units, unit and have impervious surfaces and that are not more than 4-1/2 inches (114 mm) below the top of the threshold of the door between the exterior deck, patio or balcony and the finished floor level of the adjacent interior space of the dwelling unit.

1008.1.6 (IFC [B] 1008.1.6) Thresholds. Thresholds at doorways shall not exceed 0.75 inch (19.1 mm) in height for sliding doors serving dwelling units or 0.5 inch (12.7 mm) for other doors. Raised thresholds and floor level changes greater than 0.25 inch (6.4 mm) at doorways shall be beveled with a slope not greater than one unit vertical in two units horizontal (50-percent slope).

Exception: ~~The threshold height shall be limited to 7.75 inches (197 mm) where the occupancy is Group R-2 or R-3; the door is an exterior door that is not a component of the required means of egress; the door, other than an exterior storm or screen door does not swing over the landing or step; and the doorway is not on an accessible route as required by Chapter 11 and is not part of an Accessible unit, Type A unit or Type B unit.~~ Thresholds of exterior doors in Group R-2 and R-3 occupancies that meet the criteria of Section 1008.1.4, exception 3 or 5 shall not be subject to the height restrictions of this section.

Reason: The purpose of this proposal is to remove confusion that currently exists in regards to the application of exceptions 3 and 5 to Section 1008.1.4 and the exception to Section 1008.1.6. All three of these exceptions have primarily the same purpose – to permit a height difference greater than ½ or ¾ inch at the threshold of exterior doors to reduce the likelihood of water penetration underneath the door into the interior space. Section 1008.1.4 deals with the elevation difference between interior and exterior floors, and Section 1008.1.6 deals with door thresholds.

Water penetration through exterior fenestration can be a problem in any climate zone. Currently AAMA/WDMA/CSA 101/I.S.2/A440, which is referenced in Section 1714.5.1 of the 2006 IBC for exterior windows and sliding doors, ties the pressure at which water resistant testing is to be performed to the design pressure (DP) for the opening. The design pressure, in turn, is a function of a number of variables, including design wind speed, exposure category, size of opening and location of the opening on the exterior face of the building (height above grade, proximity of opening to corners and other abrupt changes in the profile of the building), etc. This water resistance pressure is directly related to inches of water pressure that occur over the face of the fenestration during a weather event that combines high winds and rain. A barrier the height of the water pressure or higher is needed to resist water penetration through the opening. Once the design wind speed for an area exceeds 85 mph, this water pressure will exceed ½ inch, which in turn requires a water barrier at door thresholds that exceeds the ½ inch threshold permitted by Section 1008.1.6.

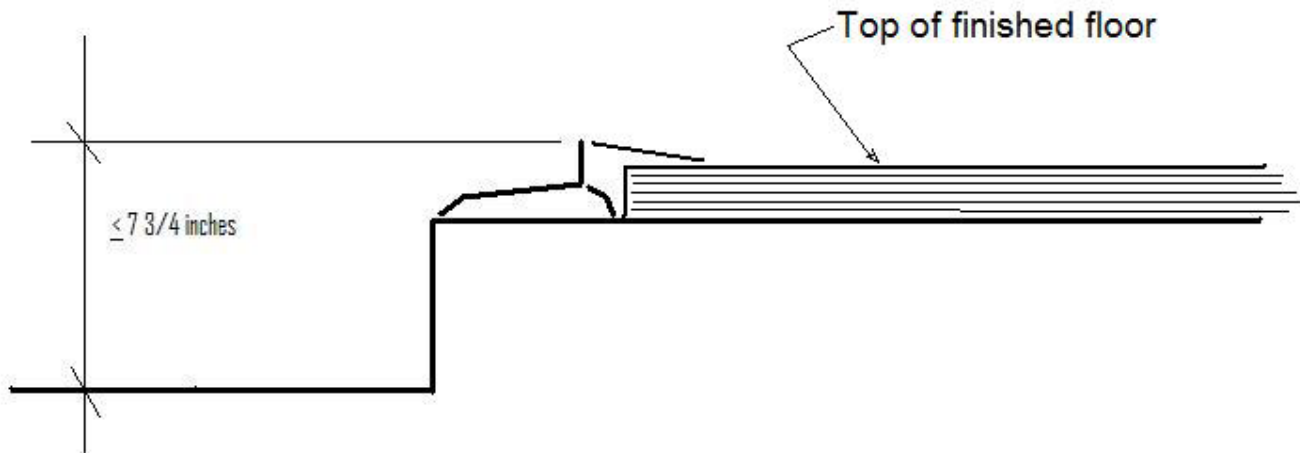
Indications from extreme weather events indicate that the water resistant pressures given in AAMA/WDMA/CSA 101/I.S.2/A440 may be unconservative for some locations. For example, studies conducted after the 2004 hurricanes in Florida indicated that buildings built under the 2001 *Florida Building Code* for the most part survived the hurricanes with fenestration remaining in place, but that in some instances water penetration of the fenestration did occur. In some cases this water penetration caused a great deal of damage to the interior spaces of buildings. AAMA has recently begun participating in a research project to learn more about water penetration of exterior fenestration during extreme wind and rain events. What we know at the present time is that ½ inch high barriers are inadequate throughout most of the U.S., and barriers greater than 2 ½ inches in height may be needed in some areas.

To address this need the IBC currently contains Exceptions 3 and 5 to Section 1008.1.4 and the exception to Section 1008.1.6. The exceptions to Section 1008.1.4 permit the exterior landing, balcony, deck or porch to be a certain distance below the top of the threshold of an exterior door, or the interior finished floor, in certain types of dwelling units. The exception to Section 1008.1.6 permits the threshold of exterior doors to be the same height as the step down permitted in Exception 3 to Section 1008.1.4.

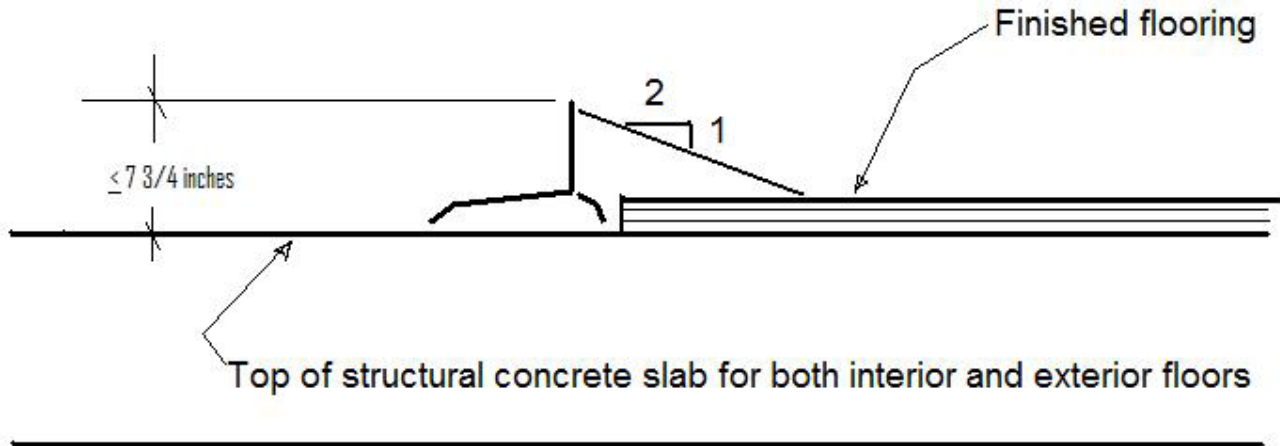
Some confusion has occurred between the application of Exception 3 of Section 1008.1.4 and the exception to Section 1008.1.6, with some parties interpreting the two sections as permitting a total height difference of 15 ½ inches. Other parties have viewed the two exceptions as being redundant.

The intent of the two exceptions, however, is to permit a total height difference from the exterior floor surface to the top of the threshold of 7 ¾ inches, as stated in Exception 3 of Section 1008.1.4. In some cases that difference is provided by a difference in floor elevation between the interior and exterior spaces and therefore is addressed by the exception to Section 1008.1.4. In other cases, such as when the top of the interior and exterior floor are at similar heights, the barrier needs to be provided by the door threshold itself, and therefore the exception to Section 1008.1.6 is needed. Common instances when the top of the interior and exterior floor are at similar heights include when the exterior door is at grade, or when both the interior and exterior floor is provided by a concrete slab that is cantilevered through the exterior wall.

Case 1: Exterior step down occurs. Exception to Section 1008.1.6 permits the threshold to be greater than 1/2 inch or 3/4 inch in height, but exception 3 to Section 1008.1.4 limits the total distance in height (change in floor elevation + threshold height) to 7 3/4 inches.



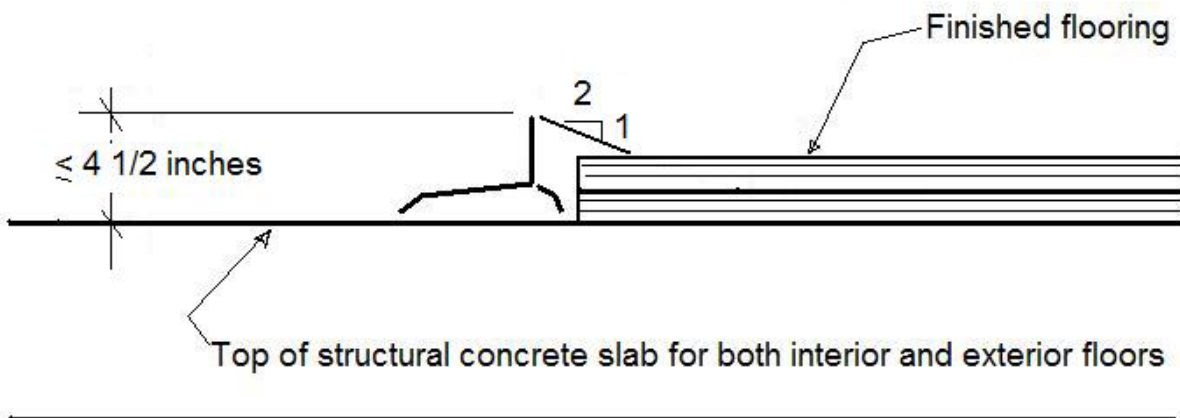
Case #2: Top of structural slab for both interior and exterior floor is at the same elevation. Only difference in floor height is from the interior finished flooring. Entire water barrier must be provided by the door threshold, which is permitted to be up to 7 3/4 inch in height by the exception to 1008.1.6.



Similarly, a lower height difference of 4 inches by floor elevation difference is currently provided in Exception 5 to Section 1008.1.4, but in some cases the barrier height required must be provided by the threshold. Therefore an exception similar to the current one for Section 1008.1.6 is needed for Type B dwelling units.

This proposal seeks to tie the exceptions to the two sections together, to clarify that the real concern is the total height difference between the top of the threshold and the exterior floor, landing, balcony, deck or patio. The combination of Exception 3 to Section 1008.1.4 and the exception to 1008.1.6 will continue to permit that height difference to be a total of 7 3/4 inches and clarifies that it is not to be greater than that, in Use Group R-2 and R-3 occupancies when the door does not swing over an exterior landing. The combination of Exception 5 to Section 1008.1.4 and the exception to 1008.1.6 will permit the height difference to be a total of 4 1/2 inches (the currently permitted 4 inches + the 1/2 inch threshold height permitted in Section 1008.1.6) for doorways to exterior balconies, decks and patios in Type B dwelling units.

Case 3: Type B dwelling unit with same height structural floor both interior and exterior. Water barrier height is provided by a combination of threshold height and height of finished flooring, with total height limited to 4 1/2 inches.



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

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

E43-07/08

1008.1.7 (IFC [B] 1008.1.7)

Proponent: James C. Gerren, Clark County Department of Development Services

Revise as follows:

1008.1.7 (IFC [B] 1008.1.7) Door arrangement. Space between two doors in a series shall be 48 inches (1219 mm) minimum plus the width of a door swinging into the space. Doors in a series shall swing either in the same direction or away from the space between the doors.

Exceptions:

1. The minimum distance between horizontal sliding power-operated doors in a series shall be 48 inches (1219 mm).
2. Storm and screen doors serving individual dwelling units in Groups R-2 and R-3 need not be spaced 48 inches (1219 mm) from the other door.
3. Doors within individual dwelling units in Groups R-2 and R-3 other than within Type A dwelling units.
4. The space between doors serving access vestibules of smokeproof enclosures shall be permitted to be in accordance with Section 909.20.1.

Reason: The purpose of this proposal is to clarify the code. IBC Section 1008.1.7 requires that the space between two doors in series must be at least 48 inches minimum plus the width of a door swinging into the space. However, where vertical exit enclosures are required to be smokeproof enclosures per IBC Section 1020.1.7, IBC Section 909.20.1 requires that the access to the stair in a smokeproof enclosure be by way of a vestibule or open exterior balcony. When vestibules provide access to the stair, IBC Section 909.20.1 requires that the vestibule be a minimum of 44 inches wide, but not less than the required width of the corridor leading to the vestibule, and a minimum of 72 inches in the direction of egress travel. As noted in the 2006 IBC Commentary on Section 909.20.1, as well as Figures 909.20.1 and 909.20.4.1 of the Commentary, the intent of IBC Section 909.20.1 is clearly to permit a minimum 44-inch by 72-inch vestibule. However, the current language of IBC Section 1008.1.7 would not permit a minimum 44-inch by 72-inch vestibule since Section 1008.1.7 requires the space between the two vestibule doors in series to be 48 inches minimum plus the width of the door swinging into the vestibule, i.e., 36 inches, which means that IBC Section 1008.1.7 would require smokeproof enclosure vestibules to be a minimum 44-inches wide by 84-inches in the direction of egress travel.

The proposed new Exception No. 4 to IBC Section 1008.1.7 would eliminate the conflict between Sections 1008.1.7 and 909.20.1 by specifically allowing the space between smokeproof enclosure vestibule doors to be sized in accordance with Section 909.20.1.

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

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

E44-07/08

1008.1.8.3 (IFC [B] 1008.1.8.3)

Proponent: Gene Boecker, Code Consultants, Inc

Revise as follows:

1008.1.8.3 (IFC [B] 1008.1.8.3) (Supp) 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:
 - 2.1. 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. Door locking arrangements without delayed egress shall be permitted in Group I-2 mental hospitals or portions of Group I-2 mental hospitals where the clinical needs of the patients require specialized security provisions for their safety provided all clinical staff can readily unlock such doors at all times.

Reason: This is a follow-up of a code change presented during the prior cycle. It was considered by did not have the votes necessary for passage. It was also considered to be too broad for what was being requested. Therefore, the proposal has been tailored to the specific needs of mental hospitals (as the code refers to them). The following explanation was presented but was not in written form for the membership to review:

The occupancy classification is I-2 for mental healthcare institutions, and all in-patient residential facilities comply with the applicable codes for healthcare occupancies. The major difference between a mental hospital and a general care hospital is that patients must be secured at all times. The exit access doors and exit doors must be locked.

With few exceptions, the in-patient population in a mental health facility is ambulatory with the ability to egress and are capable of self-preservation. However, all of the patient areas must be locked in order to maintain custody of the occupants. In an emergency, all members of the staff are trained and drilled to unlock the exit doors for egress from the occupied spaces. As is consistent with the established healthcare strategy of defend-in-place, the patients are moved horizontally to adjacent smoke compartments as areas of refuge.

The life safety needs of general care and mental hospitals have a significant similarity, in that the staff provide for the means of egress. In a general care hospital, staff must relocate patients on beds or gurneys to the adjacent smoke compartment. Bed-ridden patients cannot move themselves. Similarly, in mental hospitals staff is required to unlock doors so that patients can be moved to the adjacent smoke compartment. In both cases, life safety must be provided to by staff.

In mental hospitals, staff must be on duty 24/7 to supervise patient activities and movement. To prepare for emergencies, drills are conducted quarterly on each shift. All staff has keys to facilitate egress from the occupied spaces.

This proposed code change will specifically address those occupancies that must maintain control of the occupants. Automatic unlocking systems do not provide a viable solution because they ultimately result in loss of control of the occupants. Such a system will unacceptably compromise the security required for psychiatric center occupants, who have been restrained in accordance with legal proceedings. Any solution wherein a loss of power means uncontrolled egress also means a loss of security.

Although developed in a different forum, the NFPA Life Safety Code provides specific provisions for facilities where the clinical needs of inpatients require specialized security provisions for their safety. These facilities are not I-3 Occupancies and are not intended to meet the I-3 provisions. Mental Hospitals are clearly I-2. Therefore, this code change is necessary to address this consideration which currently requires negotiation and "code modifications for each installation."

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

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

E45-07/08

1008.1.8.4, (IFC [B] 1008.1.8.4)

Proponent: Thomas W. Hanson AIA, The Boeing Company

Revise as follows:

1008.1.8.4 (IFC [B] 1008.1.8.4) Bolt locks. Manually operated flush bolts or surface bolts are not permitted.

Exceptions:

1. On doors not required for egress in individual dwelling units or sleeping units.
2. Where a pair of doors serves a storage or equipment room, manually operated edge- or surface-mounted bolts are permitted on the inactive leaf.
3. Where a pair of doors serves a Group B, F or S occupancy, manually operated edge- or surface-mounted bolts are permitted on the inactive leaf provided such inactive leaf is not needed to meet egress width requirements and the building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1. The inactive leaf shall contain no doorknobs, panic bars or similar operating hardware.

