MEMORANDUM

TO: NFPA Technical Committee on Means of Egress
FROM: Linda MacKay
DATE: November 16, 2009
SUBJECT: NFPA 101 A2011 ROP Letter Ballot Final Results

The Final Results of the NFPA 101 ROP Letter Ballot are as follows:

28 Members Eligible to Vote
1 Ballot Not Returned (McMahon)

Mr. Peacock voted for Mr. Averill, Mr. Alles voted for Mr. Leon and Mr. Rhodes voted for Mr. Rosenbaum.

Reasons for negative votes, etc. from alternate members are not included unless the ballot from the principal member was not received.

All votes were affirmative on all ballot items with the exception of those noted in the attached report.

According to the final ballot results, all ballot items received the necessary 2/3 required affirmative votes to pass