Reason: The purpose of this proposal is to provide for the expanded use of manually operated edge- or surface-mounted bolts under specified conditions. The movement of equipment and computer racks within Group B, F and S occupancies is a commonplace operation that often requires more width than is provided by a standard 3'-0" door. The currently required hardware on additional door leaves can be complicated to specify and problematic to maintain as the operational requirements are different for doors accommodating equipment as opposed to occupants during egress. A number of compensatory measures have been offered in this proposed exception so as to minimize the risk to the occupants of such spaces. There is generally a high degree of occupant familiarity with such special use rooms in Group B, F and S occupancies. The provision that means of egress width requirements be satisfied by the operating leaf ensures that occupants have a fully complying door available for means of egress purposes. Also, the requirement that the inactive leaf contain no operating hardware addresses occupant conditioning. The presence of operating hardware provides an expectation to building occupants. Where no such hardware exists, occupants will naturally approach the active leaf having the appropriate hardware. The additional requirement that the building be equipped throughout with an approved automatic sprinkler system provides for fire suppression throughout the building and further enhances overall occupant safety. Approval of this additional exception will increase building functionality while maintaining a very high degree of occupant safety.

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

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

E46-07/08

1008.1.8.4, (IFC [B] 1008.1.8.4)

Proponent: Thomas W. Hanson, AIA, The Boeing Company

Revise as follows:

1008.1.8.4 (IFC [B] 1008.1.8.4) Bolt locks. Manually operated flush bolts or surface bolts are not permitted.

Exceptions:

1. On doors not required for egress in individual dwelling units or sleeping units.
2. Where a pair of doors serves a storage or equipment room, manually operated edge- or surface-mounted bolts are permitted on the inactive leaf.
3. Where a pair of doors serves an occupant load of less than 50 persons in a Group B, F or S occupancy, manually operated edge- or surface-mounted bolts are permitted on the inactive leaf. The inactive leaf shall contain no doorknobs, panic bars or similar operating hardware.

Reason: The purpose of this proposal is to provide for the expanded use of manually operated edge- or surface-mounted bolts under specified conditions. Inasmuch as a single 3'-0" door will accommodate an occupant load in excess of 200 persons, if a relatively small space in a Group B, F or S occupancy is equipped with a pair of doors, it is highly likely that such increased width is necessary for the movement of process related equipment or supplies. Automatic surface mounted flush bolts and removable door center posts are easily damaged and difficult to maintain in such areas of frequent equipment movement. A number of compensatory measures have been offered in this proposal so as to minimize the risk to the occupants of such spaces. There is generally a high degree of occupant familiarity with such special use rooms in Group B, F and S occupancies. Placing a less than 50 person occupant load limitation on the area served by the pair of doors greatly increases occupant awareness and decreases competition for the exit or exit access door. Also, the requirement that the inactive leaf contain no operating hardware addresses occupant conditioning. The presence of operating hardware provides an expectation to building occupants. Where no such hardware exists, occupants will naturally approach the active leaf having the appropriate hardware. Approval of this additional exception will increase building functionality while maintaining a very high degree of occupant safety.

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

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

E47-07/08

1008.1.8.4 (IFC [B] 1008.1.8.4)

Proponent: Bruce Ugelstad, NCARB, MeritCare Health System

Revise as follows:

1008.1.8.4 (IFC [B] 1008.1.8.4) Bolt locks. Manually operated flush bolts or surface bolts are not permitted.

Exceptions:

1. On doors not required for egress in individual dwelling units or sleeping units.

2. Where a pair of doors serves a storage or equipment room, manually operated edge- or surface-mounted bolts are permitted on the inactive leaf.
3. Where a pair of doors serve patient care rooms in a Group I-2 occupancy, manually operated edge- or surface-mounted bolts are permitted on the inactive leaf.

Reason: The American society has increasingly become overweight creating the need to care for increasingly more bariatric hospital patients. The movement of morbidly obese patients on bariatric beds through 4' wide doors is a difficult process at best. Providing a pair of doors with a typically fixed inactive leaf except during the movement of the patient would greatly improve the situation. With the active leaf of the door typically open for the monitoring of the patient by the nursing staff, automatic flush bolts would not keep the inactive leaf latched in the closed position as preferred.

Allowing hospital patient care room inactive leaf doors to be equip with standard flush bolts will:

- A) Improve the quality of care to hospital patients allowing smooth and easy transport of patients to and from rooms without moving the patient to a transport cart and providing adequate opening size allowing minimal incidence of jarring when the bed bumps the door or wall.
- B) Reduce the risk of injury to medical staff by reducing the need to move (lift) the patient on and off of transport carts.

Section 407.3.1 Corridor doors – Code currently indicates that patient room doors "...shall not have a required fire protection rating and shall not be required to be equipped with self closing or automatic-closing devices, but shall provide an effective barrier to limit the transfer of smoke and shall be equipped with positive latching." Hospital patient room doors are recognized as unique with staff trained to close doors during an alarm situation.

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

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

E48–07/08

1008.1.8.5.1 (New) [IFC [B] 1008.1.8.5.1 (New)]

Proponent: Tom Lariviere, Madison Fire Department, representing Joint Fire Service Review Committee

Add new text as follows:

1008.1.8.5.1. (IFC [B] 1008.1.8.5.1) Closet and bathroom doors in Group R-4 Occupancies. In Group R-4 occupancies, closet doors that latch in the closed position shall be operable from inside the closet, and bathroom doors that latch in the closed position shall be capable of being unlocked from the ingress side.

Reason: This proposal will require that doors to closets must be operable from the inside. This will provide the ability for someone to exit the closet if they were to get closed into the closet.

Additionally, the bathroom doors must be able to be unlocked from the outside of the bathroom when the door is locked from the inside. This will allow for the door to still be locked when the bathroom is in use, but staff can open the bathroom door when someone is inside and needs assistance.

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

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

E49–07/08

1008.1.8.6, 1008.1.8.6.2 (New), 1008.1.8.7, (IFC [B] 1008.1.8.6, [B] 1008.1.8.6.2 (New), 1008.1.8.7)

Proponent: Kent A. Libbe, Kingston HealthCare Company, LLC

1. Add new text as follows:

1008.1.8.6 (IFC [B] 1008.1.8.6) Special egress locks. Special locking systems shall be permitted to be installed in accordance with Sections 1008.1.8.6.1, 1008.1.8.6.2 or 1008.1.8.6.3.

2. Revise as follows:

~~1008.1.8.6 (IFC [B] 1008.1.8.6)~~ 1008.1.8.6.1 (IFC [B] 1008.1.8.6.1) Delayed egress locks. Approved, listed, delayed egress locks shall be permitted to be installed on doors serving any occupancy except Group A, E and H occupancies in buildings that are equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or

an approved automatic smoke or heat detection system installed in accordance with Section 907, provided that the doors unlock in accordance with Items 1 through 6 below. A building occupant shall not be required to pass through more than one door equipped with a delayed egress lock before entering an exit.

1. The doors unlock upon actuation of the automatic sprinkler system or automatic fire detection system.
2. The doors unlock upon loss of power controlling the lock or lock mechanism.
3. The door locks shall have the capability of being unlocked by a signal from the fire command center.
4. The initiation of an irreversible process which will release the latch in not more than 15 seconds when a force of not more than 15 pounds (67 N) is applied for 1 second to the release device. Initiation of the irreversible process shall activate an audible signal in the vicinity of the door. Once the door lock has been released by the application of force to the releasing device, relocking shall be by manual means only.

Exception: Where approved, a delay of not more than 30 seconds is permitted.

5. A sign shall be provided on the door located above and within 12 inches (305 mm) of the release device reading: PUSH UNTIL ALARM SOUNDS. DOOR CAN BE OPENED IN 15 [30] SECONDS.
6. Emergency lighting shall be provided at the door.

3. Add new text:

1008.1.8.6.2 (IFC [B] 1008.1.8.6.2) Controlled egress locks. Approved, listed, controlled egress locks shall be permitted to be installed on doors serving Group I-2 occupancies in areas where patients or residents have physical or mental conditions that would endanger them if they were not restricted. Buildings using controlled egress locking devices shall be equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1. Buildings using controlled egress locking systems shall provide an approved automatic smoke detection system installed in accordance with Section 907.

Controlled egress locking doors shall unlock in accordance with Items 1 through 6 below. A building occupant shall not be required to pass through more than one door equipped with a controlled egress lock before entering an exit.

1. The doors unlock upon actuation of the automatic sprinkler system or automatic fire detection system.
2. The doors unlock upon loss of power controlling the lock or lock mechanism.
3. The door locks shall have the capability of being unlocked by an approved manual keypad located on each side of the door, at staff locations on that floor and a signal from the fire command center.
4. Once the door lock has been released, relocking shall be by manual means only.
5. A sign shall be provided on the door located above and within 12 inches (305 mm) of the release device reading: THESE DOORS ARE ELECTRONICALLY CONTROLLED.
6. Emergency lighting shall be provided at the door.

4. Revise as follows:

~~1008.1.8.7 (IFC [B] 1008.1.8.7)~~ 1008.1.8.6.3 (IFC [B] 1008.1.8.6.3) (Supp) 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 the requirements below:

1. The listed hardware that 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 releases to the electromagnetic lock and unlocks the door immediately.
4. Loss of power to the listed hardware automatically unlocks the door.

(Renumber subsequent sections)

Reason: 1. This change has been adopted effective July 1, 2007 by the state of Ohio. The purpose of the change is to address the special needs of facilities that provide care for individuals who must be restricted for their own safety such as people suffering from dementia or Alzheimer's disease. 2. Application of the current code as it is written forces the facility to put residents at risk by allowing them to be able to exit and wander away from the facility, thereby putting them in extreme danger due to their inability to safely function in the outside world. Many of the residents are able to read and comprehend instructions such as those on delayed egress devices and are able to let themselves out. Additional systems such as Roam Alert or Code Alert are used to try to help with this problem, but they are not 100% effective. Some residents resist wearing the pendants that are required as part of these systems and have been known to go as far as to chew them off. There also are mechanical issues that develop with these systems. 3. NA 4. This code change is identical to that being adopted by the state of Ohio.

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

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

E50-07/08

1008.1.8.6, 1008.1.8.6.1 (New), 1008.1.8.6.2 (New) [IFC [B] 1008.1.8.6, [B] 1008.1.8.6.1 (New), [B] 1008.1.8.6.2 (New)]

Proponent: David W. Sizemore, HCR-Manorcare

1. Add new text as follows:

1008.1.8.6 (IFC [B] 1008.1.8.6) Special egress locks. Special locking systems shall be permitted to be installed in accordance with Sections 1008.1.8.6.1, 1008.1.8.6.2 or 1008.1.8.6.3.

2. Revise as follows:

~~1008.1.8.6~~ 1008.1.8.6.1 (IFC [B] 1008.1.8.6.1) Delayed egress locks. Approved, listed, delayed egress locks shall be permitted to be installed on doors serving any occupancy except Group A, E and H occupancies in buildings that are equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1. or an approved automatic smoke or heat detection system installed in accordance with Section 907, provided that the doors unlock in accordance with Items 1 through 6-7 below. ~~A building occupant shall not be required to pass through more than one door equipped with a delayed egress lock before entering an exit.~~ Buildings using delayed egress locking devices shall have an independent release mechanism to remotely disengage all delayed egress door locking devices that is accessible to staff at all times.

A building occupant shall be permitted to pass through more than one door equipped with a delayed egress lock before entering an exit, however, only one delayed egress device shall be permitted to be used on each door. Delayed egress locks complying with 1008.1.8.6.1 shall be permitted to be used in conjunction with controlled egress locks complying with 1008.1.8.6.2 provided only one such device is used on each door in the same path of egress.

1. The doors unlock upon actuation of the automatic sprinkler system or automatic fire detection system.
2. The doors unlock upon loss of normal power controlling the lock or lock mechanism however, the lock or lock mechanism shall be permitted to regain operational status after being relocked by manually means only at each device provided devices are connected to an alternate power source and such operational power is not derived through or from the buildings fire alarm system. Alternate power sources shall be limited to lock mechanism manufacturer approved battery supplies or building emergency power source and, all devices remain capable of being released through the remote release mechanism.
3. The ~~door lock doors locks~~ shall have the capability of being unlocked by an approved manual pinpad or a single action push button release device located on each side of the door as well as by a signal from the fire command center, where provided.
4. The initiation of an irreversible process which will release the latch in not more than 15 seconds when a force of not more than 15 pounds (67 N) is applied for 1 second to the release device. Initiation of the irreversible process shall activate an audible signal in the vicinity of the door. Once the door lock has been released by the application of force to the releasing device, relocking shall be by manual means only.

Exception: Where approved, a delay of not more than 30 seconds is permitted.

5. A sign shall be provided on the door located above and within 12 inches (305 mm) of the release device reading; **DISENGAGE DOOR LATCHING MECHANISM AND** PUSH UNTIL ALARM SOUNDS. DOOR CAN BE OPENED IN 15 (30) SECONDS.

Exception: Such a sign is permitted to be replaced by one that reads; **DOOR IS MAGNETICALLY LOCKED - TO AVOID ALARMS - SEE STAFF FOR EXITING METHODS;** where it has been determined necessary for the protection of the building occupants and approved by the authority having jurisdiction.

6. Emergency lighting shall be provided at the door.
7. Door locking mechanism shall be permitted to remain operational where fire alarm panel is to lose normal power provided device operational power is not derived through or from the buildings fire alarm system and the device remains capable of being released through the remote release mechanism.

3. Add new text as follows:

1008.1.8.6.2 (IFC [B] 1008.1.8.6.2) Controlled egress locks. Approved, listed controlled egress locks, including electromagnetic devices or continuously locked mechanisms shall be permitted to be installed on doors serving Group I-2 occupancies in areas where patients or residents have a clinical need due to either physical or mental conditions

that could potentially endanger them if their egress were not restricted. Buildings using controlled egress locking devices shall be equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1. Buildings using controlled egress locking systems shall have an independent release mechanism to remotely disengage all egress door locking devices accessible to staff at all times.

Controlled egress locking device shall function in accordance with Items 1 through 6 below. A building occupant shall be permitted to pass through more than one door equipped with a controlled egress lock before entering an exit, however, only one controlled egress device shall be permitted to be used on each door.

1. The doors unlock upon actuation of the automatic sprinkler system or automatic fire detection system.
2. The doors unlock upon loss of normal power controlling the lock or lock mechanism however, the lock or lock mechanism shall be permitted to regain operational status after being relocked by manually means only at each device provided devices are connected to an alternate power source and such operational power is not derived through or from the buildings fire alarm system. Alternate power sources shall be limited to lock mechanism manufacturer approved battery supplies or building emergency power source and, all devices remain capable of being released through the remote release mechanism.
3. The door lock shall have the capability of being unlocked by an approved manual pinpad or a single action push button release device located on each side of the door, as well as a signal from the fire command center, where provided.
4. Once the door lock has been released, relocking shall be by manual means at that device only.
5. A sign shall be provided on the door located above and within 12 inches (305 mm) of the release device reading: THIS DOOR IS ELECTRONICALLY CONTROLLED. SEE STAFF FOR EXITING METHODS.
6. Emergency lighting shall be provided at the door.
7. Door locking mechanism shall be permitted to remain operational if fire alarm panel is to lose normal power provided device operational power is not derived through or from the buildings fire alarm system and device remains capable of being released through the remote release mechanism.

4. Revise as follows:

1008.1.8.7 (IFC [B] 1008.1.8.7) 1008.1.8.6.3 (IFC [B] 1008.1.8.6.3) (Supp) 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 the requirements below:

1. The listed hardware that 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 releases to the electromagnetic lock and unlocks the door immediately.
4. Loss of power to the listed hardware automatically unlocks the door.

(Renumber subsequent sections)

Reason: The purposed code change is to address the special needs of facilities that provide care for individuals who must be restricted for their own safety such as people suffering from dementia or Alzheimer's disease.

Application of the current code as it is written forces the facility to put residents at risk by allowing them to be able to exit and wander away from the facility, thereby putting them in extreme danger due to their inability to safely function in the outside world. Many of the residents are able to read and comprehend instructions such as those on delayed egress devices and are able to let themselves out. Additional systems such as Roam Alert or Code Alert are used to try to help with this problem, but they are not 100% effective. Some residents resist wearing the pendants that are required as part of these systems and have been known to go as far as to chew them off. There also are mechanical issues that develop with these systems.

This code change will not affect the requirements for the doors to release upon activation of the fire alarm or sprinkler system.

This code change does not harm any residents nor will it affect their quality of care. What it does is to protect them from elopement and possible harm because of their inability to protect themselves.

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

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

E51-07/08

1008.1.8.6 (New) [IFC [B] 1008.1.8.6 (New)]

Proponent: John Williams, Construction Review Services, Washington State Department of Health, Emory Rogers, Virginia Department of Housing and Community Development, John Neff City of Lacey, WA, representing Washington State Building Code Council

Add new text as follows:

1008.1.8.6 (IFC [B] 1008.1.8.6) Special locking arrangements in Group I-2. Where the clinical needs of patients require the restraint of movement, locks shall be permitted on doors within the means of egress, provided that:

1. The building is equipped with an approved automatic sprinkler system in accordance with Section 903.3.1.1, and an approved automatic fire alarm system in accordance with Section 907.
2. The doors unlock upon actuation of the automatic fire alarm system, or, upon the loss of power to the lock or lock mechanism.
3. The doors are capable of being unlocked by a signal from a switch at a nurse station or other approved location.
4. An electronic device, such as a keypad and code, is provided adjacent to each door equipped with a lock. Such device shall deactivate the door locking mechanism and permit operation of the door. Instructions for exiting shall be posted within six feet of the door.
5. All clinical staff shall have the codes or other means necessary to operate the device in Item #4.

Reason: This change provides a much needed option for facilities that house dementia and Alzheimer's patients. There is a reoccurring issue with elopement of dementia patients. Facilities that house these patients face significant challenges in maintaining a safe and secure environment for these patient types within the framework of the building code. The States of Washington and Virginia have amended the building code with similar special provisions for dementia control. The conditions that allow this special locking arrangement provide a measured approach to life safety, similar to delayed egress. We use this as a practical solution to a real world problem.

There were three proposals last cycle that dealt with this concept, all were defeated by the committee. Two changes were turned down in favor of a third amendment (G83-06/07) that was almost identical to this one. The committee turned down G83-06/07 due to concerns that patients would learn to pull the fire alarm to get out of the building. An existing exception to IBC 907.2.6 allows the fire alarm pulls to be located at nurse stations and other constantly staff attended locations, which mitigates this concern.

To address other committee concerns: We believe that while there may be occupancies that may house these types of patients, it is clear that Group I-2 definitely houses these patients. The purpose of this change is targeted towards a verifiable condition. The committee preferred the language "clinical staff" as opposed to "all staff". This change has been made

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

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

E52-07/08

1008.1.8.8 (New) [IFC [B] 1008.1.8.8 (New)]

Proponent: A. Brooks Ballard, Virginia Department of Corrections

Add new text as follows:

1008.1.8.8 (IFC [B] 1008.1.8.8) Locking arrangements in correctional facilities. In occupancies in Groups A-2, A-3, A-4, B, E, F, I-2, I-3, M and S within correctional and detention facilities, doors in means of egress serving rooms or spaces occupied by persons whose movements are controlled for security reasons shall be permitted to be locked when equipped with egress control devices which shall unlock manually and by at least one of the following means:

1. Activation of an automatic sprinkler system installed in accordance with Section 903.3.1.1,
2. Activation of an approved manual alarm box, or
3. A signal from a constantly attended location.

Reason: This section permits the locking of means of egress doors in areas within penal facilities that contain occupancies in Use Groups A-2, A-3, A-4, B, E, F, I-2, M and S, which are occupied by persons who must be restrained for security reasons. In Section 410.2, the code provides for locking of doors in the means of egress in mixed occupancies containing a Group I-3 use area. Correctional and detention facilities, however, often are a complex of buildings that do not necessarily have a Group I-3 classification in each building, but one which still require high levels of security throughout. This section is intended to regulate those areas. All locking devices must be capable of manual unlocking by at least one of the egress

control devices specified. Such arrangements are deemed satisfactory to permit prompt egress for the building occupants because correctional and detention facilities are ordinarily continuously staffed with trained personnel. Further, the provisions for backup by activation of an automatic sprinkler system, activation of an approved manual alarm box, or unlocking from a constantly attended location, provide additional life safety measures. Note that in order to utilize this section, an automatic sprinkler system or manual alarm system is not required to be provided.

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

Analysis: A concern may be if this could be considered to conflict with Section 1008.1.8.3 Item 1.

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

E53-07/08

1008.1.9, 1008.1.9.1 (New), 1008.1.9.2 (New) [IFC [B] 1008.1.9, [B] 1008.1.9.1 (New), [B] 1008.1.9.2 (New)]

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

Revise as follows:

1008.1.9 (IFC [B] 1008.1.9) Panic and fire exit hardware. ~~Where panic and fire exit hardware is installed, it shall comply with the following:~~

- ~~1. The actuating portion of the releasing device shall extend at least one-half of the door leaf width.~~
- ~~2. The maximum unlatching force shall not exceed 15 pounds (67 N).~~

Each door in a means of egress from a Group A or E occupancy having an occupant load of 50 or more and any Group H occupancy shall not be provided with a latch or lock unless it is panic hardware or fire exit hardware.

Exception: A main exit of a Group A occupancy in compliance with Section 1008.1.8.3, Item 2.

Electrical rooms with equipment rated 1,200 amperes or more and over 6 feet (1829 mm) wide that contain overcurrent devices, switching devices or control devices with exit or exit access doors shall be equipped with panic hardware ~~and~~ or fire exit hardware. The doors shall swing in the direction of egress travel.

1008.1.9.1 (IFC [B] 1008.1.9.1) Installation. Where panic or fire exit hardware is installed, it shall comply with the following:

1. The actuating portion of the releasing device shall extend at least one-half of the door leaf width; and
2. The maximum unlatching force shall not exceed 15 pounds (67 N)

1008.1.9.2 (IFC [B] 1008.1.9.2) Balanced doors. If balanced doors are used and panic hardware is required, the panic hardware shall be the push-pad type and the pad shall not extend more than one-half the width of the door measured from the latch side.

Reason: Section 1008.1.9 intends to require panic hardware or fire exit hardware under certain conditions, then, specify requirements for their installation including maximum unlatching forces. The current language, however, specifies the installation requirements prior to establishing when panic hardware or fire exit hardware is required. The proposal rearranges the language by stating when panic or fire exit hardware is required, then, stating their installation requirements.

Section 715.4 on fire door and shutter assemblies requires compliance with NFPA 80 and Section 6.4.4.1 of NFPA 80-07 effectively limits locks and latches on fire doors to labeled locks and latches and labeled fire exit hardware. Thus, panic hardware is prohibited on fire doors. Panic hardware and fire exit hardware are permitted to meet the requirements of Section 1008.1.9 on nonrated means of egress doors but only fire exit hardware is permitted to meet the same requirements on means of egress doors that are also fire doors. Based on this, the proposal adds fire exit hardware as an option to the requirement for panic hardware at electrical rooms.

The other changes are primarily editorial and to better correlate Section 1008.1.9 with the other provisions of Chapter 10. "Must" is changed to "shall" to eliminate nonmandatory language. "Exit access doors" is changed to "exit or exit access doors" so that means of egress doors in the exit are not excluded from the applicable requirements and to better correlate with the provisions of Section 1015 on exit and exit access doorways. A means of egress door from an electrical room could be an exit door as readily as an exit access door. "Egress" is changed to "egress travel" to correlate with similar language in Section 1008.1.2 on door swing.

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

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

E54-07/08

1008.1.9, Chapter 35 (New) (IFC [B] 1008.19, Chapter 45 (New))

Proponent: Bob Eugene, Underwriters Laboratories, Inc.

1. Revise as follows:

1008.1.9 (IFC [B] 1008.1.9) Panic and fire exit hardware. Where panic and fire exit hardware is installed, it shall comply with the following:

1. Panic hardware shall be listed in accordance with UL 305.
2. Fire exit hardware shall be listed in accordance with UL 10C and UL 305.
4. 3. The actuating portion of the releasing device shall extend at least one-half of the door leaf width.
- ~~2. The maximum unlatching force shall not exceed 15 pounds (67 N).~~

Each door in a means of egress from a Group A or E occupancy having an occupant load of 50 or more and any Group H occupancy shall not be provided with a latch or lock unless it is panic hardware or fire exit hardware.

Exception: A main exit of a Group A occupancy in compliance with Section 1008.1.8.3, Item 2.

Electrical rooms with equipment rated 1,200 amperes or more and over 6 feet (1829 mm) wide that contain overcurrent devices, switching devices or control devices with exit access doors shall be equipped with panic hardware and doors shall swing in the direction of egress.

If balanced doors are used and panic hardware is required, the panic hardware shall be the push-pad type and the pad shall not extend more than one-half the width of the door measured from the latch side.

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

Underwriters Laboratories

305-07 Panic Hardware

Reason: This proposal is intended to simplify code enforcement related to approval of panic hardware by requiring it to be listed in accordance with UL 305. For many years panic and fire exit hardware has been listed in accordance with this standard, and over 60 companies have their panic hardware listed and over 40 companies have their fire exit hardware listed.

UL 305 includes a comprehensive set of construction and performance requirements that verify that this important life safety product operates as intended. This includes endurance, emergency operation, elevated ambient exposure, and low temperature impact tests.

The standard currently includes a requirement for the release mechanism to be constructed so that a horizontal force of 15 pounds (66 N) or less will actuate the actuating bar and latches when the door is latched. This requirement (item 2) is being deleted from the body of the code since the listed panic hardware has already been investigated to verify it already meets this criteria.

ANSI/UL 305 is an ANSI approved standard.

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

Analysis: A review of the standard proposed for inclusion in the code, UL 305-07, for compliance with ICC criteria for referenced standards given in Section 3.6. of Council Policy #CP 28 will be posted on the ICC website on or before January 15, 2008.

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

E55-07/08

1008.1.9 (IFC [B] 1008.1.9)

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

Revise as follows:

1008.1.9 (IFC [B] 1008.1.9) Panic and fire exit hardware. Where panic and fire exit hardware is installed, it shall comply with the following:

1. The actuating portion of the releasing device shall extend at least one-half of the door leaf width.
2. The maximum unlatching force shall not exceed 15 pounds (67 N).

Each door in a means of egress ~~from serving~~ a Group A or E occupancy ~~having with~~ an occupant load of 50 or more ~~and any or a~~ Group H occupancy shall not be provided with a latch or lock unless it is panic hardware or fire exit hardware.

Exception: A main exit of a Group A occupancy in compliance with Section 1008.1.8.3, Item 2.

Electrical rooms with equipment rated 1,200 amperes or more and over 6 feet (1829 mm) wide that contain overcurrent devices, switching devices or control devices with exit access doors shall be equipped with panic hardware and doors shall swing in the direction of egress.

If balanced doors are used and panic hardware is required, the panic hardware shall be the push-pad type and the pad shall not extend more than one-half the width of the door measured from the latch side.

Reason: For Group A and E occupancies, the current language limits the requirement for panic hardware or fire exit hardware to means of egress from the occupancy, thus, exempting the means of egress within the Group A or E occupancy from the requirement. This is not the intent and the proposal corrects this oversight.

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

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

E56-07/08

1009.1 (New), 1009.3, (IFC [B] 1009.1 (New), [B] 1009.3)

Proponent: Scott Crossfield, Theatre Projects Consultants, Inc., representing himself

1. Add new text as follows:

1009.1 Scope. The provisions of this section shall apply to all stairways. Exterior exit stairways shall also comply with Section 1023.

Exception: Existing stairways being altered or replaced shall be permitted to comply with Section 3403.4.

(Renumber subsequent sections)

2. Revise as follows:

1009.3 Stair treads and risers. Stair riser heights shall be 7 inches (178 mm) maximum and 4 inches (102 mm) minimum. Stair tread depths shall be 11 inches (279 mm) minimum. The riser height shall be measured vertically between the leading edges of adjacent treads. The tread depth shall be measured horizontally between the vertical planes of the foremost projection of adjacent treads and at a right angle to the tread's leading edge. Winder treads shall have a minimum tread depth of 11 inches (279 mm) measured at a right angle to the tread's leading edge at a point 12 inches (305 mm) from the side where the treads are narrower and a minimum tread depth of 10 inches (254 mm).

Exceptions:

1. Alternating tread devices in accordance with Section 1009.9.
2. Spiral stairways in accordance with Section 1009.8.
3. Aisle stairs in assembly seating areas where the stair pitch or slope is set, for sightline reasons, by the slope of the adjacent seating area in accordance with Section 1025.11.2.
4. 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; the maximum riser height shall be 7.75 inches (197 mm); the minimum tread depth shall be 10 inches (254 mm); the minimum winder tread depth at the walk line shall be 10 inches (254 mm); and the minimum winder tread depth shall be 6 inches (152 mm). A nosing not less than 0.75 inch (19.1 mm) but not more than 1.25 inches (32 mm) shall be provided on stairways with solid risers where the tread depth is less than 11 inches (279 mm).
5. ~~See the Section 3403.4 for the replacement of existing stairways.~~

Reason: The intent of this proposal is to provide a general scoping section for stairways. Without this language, there has also been the interpretation that supplemental stairways or non-required stairways do not have to comply with general stairways safety provisions. In addition there is confusion over whether that exterior exit stairways do or do not have to comply with the general provisions for stairways in Section 1009, only the specific provisions in Section 1023. Section 1009.3, Exception 5 is relocated if the general scoping provisions are added.

Code change proposal E55-06/07 had language that limited the stairway scoping to stairways only used as part of the means of egress, similar to the scoping used for ramps in Section 1010.1. The committee's reason for disapproval of the 'means of egress' stairways language proposed in E55-06/07, was that while they believed a scoping section is needed for this section, the proposed language did not clarify if the stairway provisions should be applicable to all stairways, stairways that are part of the means of egress, or just stairways required to serve as part of the means of egress. This proposal by saying "all stairways" will eliminate that concern.

FYI - the provisions in 2004 ADA/ABA Accessibility Guidelines Section 210.1 apply to all means of egress stairways.

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

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

E57-07/08

1009.2 (IFC [B] 1009.2); IRC R311.5.2

Proponent: David W. Cooper, Stairway Manufacturers' Association

THESE PROPOSALS ARE ON THE AGENDA OF THE IBC MEANS OF EGRESS AND THE IRC BUILDING/ENERGY CODE DEVELOPMENT COMMITTEES AS 2 SEPARATE CODE CHANGES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IBC MEANS OF EGRESS

Revise as follows:

1009.2 (IFC [B] 1009.2) Headroom. Stairways shall have a minimum headroom clearance of 80 inches (2032 mm) measured vertically from a line connecting the edge of the nosings. Such headroom shall be continuous above the stairway to the point where the line intersects the landing below, one tread depth beyond the bottom riser. The minimum clearance shall be maintained the full width of the stairway and landing that is available for placement of the foot in ascent or descent.

Exceptions:

1. Spiral stairways complying with Section 1009.8 are permitted a 78-inch (1981 mm) headroom clearance.
2. 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; the edge of a floor opening shall be permitted to project 4.75 inches (121 mm) maximum into the required headroom where guards or handrails on open sides of stairways below are located beyond the edge of the opening, provided that all required stairway widths are provided and the space between the top of an angled guard or handrail and the bottom of the projection shall not narrow to less than 6 inches (152 mm) measured vertically.

PART II – IRC BUILDING AND ENERGY

Revise as follows:

R311.5.2 Headroom. The minimum headroom in all parts of the stairway shall not be less than 6 feet 8 inches (2036 mm) measured vertically from the sloped plane adjoining the tread nosing or from the floor surface of the landing or platform on that portion of the stairway that is available for placement of the foot in ascent or descent.

Exception: The edge of a floor opening shall be permitted to project 4.75 inches (121 mm) maximum into the required headroom where guards or handrails on open sides of stairways below are located beyond the edge of the opening, provided that all required stairway widths are provided and the space between the top of an angled guard or handrail and the bottom of the projection shall not narrow to less than 6 inches (152 mm) measured vertically.

Reason: Part I- IBC -This is a required change to assure consistent code enforcement and compliance and eliminate the possibility of entrapment. The change to the charging paragraph supports current enforcement policies around the country and more clearly states the intent of the code. Headroom is simply not required where you cannot walk. The code currently allows extending the line of measurement beyond the limit of the "walkable" surface causing legal issues in court interpretations and provides no additional level of safety for the user. Nosings of treads on open stairs most often overlap the supporting wall and stringer below. This supporting wall is placed under the opening above in alignment with the edge of the opening below (see diagram 1) and in the strictest sense of the code as worded now would trigger a headroom violation as successive treads approached the ceiling of the floor above.

The reason for the exception is best illustrated in the photographs attached. The reasons for the exception are also soundly rooted in the most common current application of the code. This necessary alignment of the walls in relation to the edge of the floor openings is understood and not interpreted as a headroom violation in most jurisdictions. There is currently no limit however to the effective projection that is being allowed. Moving the handrails or guards in onto the stairs narrows the exit path unnecessarily without eliminating the current codes literal headroom violation and can create an undesired climbable surface beyond the guard. This code change puts the necessary limits in place and provides an additional level of safety by:

1. Standardizing the most commonly understood current enforcement policies for headroom.
2. Addressing needed prevention of entrapment of an appendage or object being carried in ascent in the narrowing space that is formed when an angled guard or handrail approaches intersection with the ceiling of the next floor or level above. (See photos 1 & 2)
3. Recognizing the standard methods of construction used in the placement and framing of supporting walls and floor systems associated with the perimeter of the openings for stairways. (See diagrams 1) In particular it specifies a maximum projection into the headroom space that is based upon the required attachment of a guard/handrail system to the face of a supporting wall sitting solidly on the floor system and limits it to the nominal width of a finished 2 x 4 wall.
4. Allowing the currently accepted methods to transfer stairway loads to the surrounding structure and space saving stacking of stairs and landings in wells without adding juxtaposition support walls that would narrow the stairwells below if the edge of the stair and supporting wall were moved from under the opening above.
5. Allowing the guards and handrails to be positioned such as to widen the stairway in descent, the most common egress direction. (See photos 1 & 2)
6. Allowing the secure attachment of the end of guard/handrail systems providing for the required transfer of loads to the structure.

Part II-IRC: This is a required change to assure consistent code enforcement and compliance and eliminate the possibility of entrapment. The change to the charging paragraph supports current enforcement policies around the country and more clearly states the intent of the code. Headroom is simply not required where you cannot walk. The code currently allows extending the plane of measurement beyond the limit of the "walkable" surface causing legal issues in court interpretations and provides no additional level of safety for the user. Nosings of treads on open stairs most often overlap the supporting wall and stringer below. This supporting wall is placed under the opening above in alignment with the edge of the opening below (see diagram 1) and in the strictest sense of the code as worded now would trigger a headroom violation as successive treads approached the ceiling of the floor above.

The reason for the exception is best illustrated in the photographs attached. The reasons for the exception are also soundly rooted in the most common current application of the code. This necessary alignment of the walls in relation to the edge of the floor openings is understood and not interpreted as a headroom violation. There is currently no limit however to the effective projection that is being allowed. Moving the handrails or guards in onto the stairs narrows the exit path unnecessarily without eliminating the current codes literal headroom violation and can create an undesired climbable surface beyond the guard. This code change puts the necessary limits in place and provides an additional level of safety by:

1. Standardizing the most commonly understood current enforcement policies for headroom.
2. Addressing needed prevention of entrapment of an appendage or object being carried in ascent in the narrowing space that is formed when an angled guard or handrail approaches intersection with the ceiling of the next floor or level above. (See photos 1 & 2)
3. Recognizing the standard methods of construction used in the placement and framing of supporting walls and floor systems associated with the perimeter of the openings for stairways. (See diagram 1) In particular it specifies a maximum projection into the headroom space that is based upon the required attachment of a guard/handrail system to the face of a supporting wall sitting solidly on the floor system and limits it to the nominal width of a finished 2 x 4 wall.
4. Allowing the currently accepted methods to transfer stairway loads to the surrounding structure and space saving stacking of stairs and landings in wells without adding juxtaposition support walls that would narrow the stairwells below if the edge of the stair and supporting wall were moved from under the opening above.
5. Allowing the guards and handrails to be positioned such as to widen the stairway in descent, the most common egress direction. (See photos 1 & 2)
6. Allowing the secure attachment of the end of guard/handrail systems providing for the required transfer of loads to the structure.



Photo 1

Photo 2

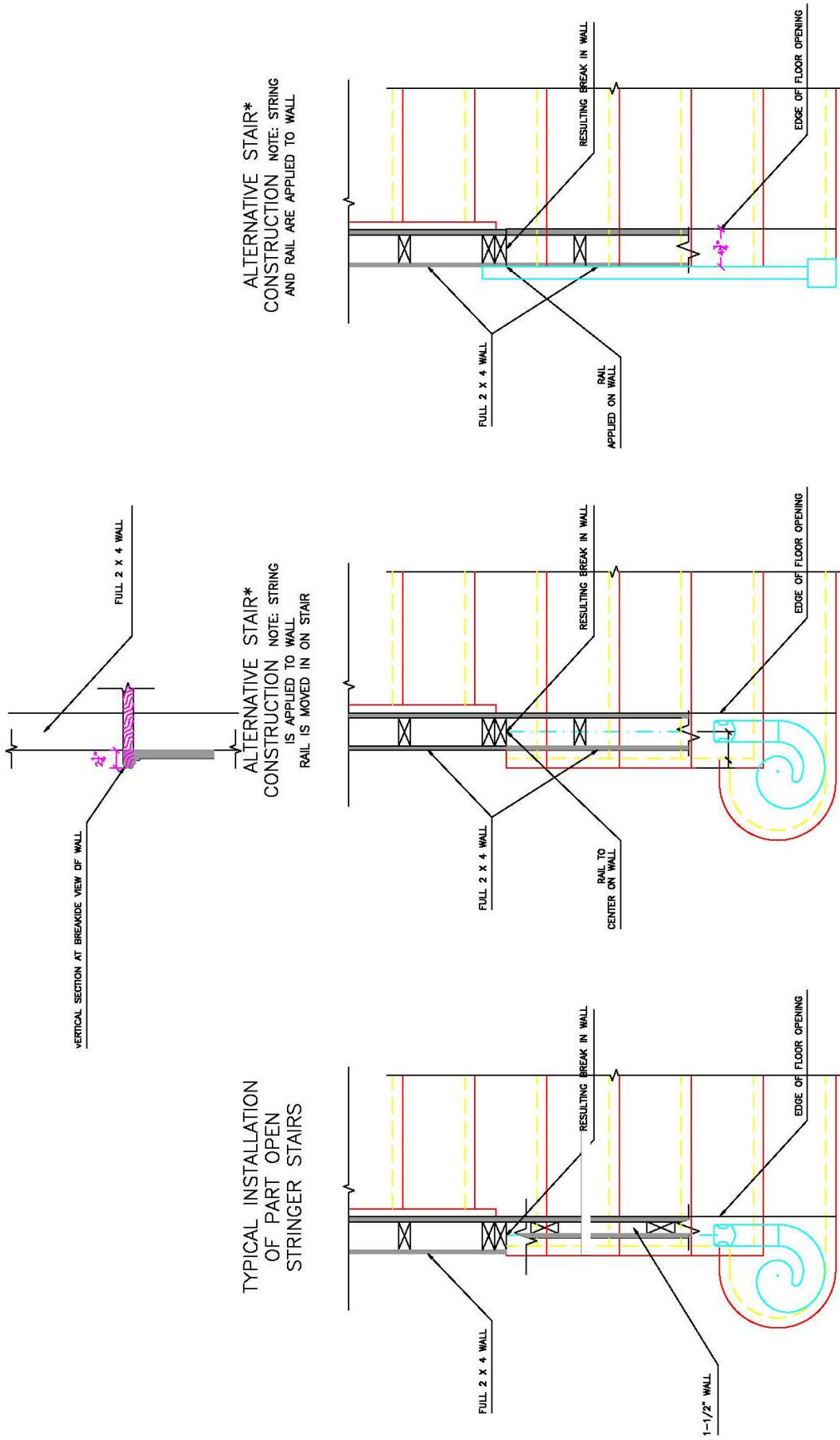


Diagram 1 – TYPICAL WALL SECTIONS AT STAIRS IN PLAN VIEW

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

PART I – IBC MEANS OF EGRESS

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

PART II – IRC BUILDING AND ENERGY

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

E58–07/08

1009.3, 1009.3.2 (IFC [B] 1009.3, 1009.3.2); IRC R311.5.2.3 (New), R311.5.3.2

Proponent: David W. Cooper, Stairway Manufacturers' Association

THESE PROPOSALS ARE ON THE AGENDA OF THE IBC MEANS OF EGRESS AND THE IRC BUILDING/ENERGY CODE DEVELOPMENT COMMITTEES AS 2 SEPARATE CODE CHANGES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IBC MEANS OF EGRESS

Add new text as follows:

1009.3 (IFC [B] 1009.3) Walk line. The walk line is the line of travel used to provide for uniform layout of the tread depths in the design and regulation of flights with winder treads. The walk line shall be parallel to the side of the flight where the treads are narrowest and located 12 inches (305 mm) from the point of minimum tread depth used for placement of the foot on the flight in ascent or descent.

Revise as follows:

1009.3 (IFC [B] 1009.3) 1009.4 (IFC [B] 1009.4) Stair treads and risers. Stair riser heights shall be 7 inches (178 mm) maximum and 4 inches (102 mm) minimum. ~~Stair tread depths shall be 11 inches (279 mm) minimum.~~ The riser height shall be measured vertically between the leading edges of adjacent treads. ~~Rectangular tread depths shall be 11 inches (279 mm) minimum.~~ ~~The tread depth shall be measured horizontally between the vertical planes of the foremost projection of adjacent treads and at a right angle to the tread's leading edge.~~ Winder treads shall have a minimum tread depth of 11 inches (279 mm) measured between the vertical planes of the foremost projection of adjacent treads at the intersections with the walk line at a right angle to the tread's leading edge at a point 12 inches (305 mm) from the side where the treads are narrower and a minimum tread depth used for placement of the foot ascent or descent of 10 inches (254 mm).

Exceptions:

1. Alternating tread devices in accordance with Section 1009.9.
2. Spiral stairways in accordance with Section 1009.8.
3. Aisle stairs in assembly seating areas where the stair pitch or slope is set, for sightline reasons, by the slope of the adjacent seating area in accordance with Section 1025.11.2.
4. 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; the maximum riser height shall be 7.75 inches (197 mm); the minimum tread depth shall be 10 inches (254 mm); the minimum winder tread depth at the walk line shall be 10 inches (254 mm); and the minimum winder tread depth shall be 6 inches (152 mm). A nosing not less than 0.75 inch (19.1 mm) but not more than 1.25 inches (32 mm) shall be provided on stairways with solid risers where the tread depth is less than 11 inches (279 mm).
5. See the Section 3403.4 for the replacement of existing stairways.

1009.3.1 (IFC [B] 1009.3.1) 1009.4.1 (IFC [B] 1009.4.1) Winder treads. (No change to text)

~~1009.3.2 (IFC [B] 1009.3.2)~~ **1009.4.2 (IFC [B] 1009.4.2) Dimensional uniformity.** Stair treads and risers shall be of uniform size and shape. The tolerance between the largest and smallest riser height or between the largest and smallest tread depth shall not exceed 0.375 inch (9.5 mm) in any flight of stairs. The greatest winder tread depth at the 12-inch (305 mm) walk line within any flight of stairs shall not exceed the smallest by more than 0.375 inch (9.5 mm) measured at a right angle to the tread's leading edge.

Exceptions:

1. Nonuniform riser dimensions of aisle stairs complying with Section 1025.11.2.
2. Consistently shaped winders, complying with Section 1009.3, differing from rectangular treads in the same stairway flight.

Where the bottom or top riser adjoins a sloping publicway, walkway or driveway having an established grade and serving as a landing, the bottom or top riser is permitted to be reduced along the slope to less than 4 inches (102 mm) in height, with the variation in height of the bottom or top riser not to exceed one unit vertical in 12 units horizontal (8-percent slope) of stairway width. The nosings or leading edges of treads at such nonuniform height risers shall have a distinctive marking stripe, different from any other nosing marking provided on the stair flight. The distinctive marking stripe shall be visible in descent of the stair and shall have a slip-resistant surface. Marking stripes shall have a width of at least 1 inch (25 mm) but not more than 2 inches (51 mm).

~~1009.3.3 (IFC [B] 1009.3.3)~~ **1009.4.3 (IFC [B] 1009.4.3) Profile.** (No change to text)

PART II – IRC BUILDING AND ENERGY

Revise as follows:

R311.5.2.3 Walk line. The walk line is the line of travel used to provide for uniform layout of the tread depths in the design and regulation of flights with winder treads. The walk line shall be parallel to the side of the flight where the treads are narrowest and located 12 inches (305 mm) from the point of minimum tread depth used for placement of the foot on the flight in ascent or descent.

R311.5.3.2 Tread depth. The minimum tread depth shall be 10 inches (254 mm). The tread depth shall be measured horizontally between the vertical planes of the foremost projection of adjacent treads and at a right angle to the tread's leading edge. The greatest tread depth within any flight of stairs shall not exceed the smallest by more than 3/8 inch (9.5 mm). Winder treads shall have a minimum tread depth of 10 inches (254 mm) measured between the vertical planes of the foremost projection of adjacent treads at the intersections with the walk line as above at a point 12 inches (305 mm) from the side where the treads are narrower. Winder treads shall have a minimum tread depth used for placement of the foot in ascent or descent of 6 inches (152 mm) at any point. Within any flight of stairs, the largest winder tread depth at the 12-inch (305 mm) walk line shall not exceed the smallest winder tread by more than 3/8 inch (9.5 mm).

Reason: PART I – IBC

Need for Improvement:

Current regulation of the placement of the walk line varies for lack of a specific point from which to measure. The tread depth measured at the walk line therefore varies from one enforcement jurisdiction to another sometimes even within a jurisdiction. The complications of varying interpretations of this part of the code have lead to costly hearings and appeals for variances. The industry needs a standard as do code officials but more importantly the people walking these stairs need a standard as well that will provide consistency in the built environment. In this effort the Stairway Manufacturers' Association has offered several proposals over the years that have met with an agreement by the committees involved that a *standard is needed* but with certain objections. Each proposal in succession has improved utilizing the critical direction obtained from the committees in the code development process and in meetings with code officials around the country.

Separate Section on Walk Line is Needed:

The walk line is a critical element of stair design just as are width, headroom, rise and run. The separation of this element draws attention to the need to meet this requirement in the planning stage rather than being buried within the code. This allows for further specifics for location and simplification of the subsequent sections relative to tread depth. Finally although the term walk line has been used for years with in the code text on tread depth, this section offers a clear understanding.

What is the "Walk Line":

The walk line is related to the person's position *when walking on the stair* and is that line which the inside foot follows when *walking on a stair* and therefore this proposal states that the walk line shall be established based only on that portion of the treads in a flight that can be walked on. Any portion of a tread that cannot be walked on does not require regulation by this section. The extension of the tread or its size beyond the "walk-able" area, whether for structural attachment or decorative purpose, is not necessary to the regulation of tread depth for the safety of the user.

Ease of enforcement:

In this proposal the location of the walk line is simply determined by measuring onto the tread at the front of each tread from the point of minimum tread depth because the walk line is defined as being parallel to the side of the flight. This represents no change in the common practice to measure at the leading edge or nosing of the tread and no longer will require a square across the tread depth to accurately determine the winder tread depth at the walk line.

Simplification of the IBC Tread Related Sections:

No changes in any of the specified dimensions are being made. The first change is to only move the tread depth requirement to allow the riser requirements to appear together. The word "rectangular" used in exception 2 of the dimensional uniformity exception has been added to clarify. The way in which the winder treads will be measured is changed to match the way they are laid out to be uniform. This does not affect typical two or three winder layouts that are typically much deeper than the rectangular treads they are paired with in a flight and more closely reflects the foot positions in both ascent and descent as a person turns while walking on the stair. At the same time this allows for an easier method of accurately measuring the tread depth without the use of a square across the depth of the winder tread. The minimum winder tread depth is now clarified by reflecting the most common enforcement convention and is to be measured on that portion of the stair-walking surface that is actually used for walking as is in the new walk line section.

The Dimensional uniformity section has been edited for simplification because these terms are now clearly stated in the new walk line section.

PART II-IRC

Need for Improvement:

Current regulation of the placement of the walk line varies for lack of a specific point from which to measure. The tread depth measured at the walk line therefore varies from one enforcement jurisdiction to another sometimes even within a jurisdiction. The complications of varying interpretations of this part of the code have lead to costly hearings and appeals for variances. The industry needs a standard as do code officials but more importantly the people walking these stairs need a standard as well that will provide consistency in the built environment. In this effort the Stairway Manufacturers' Association has offered several proposals over the years that have met with an agreement by the committees involved that a standard is needed but with certain objections. Each proposal in succession has improved utilizing the critical direction obtained from the committees in the code development process and in meetings with code officials around the country.

Separate Section on Walk Line is Needed:

The walk line is a critical element of stair design just as are width, headroom, rise and run. The separation of this element draws attention to the need to meet this requirement in the planning stage rather than being buried within the code. This allows for further specifics for location and simplification of the subsequent sections relative to tread depth. Finally although the term walk line has been used for years with in the code text on tread depth, this section offers a clear understanding.

What is the "Walk Line":

The walk line is related to the person's position when walking on the stair and is that line which the inside foot follows when walking on a stair and therefore this proposal states that the walk line shall be established based only on that portion of the treads in a flight that can be walked on. Any portion of a tread that cannot be walked on does not require regulation by this section. The extension of the tread or its size beyond the "walk-able" area, whether for structural attachment or decorative purpose, is not necessary to the regulation of tread depth for the safety of the user.

Ease of enforcement:

In this proposal the location of the walk line is simply determined by measuring onto the tread at the front of each tread from the point of minimum tread depth because the walk line is defined as being parallel to the side of the flight. This represents no change in the common practice to measure at the leading edge or nosing of the tread and no longer will require a square across the tread depth to accurately determine the winder tread depth at the walk line.

Simplifications of the IRC Tread Related Sections:

No changes in any of the specified dimensions are being made. The way in which the winder treads will be measured is changed to match the way they are laid out to be uniform. This does not affect typical two or three winder layouts that are typically much deeper than the rectangular treads they are paired with in a flight and more closely reflects the foot positions in both ascent and descent as a person turns while walking on the stair. At the same time this allows for an easier method of accurately measuring the tread depth without the use of a square across the depth of the tread winder. The minimum winder tread depth is now clarified by reflecting the most common enforcement convention and is to be measured on that portion of the stair-walking surface that is actually used for walking as is in the new walk line section.

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

PART I – IBC MEANS OF EGRESS

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

PART II – IRC BUILDING AND ENERGY

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

E59–07/08

1009.3, 1009.3.2 (IFC [B] 1009.3, [B] 1009.3.2); IRC R311.5.2.3 (New), R311.5.3.2

Proponent: David W. Cooper, Stairway Manufacturers' Association

THESE PROPOSALS ARE ON THE AGENDA OF THE IBC MEANS OF EGRESS AND THE IRC BUILDING/ENERGY CODE DEVELOPMENT COMMITTEES AS 2 SEPARATE CODE CHANGES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IBC MEANS OF EGRESS

Revise as follows:

1009.3 (IFC [B] 1009.3) Walk line. The walk line is the line of travel used to provide for uniform layout of the tread depths in the design and regulation of flights with winder treads. The walk line shall be parallel to the side of the flight where the treads are narrowest and located 12 inches (305 mm) from the point of minimum tread depth used for placement of the foot on the flight in ascent or descent.

Exception: Separate walk lines shall be established to measure winder sections that reverse direction of the stair within the same flight where winder treads are permitted. The change in direction shall be separated by at least 2 rectangular treads. The largest winder tread depth at the walk lines within the flight shall not exceed the smallest by more than 3/8 inch (9.5 mm).

~~1009.3 (IFC [B] 1009.3)~~ **1009.4 (IFC [B] 1009.4) Stair treads and risers.** Stair riser heights shall be 7 inches (178 mm) maximum and 4 inches (102 mm) minimum. ~~Stair tread depths shall be 11 inches (279 mm) minimum.~~ The riser height shall be measured vertically between the leading edges of adjacent treads. Rectangular tread depths shall be 11 inches (279 mm) minimum ~~The tread depth shall be~~ measured horizontally between the vertical planes of the foremost projection of adjacent treads and at a right angle to the tread's leading edge. Winder treads shall have a minimum tread depth of 11 inches (279 mm) measured between the vertical planes of the foremost projection of adjacent treads at the intersections with the walk line ~~at a right angle to the tread's leading edge at a point 12 inches (305 mm) from the side where the treads are narrower~~ and a minimum tread depth used for placement of the foot in ascent or descent of 10 inches (254 mm).

Exceptions:

1. Alternating tread devices in accordance with Section 1009.9.
2. Spiral stairways in accordance with Section 1009.8.
3. Aisle stairs in assembly seating areas where the stair pitch or slope is set, for sightline reasons, by the slope of the adjacent seating area in accordance with Section 1025.11.2.
4. 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; the maximum riser height shall be 7.75 inches (197 mm); the minimum tread depth shall be 10 inches (254 mm); the minimum winder tread depth at the walk line shall be 10 inches (254 mm); and the minimum winder tread depth shall be 6 inches (152 mm). A nosing not less than 0.75 inch (19.1 mm) but not more than 1.25 inches (32 mm) shall be provided on stairways with solid risers where the tread depth is less than 11 inches (279 mm).
5. See the Section 3403.4 for the replacement of existing stairways.

~~1009.3.1 (IFC [B] 1009.3.1)~~ **1009.4.1 (IFC [B] 1009.4.1) Winder treads.** (No change to text)

~~1009.3.2 (IFC [B] 1009.3.2)~~ **1009.4.2 (IFC [B] 1009.4.2) Dimensional uniformity.** Stair treads and risers shall be of uniform size and shape. The tolerance between the largest and smallest riser height or between the largest and smallest tread depth shall not exceed 0.375 inch (9.5 mm) in any flight of stairs. The greatest winder tread depth at the ~~12-inch (305 mm)~~ walk line within any flight of stairs shall not exceed the smallest by more than 0.375 inch (9.5 mm) ~~measured at a right angle to the tread's leading edge.~~

Exceptions:

1. Nonuniform riser dimensions of aisle stairs complying with Section 1025.11.2.
2. Consistently shaped winders, complying with Section 1009.3, differing from rectangular treads in the same stairway flight.

Where the bottom or top riser adjoins a sloping public way, walkway or driveway having an established grade and serving as a landing, the bottom or top riser is permitted to be reduced along the slope to less than 4 inches (102 mm) in height, with the variation in height of the bottom or top riser not to exceed one unit vertical in 12 units horizontal (8-percent slope) of stairway width. The nosings or leading edges of treads at such nonuniform height risers shall have a distinctive marking stripe, different from any other nosing marking provided on the stair flight. The distinctive marking stripe shall be visible in descent of the stair and shall have a slip-resistant surface. Marking stripes shall have a width of at least 1 inch (25 mm) but not more than 2 inches (51 mm).

~~1009.3.3 (IFC [B] 1009.3.3)~~ **1009.4.3 (IFC [B] 1009.4.3) Profile.** (No change to text)

PART II – IRC BUILDING AND ENERGY

Revise as follows:

R311.5.2.3 Walk line. The walk line is the line of travel used to provide for uniform layout of the tread depths in the design and regulation of flights with winder treads. The walk line shall be parallel to the side of the flight where the

treads are narrowest and located 12 inches (305 mm) from the point of minimum tread depth used for placement of the foot on the flight in ascent or descent.

Exception: Separate walk lines shall be established to measure winder sections that reverse direction of the stair within the same flight. The change in direction shall be separated by at least 2 rectangular treads. The largest winder tread depth at the walk lines within the flight shall not exceed the smallest by more than 3/8 inch (9.5 mm).

R311.5.3.2 Tread depth. The minimum tread depth shall be 10 inches (254 mm). The tread depth shall be measured horizontally between the vertical planes of the foremost projection of adjacent treads and at a right angle to the tread's leading edge. The greatest tread depth within any flight of stairs shall not exceed the smallest by more than 3/8 inch (9.5 mm). Winder treads shall have a minimum tread depth of 10 inches (254 mm) measured between the vertical planes of the foremost projection of adjacent treads at the intersections with the walk line as above at a point 12 inches (305 mm) from the side where the treads are narrower. Winder treads shall have a minimum tread depth used for placement of the foot in ascent or descent of 6 inches (152 mm) at any point. Within any flight of stairs, the largest winder tread depth at the 12-inch (305 mm)-walk line shall not exceed the smallest winder tread by more than 3/8 inch (9.5 mm).

Reason: PART I – IBC

Need for Improvement:

Current regulation of the placement of the walk line varies for lack of a specific point from which to measure. The tread depth measured at the walk line therefore varies from one enforcement jurisdiction to another sometimes even within a jurisdiction. The complications of varying interpretations of this part of the code have lead to costly hearings and appeals for variances. The industry needs a standard as do code officials but more importantly the people walking these stairs need a standard as well that will provide consistency in the built environment. In this effort the Stairway Manufacturers' Association has offered several proposals over the years that have met with an agreement by the committees involved that *a standard is needed* but with certain objections. Each proposal in succession has improved utilizing the critical direction obtained from the committees in the code development process and in meetings with code officials around the country. In this proposal we feel we have provided a complete solution to the concerns in the regulation of winder tread depth.

Separate Section on Walk Line is Needed:

The walk line is a critical element of stair design just as are width, headroom, rise and run. The separation of this element draws attention to the need to meet this requirement in the planning stage rather than being buried within the code. This allows for further specifics for location and simplification of the subsequent sections relative to tread depth. Finally although the term walk line has been used for years with in the code text on tread depth, this section offers a clear understanding.

What is the "Walk Line":

The walk line is related to the person's position *when walking on the stair* and is that line which the inside foot follows when *walking on a stair* and therefore this proposal states that the walk line shall be established based only on that portion of the treads in a flight that can be walked on. Any portion of a tread that cannot be walked on does not require regulation by this section. The extension of the tread or its size beyond the "walk-able" area, whether for structural attachment or decorative purpose, is not necessary to the regulation of tread depth for the safety of the user.

Ease of enforcement:

In this proposal the location of the walk line is simply determined by measuring onto the tread at the front of each tread from the point of minimum tread depth because the walk line is defined as being parallel to the side of the flight. This represents no change in the common practice to measure at the leading edge or nosing of the tread and no longer will require a square across the tread depth to accurately determine the winder tread depth at the walk line.

Reason for the Exception:

Reversing winders are rare but can often offer the only egress solution and should be provided with some level of safety regulated by the code. They are allowed in the code but lacking any regulation at all. This issue has been addressed because of input from ICC staff and many questions from concerned building officials around the country. Reversing winders often cause the user seeking the shortest path to cross the stair. Providing a transition of two rectangular treads allows for a more gradual change in the users gait to be achieved *whether or not they change sides*. This section also provides clarity for how reversing winder treads are measured for tread depth by providing for two walk lines and clarifying the regulation of uniform tread depth at the walk line of the reversing winders throughout the flight.

Simplification of the IBC Tread Related Sections:

No changes in any of the specified dimensions are being made. The first change is to only move the tread depth requirement to allow the riser requirements to appear together. The word "rectangular" used in exception 2 of the dimensional uniformity exception has been added to clarify. The way in which the winder treads will be measured is changed to match the way they are laid out to be uniform. This does not affect typical two or three winder layouts that are typically much deeper than the rectangular treads they are paired with in a flight and more closely reflects the foot positions in both ascent and descent as a person turns while walking on the stair. At the same time this allows for an easier method of accurately measuring the tread depth without the use of a square across the depth of the winder tread. The minimum winder tread depth is now clarified by reflecting the most common enforcement convention and is to be measured on that portion of the stair-walking surface that is actually used for walking as is in the new walk line section.

The Dimensional uniformity section has been edited for simplification because these terms are now clearly stated in the new walk line section.

PART II- IRC

Need for Improvement:

Current regulation of the placement of the walk line varies for lack of a specific point from which to measure. The tread depth measured at the walk line therefore varies from one enforcement jurisdiction to another sometimes even within a jurisdiction. The complications of varying interpretations of this part of the code have lead to costly hearings and appeals for variances. The industry needs a standard as do code officials but more importantly the people walking these stairs need a standard as well that will provide consistency in the built environment. In this effort the Stairway Manufacturers' Association has offered several proposals over the years that have met with an agreement by the committees involved that *a standard is needed* but with certain objections. Each proposal in succession has improved utilizing the critical direction obtained from the committees in the code development process and in meetings with code officials around the country. In this proposal we feel we have provided a complete solution to the concerns in the regulation of winder tread depth.

Separate Section on Walk Line is Needed:

The walk line is a critical element of stair design just as are width, headroom, rise and run. The separation of this element draws attention to the need to meet this requirement in the planning stage rather than being buried within the code. This allows for further specifics for location and simplification of the subsequent sections relative to tread depth. Finally although the term walk line has been used for years with in the code text on tread depth, this section offers a clear understanding.

What is the "Walk Line":

The walk line is related to the person's position *when walking on the stair* and is that line which the inside foot follows when *walking on a stair* and therefore this proposal states that the walk line shall be established based only on that portion of the treads in a flight that can be walked on. Any portion of a tread that cannot be walked on does not require regulation by this section. The extension of the tread or its size beyond the "walk-able" area, whether for structural attachment or decorative purpose, is not necessary to the regulation of tread depth for the safety of the user.

Ease of enforcement:

In this proposal the location of the walk line is simply determined by measuring onto the tread at the front of each tread from the point of minimum tread depth because the walk line is defined as being parallel to the side of the flight. This represents no change in the common practice to measure at the leading edge or nosing of the tread and no longer will require a square across the tread depth to accurately determine the winder tread depth at the walk line.

Reason for The Exception:

Reversing winders are rare but can often offer the only egress solution and should be provided with some level of safety regulated by the code. They are allowed in the code but lacking any regulation at all. This issue has been addressed because of input from ICC staff and many questions from concerned building officials around the country. Reversing winders often cause the user seeking the shortest path to cross the stair. Providing a transition of two rectangular treads allows for a more gradual change in the users gait to be achieved *whether or not they change sides*. This section also provides clarity for how reversing winder treads are measured for tread depth by providing for two walk lines and clarifying the regulation of uniform tread depth at the walk line of the reversing winders throughout the flight.

Simplifications of the IRC Tread Related Sections:

No changes in any of the specified dimensions are being made. The way in which the winder treads will be measured is changed to match the way they are laid out to be uniform. This does not affect typical two or three winder layouts that are typically much deeper than the rectangular treads they are paired with in a flight and more closely reflects the foot positions in both ascent and descent as a person turns while walking on the stair. At the same time this allows for an easier method of accurately measuring the tread depth without the use of a square across the depth of the winder tread. The minimum winder tread depth is now clarified by reflecting the most common enforcement convention and is to be measured on that portion of the stair-walking surface that is actually used for walking as is in the new walk line section.

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

PART I – IBC MEANS OF EGRESS

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

PART II – IRC BUILDING AND ENERGY

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

E60–07/08

1009.3, 1009.3.1 (IFC [B] 1009.3, [B] 1009.3.1); IRC R311.5.3

Proponent: David W. Cooper, Stairway Manufacturers' Association

THESE PROPOSALS ARE ON THE AGENDA OF THE IBC MEANS OF EGRESS AND THE IRC BUILDING/ENERGY CODE DEVELOPMENT COMMITTEES AS 2 SEPARATE CODE CHANGES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IBC MEANS OF EGRESS

1. Add new text as follows:

1009.3 (IFC [B] 1009.3) Stair treads and risers. Stair treads and risers shall comply with Sections 1009.3.1 through 1009.3.5.

1009.3.1 (IFC [B] 1009.3.1) Dimension reference surfaces. For the purpose of the section, all dimensions are exclusive of carpets, rugs, or runners.

2. Revise as follows:

~~**1009.3 (IFC [B] 1009.3) Stair treads and risers**~~ **1009.3.2 (IFC [B] 1009.3.2) Riser height and tread depth.** Stair riser heights shall be 7 inches (178 mm) maximum and 4 inches (102 mm) minimum. Stair tread depths shall be 11 inches (279 mm) minimum. The riser height shall be measured vertically between the leading edges of adjacent treads. The tread depth shall be measured horizontally between the vertical planes of the foremost projection of adjacent treads and at a right angle to the tread's leading edge. Winder treads shall have a minimum tread depth of 11 inches (279 mm) measured at a right angle to the tread's leading edge at a point 12 inches (305 mm) from the side where the treads are narrower and a minimum tread depth of 10 inches (254 mm).

Exceptions:

1. Alternating tread devices in accordance with Section 1009.9.
2. Spiral stairways in accordance with Section 1009.8.
3. Aisle stairs in assembly seating areas where the stair pitch or slope is set, for sightline reasons, by the slope of the adjacent seating area in accordance with Section 1025.11.2.
4. 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; the maximum riser height shall be 7.75 inches (197 mm); the minimum tread depth shall be 10 inches (254 mm); the minimum winder tread depth at the walk line shall be 10 inches (254 mm); and the minimum winder tread depth shall be 6 inches (152 mm). A nosing not less than 0.75 inch (19.1 mm) but not more than 1.25 inches (32 mm) shall be provided on stairways with solid risers where the tread depth is less than 11 inches (279 mm).
5. See the Section 3403.4 for the replacement of existing stairways.

~~1009.3.1 (IFC [B] 1009.3.1)~~ 1009.3.3 (IFC [B] 1009.3.3) **Winder treads.** (No change to text)

~~1009.3.2 (IFC [B] 1009.3.2)~~ 1009.3.4 (IFC [B] 1009.3.4) **Dimensional uniformity.** (No change to text)

~~1009.3.3 (IFC [B] 1009.3.3)~~ 1009.3.5 (IFC [B] 1009.3.5) **(Supp) Profile.** (No change to text)

PART II – IRC BUILDING AND ENERGY

Revise text as follows:

R311.5.3 Stair treads and risers. Stair treads and risers shall meet the requirements of this section. For the purposes of this section all dimensions and dimensioned surfaces shall be exclusive of carpets, rugs, or runners.

Reason: PART I-IBC- This new section provides for accurate measurements consistent with the intent of the code by standardizing the surfaces to be measured from the dimensions currently described under **1009.3 Treads and risers**. It further makes sense out of the nosing radius and bevel dimensions in **1009.3.3 Profile** as these are not intended to be measured at a carpeted surface.

This clarification would result in more consistent interpretation and enforcement eliminating confusion. In our code seminars around the country I ask how officials determine the riser height if the stair is carpeted. Some have a standard thickness they calculate for the carpet without knowing the thickness that will be used. Others measure in consideration of the compressed thickness and still others wait to pass or fail the stairway based on measuring to the uncompressed surface of a carpet that might change after just a few months use or when it is replaced. We can't have our cake and eat it too. Court battles ensue over such widely interpreted issues that become law upon adoption and in this case should become the sole responsibility of the occupant as they change carpets, rugs, and runners.

Surfaces can easily vary 1 inch or more in thickness when uncompressed carpet and pad is inserted in the calculation of the riser height. The code requires accuracy within 3/8 of an inch and yet it provides for inconsistent measurements and enforcement. The fact is that carpeting is not regulated by the code and cannot be indiscriminately inserted based on widely varying individual interpretation.

Whether the stair is site built or prefabricated the rise of the stair is determined during the rough stage long prior to the selection of carpet for thickness. Prior to layout of the stringer you must know what thickness treads will be used and what materials will be used on the floors. The decision is made to allow the landing tread that meets the floor surface (or also called landing nosing) to be held up to accept floor coverings to abut its back edge or place it flush for carpet to wrap it such that the top riser *should always be the same height as the other stair risers within normal construction tolerances prior to the addition of carpets*. The top and bottom steps should not be controlled based on carpet because the uncontrollable addition of rugs and/or runners at the floors and landings will change at the option of the owners/occupants/residents.

Since carpeting is not controlled by the code then the dimensions of the stair should not be controlled by carpet. The code must provide a product that the end user can rely on regardless of the jurisdiction they decide to live or walk. We mislead ourselves if we think that the variants now allowed in measuring the rise on stairs provide for safety. We need to provide a standard the consumer can count on and *walk safely on*. This change provides the needed standard the code now lacks.

PART II-IRC-This new section provides for accurate measurements consistent with the intent of the code by standardizing the surfaces to be measured from the dimensions described under R311.5.3 Treads and risers. It further makes sense out of the nosing radius and bevel dimensions in R311.5.3.3 Profile as these are not intended to be measured at a carpeted surface.

This clarification would result in more consistent interpretation and enforcement eliminating confusion. In our code seminars around the country I ask how officials determine the riser height if the stair is carpeted. Some have a standard thickness they calculate for the carpet without knowing the thickness that will be used. Others measure in consideration of the compressed thickness and still others wait to pass or fail the stairway based on measuring to the uncompressed surface of a carpet that might change after just a few months use or when it is replaced. We can't have our cake and eat it too. Court battles ensue over such widely interpreted issues that become law upon adoption and in this case should become the sole responsibility of the occupant as they change carpets, rugs, and runners.

Surfaces can easily vary 1 inch or more in thickness when uncompressed carpet and pad is inserted in the calculation of the riser height. The code requires accuracy within 3/8 of an inch and yet it provides for inconsistent measurements and enforcement. The fact is that carpeting is not regulated by the code and cannot be indiscriminately inserted based on widely varying individual interpretation.

Whether the stair is site built or prefabricated the rise of the stair is determined during the rough stage long prior to the selection of carpet for thickness. Prior to layout of the stringer you must know what thickness treads will be used and what materials will be used on the floors. The decision is made to allow the landing tread that meets the floor surface (or also called landing nosing) to be held up to accept floor coverings to abut its back edge or place it flush for carpet to wrap it such that the top riser should always be the same height as the other stair risers within normal construction tolerances prior to the addition of carpets. The top and bottom steps should not be controlled based on carpet because the uncontrollable addition of rugs and/or runners at the floors and landings will change at the option of the residents.

Since carpeting is not controlled by the code then the dimensions of the stair should not be controlled by carpet. The code must provide a product that the end user can rely on regardless of the jurisdiction they decide to live or walk. We mislead ourselves if we think that the variants now allowed in measuring the rise on stairs provide for safety. We need to provide a standard the consumer can count on and walk safely on. This change provides the needed standard the code now lacks.

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

PART I – IBC MEANS OF EGRESS

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

PART II – IRC BUILDING AND ENERGY

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

E61–07/08

1009.3 (IFC [B] 1009.3)

Proponent: Scott Crossfield, Theatre Projects Consultants, Inc., representing himself

Revise as follows:

1009.3 (IFC [B] 1009.3) Stair treads and risers. Stair riser heights shall be 7 inches (178 mm) maximum and 4 inches (102 mm) minimum. Stair tread depths shall be 11 inches (279 mm) minimum. The riser height shall be measured vertically between the leading edges of adjacent treads. The tread depth shall be measured horizontally between the vertical planes of the foremost projection of adjacent treads and at a right angle to the tread's leading edge. Winder treads shall have a minimum tread depth of 11 inches (279 mm) measured at a right angle to the tread's leading edge at a point 12 inches (305 mm) from the side where the treads are narrower and a minimum tread depth of 10 inches (254 mm).

Exceptions:

1. Alternating tread devices in accordance with Section 1009.9.
2. Spiral stairways in accordance with Section 1009.8.
3. Aisle stairs in assembly seating areas where the stair pitch or slope is set, for sightline reasons, by the slope of the adjacent seating area in accordance with Section 1025.11.2.
4. Other than in Accessible units and Type A units required in Section 1107; 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; the maximum riser height shall be 7.75 inches (197 mm); the minimum tread depth shall be 10 inches (254 mm); the minimum winder tread depth at the walk line shall be 10 inches (254 mm); and the minimum winder tread depth shall be 6 inches (152 mm). A nosing not less than 0.75 inch (19.1 mm) but not more than 1.25 inches (32 mm) shall be provided on stairways with solid risers where the tread depth is less than 11 inches (279 mm).
5. See the Section 3403.4 for the replacement of existing stairways.

Reason: The intent of this proposal is to clarify the residential exception for the reduction in tread riser ratios are not permitted for stairways that may be in Accessible or Type A units

It was indicated during testimony for a similar change, E57-06/07, that the Fair Housing Act does not specify requirements for stairways within units, therefore, Type B units could use the 7.75/10 rise/run exception. The 7/11 rise/run would be required in Accessible units and Type A units that included stairways in the floor plan. While stairs are not an accessible route, the configurations of stairways is important for person with other mobility impairments.

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

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

E62-07/08

1009.3 (IFC [B] 1009.3)

Proponent: A. Brooks Ballard, Virginia Department of Corrections

Revise as follows:

1009.3 (IFC [B] 1009.3) Stair treads and risers. Stair riser heights shall be 7 inches (178 mm) maximum and 4 inches (102 mm) minimum. Stair tread depths shall be 11 inches (279 mm) minimum. The riser height shall be measured vertically between the leading edges of adjacent treads. The tread depth shall be measured horizontally between the vertical planes of the foremost projection of adjacent treads and at a right angle to the tread's leading edge. Winder treads shall have a minimum tread depth of 11 inches (279 mm) measured at a right angle to the tread's leading edge at a point 12 inches (305 mm) from the side where the treads are narrower and a minimum tread depth of 10 inches (254 mm).

Exceptions:

1. Alternating tread devices in accordance with Section 1009.9.
2. Spiral stairways in accordance with Section 1009.8.
3. Aisle stairs in assembly seating areas where the stair pitch or slope is set, for sightline reasons, by the slope of the adjacent seating area in accordance with Section 1025.11.2.
4. 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; the maximum riser height shall be 7.75 inches (197 mm); the minimum tread depth shall be 10 inches (254 mm); the minimum winder tread depth at the walk line shall be 10 inches (254 mm); and the minimum winder tread depth shall be 6 inches (152 mm). A nosing not less than 0.75 inch (19.1 mm) but not more than 1.25 inches (32 mm) shall be provided on stairways with solid risers where the tread depth is less than 11 inches (279 mm).
5. See the Section 3403.4 for the replacement of existing stairways.
6. In Group I-3 facilities, stairways providing access to guard towers, observations stations and control rooms, not more than 250 square feet (23 m²) in area, shall be permitted to have a maximum riser height of 8 inches (203 mm) and a minimum tread depth of 9 inches (229 mm).

Reason: The proposed new Exception 6, applicable to Use Group I-3, allows spaces that are normally occupied by a small number of staff persons to have stairways with greater riser height and narrower tread depth than the standard 7-11 risers/tread requirements. In order to provide the 360-degree visibility and maximum mobility necessary for guard observation stations, the size of the base of such elevated stations must be kept to a minimum. Security is increased without risk to either the general public or the inmates, since access to these spaces is restricted to prison staff personnel.

This incorporates an allowance found in 1996 BOCA Building Code Section 1014.6

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

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

E63-07/08

1009.3.1 (IFC [B] 1009.3.1)

Proponent: John Berry, Cole + Russell Architects, Inc.

Revise as follows:

1009.3.1 (IFC [B] 1009.3.1) Winder treads. Winder treads are not permitted in means of egress stairways except within a dwelling unit and sleeping unit.

Exceptions:

1. Curved stairways in accordance with Section 1009.7.
2. Spiral stairways in accordance with Section 1009.8.

Reason: I have recently experienced multi-level sleeping units in hotels that do not qualify as dwelling units since they do not include provisions for cooking. Considering that the typical occupant load in a sleeping unit will typically be less than dwelling units, I see no reason why stair winders should not be allowed in sleeping units.

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

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

E64-07/08

1009.3.3 (IFC [B] 1009.3.3)

Proponent: David W. Cooper, Stairway Manufacturers' Association

Revise as follows:

1009.3.3 (IFC [B] 1009.3.3) (Supp) Profile. The radius of curvature at the leading edge of the tread shall be not greater than ~~0.5 inch (12.7 mm)~~ 9/16 inch (14.3 mm). Beveling of nosings shall not exceed 0.5 inch (12.7 mm). Risers shall be solid and vertical or sloped under the tread above from the underside of the ~~leading edge of the tread~~ nosing 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 or in F, H and S occupancies other than areas accessible to the public.

Reason: Risers are allowed to slope to provide for nosing projection and necessary heel clearance in descent. The present language does not control the direction in which the riser is allowed to slope. The insertion of the words "under the tread above" provides the clarification needed.

The substitution of the word nosing provides a sentence that is easier to read and understand. The term nosing is a defined term in the code and is further clarified by its use in parenthesis within the text of this section.

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

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

E65-07/08

1009.3.3 (IFC [B] 1009.3.3)

Proponent: Scott Crossfield, Theatre Projects Consultants, Inc., representing himself

Revise as follows:

1009.3.3 (IFC [B] 1009.3.3) (Supp) 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 part of a required means of egress ~~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 or in F, H and S occupancies other than areas accessible to the public.

Reason: The intent of the proposal is to make solid risers applicable to all means of egress stairways, not just those that serve as part of an accessible means of egress.

Section 1007.1 states that when 2 or more means of egress are required, at least two means of egress are required to be accessible. Two examples can illustrate the concern with tying the open risers to just the stairways that are part of the accessible means of egress and not all means of egress stairways. Example 1) A two story office building with 4 required exit stairways - two would have solid risers and two would be permitted to have openings between treads (per Section 1009.3.3, Exp. 1). Example 2) A high rise office building with two required exit stairways. The elevator is required to serve as one of the accessible means of egress. Therefore, one stairway will have solid risers and one stairway can have opening between treads (per Section 1009.3.3 Exp. 1).

If the true purpose for solid risers is to make stairways safer for either the general population or persons with mobility impairments who will be walking up the stairway, there is no justification to tie this requirement to only those stairways uses as part of the accessible means of egress.

In addition, this would be consistent with 2004 ADA/ABA Accessibility Guidelines Section 210.1.

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

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

E66-07/08

1009.3.3 (IFC [B] 1009.3.3)

Proponent: A. Brooks Ballard, Virginia Department of Corrections

Revise as follows:

1009.3.3 (IFC [B] 1009.3.3) (Supp) 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 or in F, H and S occupancies other than areas accessible to the public. There are no restrictions on the size of the opening in the riser.

Reason: The additional language is needed for clarification that there are no limits on openings in risers in these unique situations. Exception 2 recognizes that open risers are commonly used for stairs in occupancies such as detention facilities for practical reasons. Open risers provide a greater degree of security and supervision due to the fact that people cannot effectively conceal themselves behind the stair. There is no opening size limitation. These risers can be completely open with no restrictions.

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

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

E67-07/08

1009.3.3 (IFC [B] 1009.3.3)

Proponent: Scott Crossfield, Theatre Projects Consultants, Inc., representing himself

Revise as follows:

1009.3.3 (IFC [B] 1009.3.3) (Supp) 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 or in F, H and S occupancies other than areas accessible to the public.
3. Solid risers are not required for spiral stairways constructed in accordance with Section 1009.8.
4. Solid risers are not required for alternating tread devices constructed in accordance with Section 1009.9.

Reason: The general requirements for solid risers, as currently stated, are applicable to all stairways. Spiral stairways and alternating tread devices are only used for limited access areas, such as catwalks in theaters, or roof access for maintenance and service personnel. Open risers are necessary for these types of stairways to be constructed safely and efficiently. Sections 1009.8 for spiral stairways and Section 1009.9.2 for alternating tread device do provide specifics for tread and riser dimensions, but do not state if open risers are permitted.

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

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

E68-07/08
1009.6 (IFC [B] 1009.6)

Proponent: Robert Bagnetto, Lapeyre Stair Inc.

Revise as follows:

1009.6 (IFC [B] 1009.6) Vertical rise. A flight of stairs shall not have a vertical rise greater than 12 feet (3658 mm) between floor levels or landings.

Exceptions:

1. Aisle stairs complying with Section 1025.
2. Alternating tread devices used as a means of egress shall not have a rise greater than 20 feet (6096mm) between floor levels or landings.

Reason: The purpose of this proposed change to IBC-2006 is to allow a maximum allowable vertical height of 20 feet for alternating tread devices used as a means of egress, without requiring an intermediate landing or platform.

The proposed change is superior to the current provisions of the code in that alternating tread devices may be used in heights up to 20 ft, without the use of an intermediate landing platform. In some instances this eliminates the need for unnecessary components; and potentially improves safety by allowing alternating tread devices to be used in areas with limited horizontal space, where otherwise the only alternative would be to use a vertical ladder.

Alternating tread devices are allowed by the code only as a means of egress to locations that are for use by maintenance/industrial workers (see listing below). Such workers are typically able to climb higher vertical distances than the general public without an intermediate landing. Sections 502 and 505 allow the use of a ladder to access equipment platforms which are also typically used by maintenance/industrial workers. Allowable heights for ladders are not addressed in IBC. OSHA regulations in 29CFR1910.27 allow ladders with cages, wells or safety devices up to 30 feet in height before a landing is required; Ladders without cages, wells or safety devices are allowed up to 20 feet in height before a landing is required. IMC section 306.5 allows ladders up to 30 feet in height without a landing. Alternating tread devices are typically not equipped with cages, wells or safety devices; however they are typically safer than a ladder as they have a larger landing area for the users' feet, side rails that act as a guard and a handrail and a shallower angle. Additionally, alternating tread devices have been shown by approximately 25 years of successful use and by the scientific study, "Performance, perceived safety and comfort of the alternating tread stair" to be an acceptable vertical access component and preferred over ships' ladders. Therefore, allowing alternating tread devices with vertical heights of 20 feet (the same vertical distance as ladders without cages, wells or safety devices) without requiring a landing is reasonable.

Allowed Alternating Tread Devices usage as a Means of Egress

- 410.5.3 *Gridirons of Stage Exits to scuttle in roof*
- 1009.9 *Mezzanines ≤ 250 ft² & ≤ 5 occupants in F,H & S occupancies*
- 1009.9 *I-3 guard towers observation stations or control rooms ≤ 250 ft²*
- 1009.9.11 *to Unoccupied roofs*
- 1015.3 *Secondary means of egress to Boiler, Incinerator and Furnace rooms*
- 1015.4 *Secondary means of egress to Refrigeration machinery rooms*
- 1015.6.1 *Stage galleries, gridirons and catwalks*
- 1019.1.2 *Second means of egress for helistops < 60 ft long or 2,000 ft² in area*

Bibliography:

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

29CFR1910.27(d)(2) Fixed ladders – landing platforms

Cost Impact: The code change proposal could minimally reduce the cost of construction in some cases by eliminating the need for landings for alternating tread devices.

Analysis: There is a similar code change by Mr. Bagnetto to Section 505.5.

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

E69–07/08
1009.6 (IFC [B] 1009.6)

Proponent: Scott Crossfield, Theatre Projects Consultants, Inc., representing himself

Revise as follows:

1009.6 (IFC [B] 1009.6) Vertical rise. A flight of stairs shall not have a vertical rise greater than 12 feet (3658 mm) between floor levels or landings.

Exceptions:

1. Aisle stairs complying with Section 1025.
2. Spiral stairs complying with Section 1009.8.
3. Alternating tread devices complying with Section 1009.9.

Reason: The general requirements for landing at 12 feet intervals, as currently stated in Section 1009.6, are applicable to all stairways. Spiral stairways and alternating tread devices are only used for limited access areas, such as catwalks in theaters, or roof access for maintenance and service personnel. Landings only at the top and bottom are necessary for these types of stairways to be constructed safely and efficiently.

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

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

E70–07/08
1009.7 (IFC [B] 1009.7)

Proponent: John Berry, Cole + Russell Architects, Inc.

Revise as follows:

1009.7 (IFC [B] 1009.7) Curved stairways. Curved stairways with winder treads shall have treads and risers in accordance with Section 1009.3 and the smallest radius shall not be less than twice the required width of the stairway.

Exception: The radius restriction shall not apply to curved stairways for occupancies in Group R-3₁ and within individual dwelling units and sleeping units in occupancies in Groups R-1 and R-2.

Reason: I have recently experienced multi-level sleeping units in hotels that do not qualify as dwelling units since they do not include provisions for cooking. Considering that the typical occupant load in a sleeping unit will be less than dwelling units, I see no reason why curved stairways should not be allowed in sleeping units.

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

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

E71-07/08

1009.8 (IFC [B] 1009.8)

Proponent: John Berry, Cole + Russell Architects, Inc.

Revise as follows:

1009.8 (IFC [B] 1009.8) (Supp) Spiral stairways. Spiral stairways are permitted to be used as a component in the means of egress only within dwelling units and sleeping 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).

Reason: I have recently experienced multi-level sleeping units in hotels that do not qualify as dwelling units since they do not include provisions for cooking. Considering that the typical occupant load in a sleeping unit will be less than dwelling units, I see no reason why spiral stairways should not be allowed in sleeping units.

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

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

E72-07/08

1009.9.2 (IFC [B] 1009.9.2)

Proponent: Robert Bagnetto, Lapeyre Stairs Inc.

Revise as follows:

1009.9.2 (IFC [B] 1009.9.2) Treads of alternating tread devices. Alternating tread devices shall have a minimum projected tread of 5 inches (127 mm), a minimum tread depth of 8.5 inches (216 mm), a minimum tread width of 7 inches (178 mm) and a maximum riser height of 9.5 inches (241 mm). The projected tread depth shall be measured horizontally between the vertical planes of the foremost projections of adjacent treads. The riser height shall be measured vertically between the leading edges of adjacent treads. The combination of riser height and projected tread depth provided shall result in an alternating tread device angle that complies with Section 1002. The initial tread of the device shall begin at the same elevation as the platform, landing or floor surface.

Exception: Alternating tread devices used as an element of a means of egress in buildings from a mezzanine area not more than 250 square feet (23 m²) in area which serves not more than five occupants shall have a minimum projected tread of 8.5 inches (216 mm) with a minimum tread depth of 10.5 inches (267 mm). The rise to the next alternating tread surface should not be more than 8 inches (203 mm).

Reason: The purpose of this proposed change is to clarify the code. The code is ambiguous in that it does not specify how to measure riser height and projected tread depth of alternating tread devices.

This proposal is superior to the current provisions in the code in that it rectifies shortcomings in the code by clarifying the manner in which alternating tread device projected tread depth and riser height are measured.

IBC Section 1009.3 provides details on how to measure riser height and projected tread depth of traditional stairs. However, exception 1 of this section exempts alternating tread devices from measuring riser height and projected tread depth using the same method as for traditional stairs.

IBC section 1009.9.2 provides the values for minimum projected tread depth and maximum riser height but does not provide the details on how to measure these features.

IBC section 1002 defines alternating tread devices as having a series of steps between 50 and 70 degrees.

By definition, the left and right treads of alternating tread devices are each about ½ the width of the device and therefore do not overlap one another. The most reasonable method of measuring projected tread depth of alternating tread devices is using treads that are directly above and below each other (not adjacent treads which are to the side of each other and do not overlap one another.), as these are the treads that the left and right feet of the user each separately use.

Also, measuring both projected tread depth and riser height from adjacent treads would give maximum angles of 43.26 degrees for alternating tread devices accessing mezzanines and 62.24 degrees for alternating tread devices accessing any other area. This would conflict with section 1002 as the maximum angle of 43.26 degrees would be below the minimum 50 degree allowed by definition in section 1002; and the maximum angle of 62.24 degrees would be significantly more restrictive than the 70 degree angle allowed by section 1002. Measuring projected tread depth and riser height in accordance with this proposal would result in maximum angles of 62.02 degrees for alternating tread devices accessing

mezzanines and 75.26 degrees for alternating tread devices accessing other areas. These angles are in the range of 50 to 70 degrees as required by the definition of alternating tread devices in section 1002 (with the exception that either the actual projected tread depth used must be larger than the minimum or the actual riser height used must be below the maximum to ensure a maximum angle of 70 degrees).

Note: The current wording in section 1009.9.2 is almost exactly the same as in section 1014.6.6 of the 1996 and 1999 editions the BOCA National Building Code. The history behind how the wording was incorporated into BOCA could not be ascertained.

Bibliography:

Standard Building Code; Section 1007.8.4
The BOCA National Building Code/1999 Sections 1014.6.6

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

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

E73-07/08

1009.9.2 (IFC [B] 1009.9.2)

Proponent: Robert Bagnetto, Lapeyre Stair Inc.

Revise as follows:

1009.9.2 (IFC [B] 1009.9.2) Treads of alternating tread devices. Alternating tread devices shall have a minimum projected tread of 5 inches (127 mm), a minimum tread depth of 8.5 inches (216mm), a minimum tread width of 7 inches (178 mm) and a maximum riser height of 9.5 inches (241 mm). The minimum tread width at the edge opposite of the nosing shall be 5 inches (127 mm) when the tread has a minimum area of 60 square inches. The initial tread of the device shall begin at the same elevation as the platform, landing or floor surface.

Exception: Alternating tread devices used as an element of a means of egress in buildings from a mezzanine area not more than 250 square feet (23 m2) in area which serves not more than five occupants shall have a minimum projected tread of 8.5 inches (216 mm) with a minimum tread depth of 10.5 inches (267 mm). The minimum tread width at the edge opposite of the nosing shall be 5 inches (127 mm) when the tread has a minimum area of 75 square inches. The rise to the next alternating tread surface should not be more than 8 inches (203 mm).

Reason: The purpose of this proposed change is to clarify the code. The code is ambiguous in that it does not specify how to measure tread depth and width of alternating tread devices.

This proposal is superior to the current provisions in the code in that it rectifies shortcomings in the code by clarifying the manner in which alternating tread device tread depth and width are measured.

IBC section 1009.9.2 provides the values for minimum tread depth and width of alternating tread devices, but does not provide the details on how to measure these features.

The treads of traditional stairs are by their nature rectangular in plan. Therefore, other than specifying depth and width, they do not require additional dimensional requirements to have their plan dimensions adequately specified. Winders, spiral stairs and alternating tread devices are types of specialty climbing components that are addressed by the code. The code provides additional requirements besides depth and width to ensure that the plan of treads of winders and spiral stairs are adequately specified, but no such additional requirements or tread shape are specified for alternating tread devices.

The current requirements for tread dimensions of alternating tread devices were originally incorporated into BOCA via Code Change B98-85, section 816.12.2 (at the same time alternating tread devices were first added to the code). The required dimensions for alternating tread devices have not changed since the original proposal (The current wording in IBC-2006 is nearly identical to the wording in B98-85). Mark Rollman representing Lapeyre Stair was the submitter of code change proposal B98-85. Lapeyre Stair is the original patent holder (1980) of the alternating tread device and for many years was the sole manufacturer of alternating tread devices (non-residential). A reasonable assumption is that the original proposed dimensions for the treads of alternating tread devices were based on the Lapeyre Stair tread design (which has not changed since Lapeyre Stair began manufacturing alternating tread devices). However, as explained below, there are possible interpretations of the code, such that this tread design does not meet the code requirements.

The code requires a minimum tread depth of 8.5 inches (10.5 inches for mezzanines) and a minimum tread width of 7 inches. These are shown in illustrations 1 and 2 which assume a rectangular tread. The model tread upon which the code is based has a tread depth of 10.5 inches and a tread width of 9 inches at the nosing side and 5 inches at the opposite side of the nosing. This is shown in illustration 3. Although approximately 37% larger in area, this model tread does not meet an interpretation which assumes a rectangular tread shape; as the 5 inch tread width at the side opposite of the nosing is less than 7 inches. The proposed change allows tread shapes other than rectangular, which the model tread meets, while ensuring adequate foot landing area by specifying a required area of the tread.

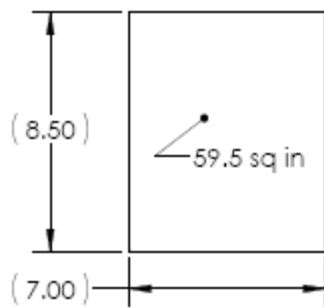


Illustration 1

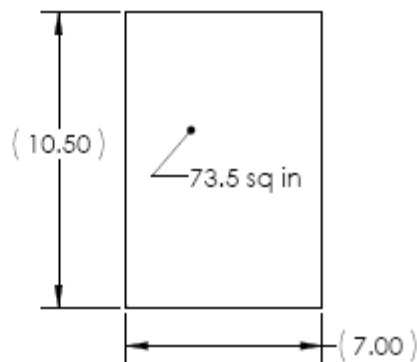


Illustration 2

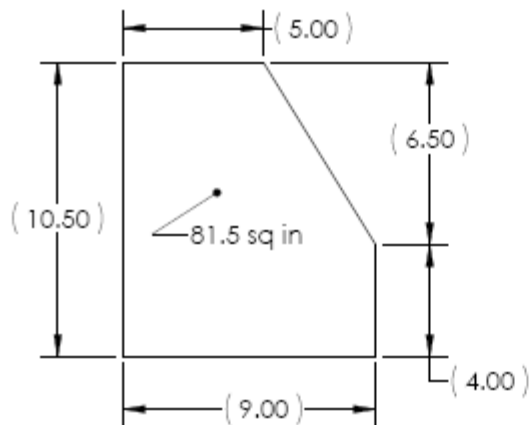


Illustration 3

IBC-2006 Section 1009.9.2
Code Proposal
Alternating Tread Device
Tread Dimensions

Bibliography:

The 1999 BOCA National Building Code, section 1014.6.6
BOCA code change no. B98-85, section 816.12

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

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

E74-07/08

408.3.4 (New), 1009.10 (New), 1009.3, 1012.2, 1012.5, 1013.2, 1013.5 (IFC [B] 1009.10 (New), [B] 1009.3, [B] 1012.2, [B] 1012.5, [B] 1013.2, [B] 1013.5)

Proponent: A. Brooks Ballard, Virginia Department of Corrections

1. Add new text as follows:

1009.10 (IFC [B] 1009.10) Ships Ladders. Ships ladders are permitted to be used as a component of a means of egress to and from control rooms or elevated facility observation stations not more than 250 SF (23sq m) with not more than 3 occupants and for access to unoccupied roofs.

Ships ladders shall have a minimum projected tread of 5 inches (127 mm), a minimum tread depth of 8.5 inches (216 mm), a minimum tread width of 15 inches (612 mm) and a maximum riser height of 9.5 inches (241 mm).

Handrails shall be provided on both sides of ships ladders.

(Renumber subsequent sections)

408.3.4 Ship ladders. Ship ladders shall be permitted for egress from control rooms or elevated facility observation rooms in accordance with Section 1009.10.

(Renumber subsequent sections)

2. Revise text as follows:

1009.3 (IFC [B] 1009.3) Stair treads and risers. Stair riser heights shall be 7 inches (178 mm) maximum and 4 inches (102 mm) minimum. Stair tread depths shall be 11 inches (279 mm) minimum. The riser height shall be measured vertically between the leading edges of adjacent treads. The tread depth shall be measured horizontally between the vertical planes of the foremost projection of adjacent treads and at a right angle to the tread's leading edge. Winder treads shall have a minimum tread depth of 11 inches (279 mm) measured at a right angle to the tread's leading edge at a point 12 inches (305 mm) from the side where the treads are narrower and a minimum tread depth of 10 inches (254 mm).

Exceptions:

1. Alternating tread devices in accordance with Section 1009.9.
2. Ships ladders in accordance with Section 1009.10.
3. 3. Spiral stairways in accordance with Section 1009.8.
4. 4. Aisle stairs in assembly seating areas where the stair pitch or slope is set, for sightline reasons, by the slope of the adjacent seating area in accordance with Section 1025.11.2.
5. 5. 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; the maximum riser height shall be 7.75 inches (197 mm); the minimum tread depth shall be 10 inches (254 mm); the minimum winder tread depth at the walk line shall be 10 inches (254 mm); and the minimum winder tread depth shall be 6 inches (152 mm). A nosing not less than 0.75 inch (19.1 mm) but not more than 1.25 inches (32 mm) shall be provided on stairways with solid risers where the tread depth is less than 11 inches (279 mm).
- 5- 6. See the Section 3403.4 for the replacement of existing stairways.

1012.2 (IFC [B] 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 and ship ladders, measured above tread nosings shall be uniform, not less than 30 inches (762 mm) and not more than 34 inches (864 mm).

1012.5 (IFC [B] 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 of ramp runs.

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

1013.2 (IFC [B] 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 and ship ladders, 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.

1013.3 (IFC [B] 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, and for alternating tread devices and ship ladders, 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: Applicable to Use Group I-3, allows spaces that are normally occupied by a small number of staff persons to have stairways with greater riser height and narrower tread depth than the standard 7-11 riser/tread requirements. In order to provide the 360-degree visibility and maximum mobility necessary for guard observation stations, the size of the base of such elevated stations must be kept to a minimum. Security is increased without risk to either the general public or the inmates, since access to these spaces is restricted to prison staff personnel.

Ships ladders are easier and safer to maneuver than are alternating tread stairs in conditions related to I-3 functions which require carrying items necessary for occupation.

The proposals to Sections 1009.3, 1012.2, 1012.5, 1013.2 and 1013.3 are for correlation. During the 2006/07 cycle the committee approved the revisions in code changes E86, E93, E99 and E100 that added provisions for alternating tread devices to 1012.2, 1012.5, 1013.2 and 1013.3. The same exceptions for handrails and guards should apply to ship ladders.

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

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

E75-07/08

1009.10 (IFC [B] 1009.10)

Proponent: Lawrence Suggars, South Salt Lake City, UT, representing Utah Chapter of ICC

Revise as follows:

1009.10 (IFC [B] 1009.10) (Supp) 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. 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 three or fewer risers within dwelling units and sleeping units in Group R-2 and R-3 do not require handrails.
6. Stairways that serve a occupant load of 10 or less and are less then 44 inches wide are permitted to have one handrail.

Reason: In truth two handrails to small spaces may present their own problems. For example when moving furniture up or down the flight of stairs. Some athletic type persons may confuse them as parallel bars or simple as a quick means of egress. For many years in many areas of the country all that was ever required was one handrail in small and limited application. I ask you, was there a problem with the old application? If so lets look at the statistics to determine where the problems occurred. One handrail worked for many years without a problem in limited applications. Please consider this revision to section 1009.10 in an attempt to not over regulate buildings.

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

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

E76-07/08

1009.12 (New), 1009.12.1 (New) (IFC [B] 1009.12 (New), [B] 1009.12.1 (New))

Proponent: Ed Donoghue, Edward Donoghue Associates Inc., representing National Elevator Industry, Inc.

Add new text as follows:

1009.12 (IFC [B] 1009.12) Stairway to elevator equipment. Roofs and penthouses containing elevator equipment that must be accessed for maintenance are required to be accessed by a stairway.

1009.12.1 (IFC [B] 1009.12.1) Penthouse or roof access. Where the stairway provides access to the penthouse or roof, access shall be provided through a penthouse complying with Section 1509.2.

Reason: The requirement for a stair to the roof for maintaining elevator equipment will correlate the IBC with ASME A17.1/CSA B44. ASME A17.1/CSA B44 has required stairs and a door to access elevator equipment since 1955. More specifically Section 2.27.3.2.1 of A17.1 states the following "a stairway with a swinging door and platform at the top level, conforming to 2.7.3.3 shall be provided from the top floor of the building to the roof level. Hatch covers as a means of access to roofs shall not be permitted." Alternating tread devices or ladders are not permitted as alternatives to the starway.

A similar code change was submitted in the last cycle (E71-06/07) to Section 1009.11, which was disapproved as it was felt that the definition of occupiable space already addressed this concern. The definition for occupiable space does not necessarily cover maintenance of elevator equipment as the intent of "engaged in labor" is talking more about the intended occupancy classification of the space such as an office space. The commentary for the definition of occupiable space states "Some spaces are neither habitable nor occupiable, such as closets, toilet rooms and mechanical equipment rooms." Without clarification this section conflicts with the elevator code.

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

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

E77-07/08

1010.7.2 (IFC [B] 1010.7.2)

Proponent: Scott Crossfield, Theatre Projects Consultants, Inc., representing himself

Delete and substitute as follows:

~~**1010.7.2 (IFC [B] 1010.7.2) Outdoor conditions.** Outdoor ramps and outdoor approaches to ramps shall be designed so that water will not accumulate on walking surfaces.~~

1010.7.2 (IFC [B] 1010.7.2) Wet conditions. Landings subject to wet conditions shall be designed to prevent the accumulation of water.

Exception: Submerged landings of ramps into swimming pools.

Reason: The intent of this proposal is two fold – to address conditions inside where there may be water, such as at a pool, or a ramp immediately inside an entrance; and to provide consistent language between IBC and 2003 ICC/ANSI A117.1 and ADA/ABA Guidelines.

Interior and exterior ramps can be subject to wet conditions. If the landings are wet, this could make moving onto or off a the ramp a slipping hazard.

The current language for “approach” can be interpreted to be any area around the ramp or the route to the ramp. Limiting the language to the landing will provide a more precise requirement.

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

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

E78–07/08

1011.1 (IFC [B] 1011.1)

Proponent: Keith Wen, RA, New York City Department of Buildings, representing New York City

Revise as follows:

1011.1 (IFC [B] 1011.1) Where required. Exits and exit access doors shall be marked by an approved exit sign readily visible from any direction of egress travel. The path of egress travel ~~Access~~ to exits and within exits shall be marked by readily visible exit signs to clearly indicate the direction of egress travel in cases where the exit or the path of egress travel is not immediately visible to the occupants. Intervening means of egress doors within exits shall be marked by exit signs. Exit sign placement shall be such that no point in an exit access corridor or exit passageway is more than 100 feet (30 480 mm) or the listed viewing distance for the sign, whichever is less, from the nearest visible exit sign.

Exceptions:

1. Exit signs are not required in rooms or areas that require only one exit or exit access.
2. Main exterior exit doors or gates that are obviously and clearly identifiable as exits need not have exit signs where approved by the building official.
3. Exit signs are not required in occupancies in Group U and individual sleeping units or dwelling units in Group R-1, R-2 or R-3.
4. Exit signs are not required in sleeping areas in occupancies in Group I-3.
5. In occupancies in Groups A-4 and A-5, exit signs are not required on the seating side of vomitories or openings into seating areas where exit signs are provided in the concourse that are readily apparent from the vomitories. Egress lighting is provided to identify each vomitory or opening within the seating area in an emergency.

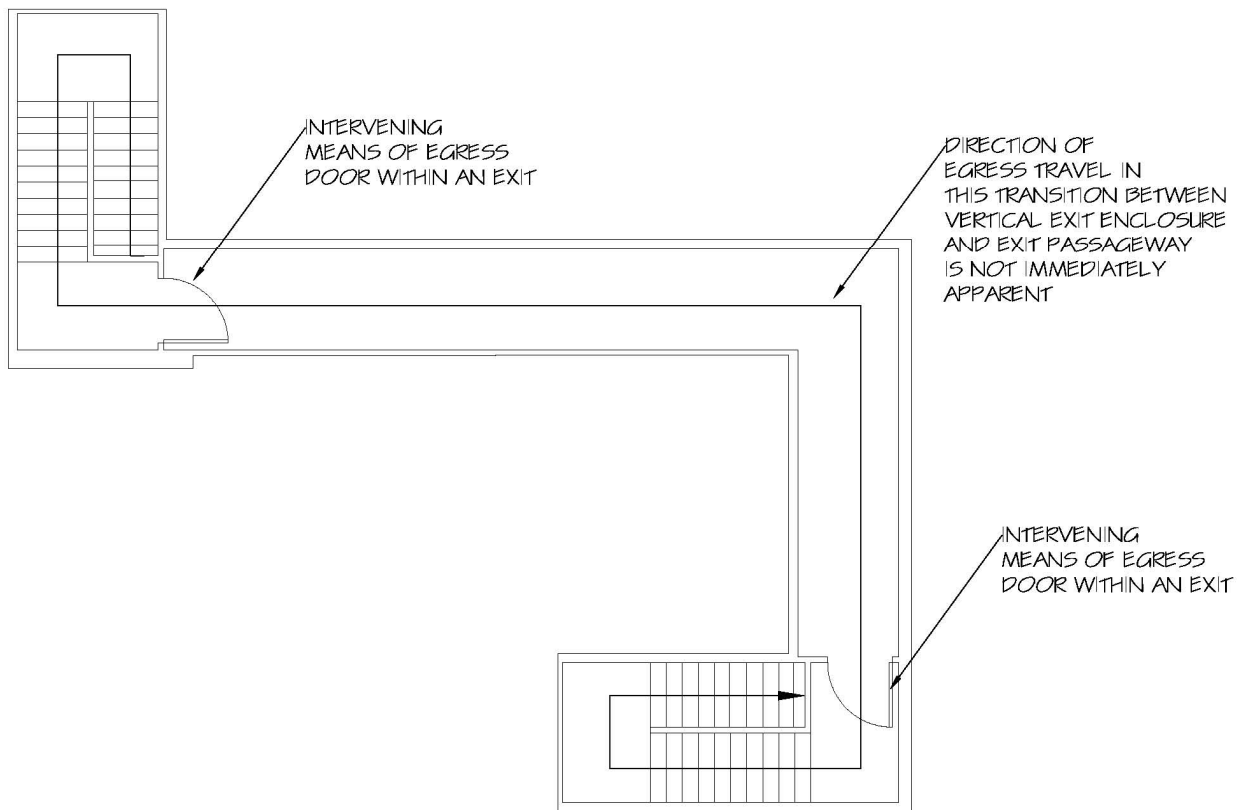
Reason: Section 1011.1 requires exit signs along the exit access to help occupants to reach the exits. Typically, once the occupants reach the exits, exit signs are not required within the exits. However, in buildings with more complicated egress layout, it is possible that the direction of egress travel within the exits may not be immediately apparent to the occupants. For example, a vertical exit enclosure on the north side of a building may transition into a horizontal extension in the form of either an extended landing/corridor or an exit passageway with intervening means of egress doors on the 15th floor before continuing down into the staircase on the south side. The path of egress might involve turns with extended distances. In such cases, it is important to provide clear egress direction for the occupants within the exits.

The report from the 2003 World Trade Center Building Code Task Force identified the problem of clarity or “readability” of travel within exit enclosures, and in response to the 1993 and 2001 World Trade Center incidents, recommended additional exit signs within the exit enclosures.

Evacuees may be hesitant or even confused when traveling within an exit that involves transition from a vertical to a horizontal direction and horizontal extension that includes turns and intervening doors within the path of egress. When travel direction is not clear within an exit, it creates uncertainty in decision making and causes delays in evacuations in threatening conditions.

The proposed changes clarify that exit signs shall be installed if the path of egress travel within an exit is not obvious to the occupants. This may already be the practice of many jurisdictions to ensure life safety of the occupants; this proposal simply codifies such practice.

Additionally, similar to the requirement for exit access corridor, exit signs in exit passageways should also be visible from within a 100 feet or the listed viewing distance for the sign, whichever is less.



EXAMPLE OF AN EXIT PASSAGEWAY
 THAT REQUIRES EXIT SIGNS ALONG
 THE EGRESS PATH AND ON THE
 INTERVENING EXIT DOORS

Bibliography:

City of New York, Department of Buildings. World Trade Center Building Code Task Force: Findings and Recommendations (available at <http://home2.nyc.gov/html/dob/downloads/pdf/wtcbctf.pdf>). February, 2003.
 LL26/2004 Section 27-383.1 (a).

Cost Impact: This proposal establishes requirements for exit signs in exits where egress direction is not immediately apparent, which may increase costs in buildings that have more complicated egress paths, but the decrease in egress and full building evacuation time outweighs the moderate cost of the exit signs.

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

E79-07/08
1011.1 (IFC [B] 1011.1)

Proponent: A. Brooks Ballard, Virginia Department of Corrections

Revise as follows:

1011.1 (IFC [B] 1011.1) Where required. Exits and exit access doors shall be marked by an approved exit sign readily visible from any direction of egress travel. Access to exits shall be marked by readily visible exit signs in cases where the exit or the path of egress travel is not immediately visible to the occupants. Exit sign placement shall be such that no point in a corridor is more than 100 feet (30 480 mm) or the listed viewing distance for the sign, whichever is less, from the nearest visible exit sign.

Exceptions:

1. Exit signs are not required in rooms or areas that require only one exit or exit access.
2. Main exterior exit doors or gates that are obviously and clearly identifiable as exits need not have exit signs where approved by the building official.
3. Exit signs are not required in occupancies in Group U and individual sleeping units or dwelling units in Group R-1, R-2 or R-3.
4. Exit signs are not required in dayrooms, sleeping areas rooms, or dormitories in occupancies in Group I-3.
5. In occupancies in Groups A-4 and A-5, exit signs are not required on the seating side of vomitories or openings into seating areas where exit signs are provided in the concourse that are readily apparent from the vomitories. Egress lighting is provided to identify each vomitory or opening within the seating area in an emergency.

Reason: This change clarifies the intent of this section that exit signs are not required in cells or contiguous housing dayrooms or sleeping dormitories in Group I-3 occupancies as those areas are within the same smoke compartment and therefore fall under the Group I-3 classification. Most occupants in such buildings are long-time residents who become familiar with the locations of all exits outside their sleeping areas, whether they are marked or unmarked. In cases of emergency, occupants in Use Group I-3 are escorted by staff to the exits and to safety. The exit signs also represent potential for vandalism and use as weapons when they are accessible to the residents.

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

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

E80-07/08

1011.6 (New), 1011.7 (New), [IFC [B] 1011.6 (New), [B] 1011.7 (New)]

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

Add new text as follows:

1011.6 (IFC [B] 1011.6) Floor-level exit signs. Where exit signs are required by Section 1011.1, additional approved floor-level exit signs which are internally or externally illuminated, photoluminescent or self-luminous shall be provided in all interior corridors of Groups A, E, I, R-1, R-2 and R-4 Occupancies.

Exceptions:

1. Where path marking complying with Section 1011.7 is provided.
2. Group I-3 occupancies.

The bottom of the sign shall not be less than 6 inches (152 mm) or more than 8 inches (203 mm) above the floor level and shall indicate the path of exit travel. For exit and exit-access doors, the sign shall be on the door or adjacent to the door with the closest edge of the sign or marker within 4 inches (102 mm) of the door frame.

1011.7 (IFC [B] 1011.7) Path marking. When exit signs are required by Section 1011.1, approved path marking shall be installed at floor level or no higher that 8 inches (203 mm) above the floor level in all interior corridors of Groups A, E, I, R-1, R-2 and R-4 occupancies.

Such marking shall be continuous except as interrupted by door-ways, corridors or other such architectural features in order to provide a visible delineation along the path of travel and shall comply with Section 1011.5.3.

Exceptions:

1. Where floor level exit signs complying with Section 1011.6 are provided.
2. Group I-3 occupancies.

Reason: Corridor smoke from a fire stratifies from the ceiling downward. This often renders the exit signs located above the exit doors difficult, if not impossible, to see. From the time a fire begins, the clock for successful evacuation begins to count down. There must never be confusion about where the exits are.

UL 924, the UL standard for exit signs, does not nor has it ever tested or listed exit signs for visibility through smoke, only for clear air. UL 924 does test and list exit signs for use at the floor proximity where the air is typically clear during the early stages of a fire.

California has had requirements in their building code for floor-level exit signs or path markings in interior corridors of Groups A, E, I, and R since 1989. The State of Connecticut recently enacted a similar law to require floor proximity path markings in all new Group A occupancies with an occupant load of more than three hundred persons, Group B medical occupancies, Group E, Group I-1, Group I-2, Group R-1 hotels and motels, and Group R-2 dormitories.

The Federal Aviation Administration, the International Maritime Organization and the American Public Transit Association all require floor-proximity exit path markings on passenger planes, passenger ships and passenger trains.

The discussion should not be about whether or not buildings should have floor proximity egress path marking but rather which buildings should have it

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

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

E81–07/08

1012.5 (IFC [B] 1012.5)

Proponent: Scott Crossfield, Theatre Projects Consultants, Inc., representing himself

Revise as follows:

1012.5 (IFC [B] 1012.5) (Supp) 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 of ramp runs. At stairways and ramps the handrail extensions shall extend in the same direction of the stair flight and ramp run.

Exceptions:

1. Handrails within a dwelling or sleeping unit that is not required to be ~~accessible~~ Accessible units or Type A units in accordance with Section 1107, 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.
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 change adds a new sentence for clarification of the direction of the handrail extensions. The current provisions do not indicate if the handrails extensions must go straight or could bend. If they bend, they no longer assist the stairway user that needs the handrail for support. The change is also for coordination with 2004 ADA/ABA Accessibility Guidelines and ICC A117.1 Section 505.10.

G208 Part I put a change into Section 3409.8 to address an exception for handrail extension on stairways being altered in existing buildings.

The intent of the additional language in Exception 1 is so that it is clear that the exception may not be used in Accessible units or Type A units when the individual units have a stairway within the unit. It is our understanding that Fair Housing does not address requirements for stairways within an individual unit, therefore, Type B units could use this exception.

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

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

E82–07/08

1012.5 (IFC [B] 1012.5)

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

Revise as follows:

1012.5 (IFC [B] 1012.5) (Supp) 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 of ramp runs. The extensions of handrails shall be in the same direction of the stair flights at stairways and the ramp runs at ramps.

Exceptions:

1. Handrails within a dwelling unit or sleeping unit that is not required to be accessible ~~an Accessible unit or a Type A unit,~~ 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.
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 question of what direction handrails should extend at the top and bottom of stair flights and ramp runs has existed for many years. I believe public safety is better served when the extensions are in the same direction as the stair flights and ramp runs they serve. The purpose for this proposal is to add language making it clear that the extensions are required to be in the same direction. It will also better align IBC Section 1012.5 with Section 505.10 of ICC A117.1-03, which requires handrails to extend beyond and in the same direction of stair flights and ramp runs.

Exception #1 is revised for consistency with the terminology in IBC Chapter 11 for dwelling units, sleeping units, Accessible units and Type A units. Note that the first two terms are defined in Section 202 and the last two terms are defined in Section 1102.1. Type B units are not also excluded from qualifying for Exception #1 because multistory dwelling units and sleeping units not provided with elevator service are not required to be Type B units. Refer to IBC Section 1107.7.2 for further information.

This proposal began as a public comment to Proposal E92-06/07-D. One of the reasons cited by the Means of Egress Committee for disapproving Proposal E92-06/07 was that there should be an exception where handrails are continuous. The proposed language in this proposal requiring handrail extensions to be in the same direction as stair flights and ramp runs, however, does not apply to continuous handrails because there is no extension at a continuous handrail, only at the ends of handrails. Refer to the 2006 Report of the Public Hearing on the 2006 ICC construction codes for further information.

A second reason cited by the Means of Egress Committee for disapproval was that there should be an exception for Group A aisle situations. Exception #2 to Section 1012.5, however, exempts aisle handrails in Group A and E occupancies in accordance with Section 1025.13. Section 1025.13 on handrails in assembly occupancies, in turn, provides exemptions for ramped aisles and aisle stairs. Handrails are not required at (1) ramped aisles with seating on both sides where the slope of the aisle is no greater than 1:8 and, (2) at the sides of ramped aisles regardless of the seating arrangement where a guard with graspability at least equivalent to that required for a handrail is provided.

A third reason cited by the Means of Egress Committee for disapproval was that the straight extension of the handrail into the landing at the top and bottom of the stairway could be an egress hazard. Section 1012.5, however, currently requires handrails to return to a wall, guard or the walking surface, except for handrails that are continuous to an adjacent stair flight or ramp run. An extension of a handrail is a portion of the handrail and is subject to this same requirement.

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

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

E83-07/08

1013.1, 1002.1, (IFC [B] 1013.1, [B] 1002.1)

Proponent: Thomas Kinsman, T.A. Kinsman Consulting Company, representing himself

1. Revise as follows:

1013.1 (IFC [B] 1013.1) (Supp) Where required. Guards shall be located along open-sided walking surfaces, mezzanines, equipment platforms, seatboards, stairways, ramps and landings that are located more than 30 inches (762 mm) above the floor or grade below. Guards shall be adequate in strength and attachment in accordance with Section 1607.7. Where glass is used to provide a guard or as a portion of the guard system, the guard shall also comply with Section 2407. Guards shall also be located along glazed sides of stairways, ramps and landings that are located more than 30 inches (762 mm) above the floor or grade below where the glazing provided does not meet the strength and attachment requirements in Section 1607.7.

Exception: Guards are not required for the following locations:

1. On the loading side of loading docks or piers.
2. On the audience side of stages and raised platforms, including steps leading up to the stage and raised platforms.
3. On raised stage and platform floor areas, such as runways, ramps and side stages used for entertainment or presentations.
4. At vertical openings in the performance area of stages and platforms.
5. At elevated walking surfaces appurtenant to stages and platforms for access to and utilization of special lighting or equipment.
6. Along vehicle service pits not accessible to the public.
7. In assembly seating where guards in accordance with Section 1025.14 are permitted and provided.

2. Add new definition as follows:

1002.1 (IFC [B] 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.

SEATBOARD. Any furniture intended for sitting that is fixed in place or other building features greater than 4 inches in width that could be used for sitting such as parapet wall tops at roof decks.

Reason: This proposal should be considered with a companion code change that seeks to strike the term "seatboard" from Section 1013.2. If the companion code change is rejected, this proposal is set forth to better clarify the code with respect to seatboards. The underlying concern is the liability for design professionals due to the lack of understanding of what a seatboard is.

This proposal accomplishes two goals: (1) it locates the term "seatboard" in the charging language in Section 1013.1 that otherwise sets forth a long list of locations of where guards are required; and (2) it sets forth a definition of the term seatboards.

The reference to seatboards in Section 1013.1 is needed because it is currently missing from the list of locations where guards are currently required and it is unique from all current locations. One shouldn't have to go to a section titled "Height" to determine if guards are required on seatboards.....rather it should be found in a section titled "Where required".

Based on informal comment from ICC staff, the term seatboard came from the legacy codes and was related to bleachers and grandstands.

There was discussion in the last cycle when E98-06/07 was debated that indicated "seatboards" meant fixed furniture. The reference to ICC 300 standard in E98-06/07 for guards for bleachers was rejected. If the code committee desires to keep the term seatboard, a definition is necessary.

Seats are defined as a chair, bench, or pew and designed to support persons in the sitting position. Boards are defined as a piece of wood sawn thin and with considerable length in comparison with its thickness.

If the intent in the code is to address the possibility of someone standing on a surface that could be used for sitting, this is a very necessary code change.

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

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

E84-07/08
1013.1 (IFC [B] 1013.1)

Proponent: Thomas B. Zuzik Jr., Artistic Railings Inc., representing himself

Revise as follows:

1013.1 (IFC [B] 1013.1) (Supp) Where required. Guards shall be located along open-sided walking surfaces, mezzanines, equipment platforms, stairways, ramps and landings that are located more than 30 inches (762 mm) ~~above the floor or grade below~~ measured vertically to the floor or grade below at any point within 36 inches (914 mm) horizontal to the edge of the open side. Guards shall be adequate in strength and attachment in accordance with Section 1607.7. Where glass is used to provide a guard or as a portion of the guard system, the guard shall also comply with Section 2407. Guards shall also be located along glazed sides of stairways, ramps and landings that are located more than 30 inches (762 mm) above the floor or grade below where the glazing provided does not meet the strength and attachment requirements in Section 1607.7.

Exception: Guards are not required for the following locations:

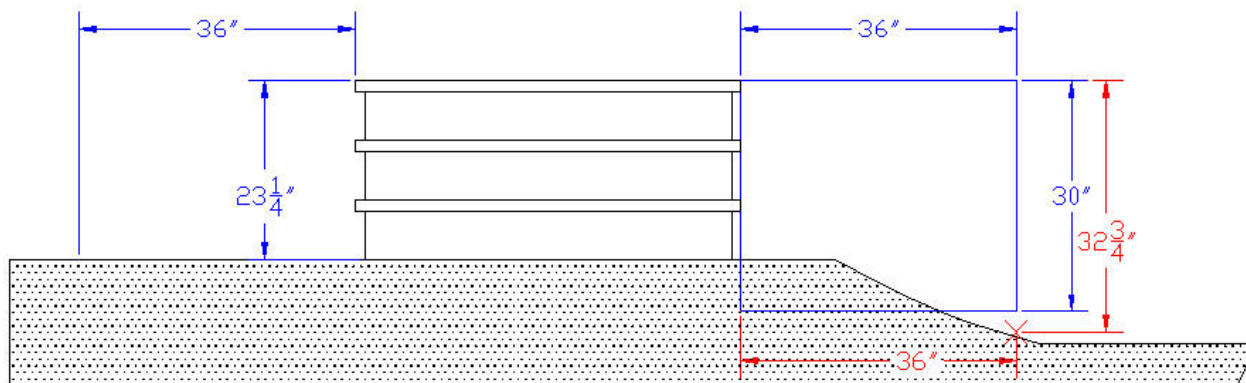
1. On the loading side of loading docks or piers.
2. On the audience side of stages and raised platforms, including steps leading up to the stage and raised platforms.
3. On raised stage and platform floor areas, such as runways, ramps and side stages used for entertainment or presentations.
4. At vertical openings in the performance area of stages and platforms.
5. At elevated walking surfaces appurtenant to stages and platforms for access to and utilization of special lighting or equipment.
6. Along vehicle service pits not accessible to the public.
7. In assembly seating where guards in accordance with Section 1025.14 are permitted and provided.

Reason: To provide fixed points for measuring the 30 inch vertical riser height of elevated surfaces to determine if guards are required.

1. The existing R312.1 states that guards are required when the walking surface is 30 inches or more above the walking surface below, however it does not define clearly were to measure that vertical measurement. This proposed code change also sets a set of parameters as to where to take the measurements.

2. I the author, previously submitted this proposal in the prior code cycle and used the 24 inch offset measurement that is published in the BOCA 1996 building code, section 1825.0 retaining walls, section 1825.5 guards, as the determining distance or point of reference for when retaining walls where required to have guards. Upon request from multiple supporters of the previous proposal a change from 24 inches to 36 inches was made to allow for an area the size of a minimum landing as required in the IRC for inside and outside exterior doors.

The diagram below was drawn by the author and is shown as a visual guide or technical drawing. The drawing shows a 3 riser front entry stoop with 7-3/4" risers from a front elevation. The ground is detailed in outlined dots. The 36" horizontal with 30" vertical box on the right shows the area in which the code change submits the measurements should be taken. The 32-3/4" vertical point shows the deepest point within the 36" horizontal edge measurement. The left side of the stoop is shown not over 30" in height and thus no guard required.



Thus if this stoop was on a facility it would require a guard be installed on the right side only as the left side is not 30 inches or more deep.

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

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

E85-07/08

1013.1, 1013.1.1 (New), 1013.2, 1013.3, 1013.5, 1013.6 (IFC [B] 1013.1, [B] 1013.1.1 (New), [B] 1013.2, [B] 1013.3, [B] 1013.5, [B] 1013.6); IRC R312.1, R312.2

Proponent: Paul K. Heilstedt, P.E., Chair, representing ICC Code Technology Committee (CTC)

THESE PROPOSALS ARE ON THE AGENDA OF THE IBC MEANS OF EGRESS AND THE IRC BUILDING/ENERGY CODE DEVELOPMENT COMMITTEE AS 2 SEPARATE CODE CHANGES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IBC MEANS OF EGRESS

1. Revise as follows:

SECTION 1013.0 GUARDS

1013.1 (IFC [B] 1013.1) (Supp) Where required. Guards shall be located along open-sided walking surfaces, including mezzanines, equipment platforms, stairways, stairs, ramps and landings, that are located more than 30 inches measured vertically to the floor or grade below at any point within 36 inches (914 mm) horizontally to the edge of the open side above the floor or grade below. Guards shall be adequate in strength and attachment in accordance with Section 1607.7. Where glass is used to provide a guard or as a portion of the guard system, the guard shall also comply with Section 2407. Guards shall also be located along glazed sides of stairways, ramps and landings that are located more than 30 inches (762 mm) above the floor or grade below where the glazing provided does not meet the strength and attachment requirements in Section 1607.7.

Exception: Guards are not required for the following locations:

1. On the loading side of loading docks or piers.
2. On the audience side of stages and raised platforms, including steps leading up to the stage and raised platforms.
3. On raised stage and platform floor areas such as runways, ramps and side stages used for entertainment or presentations.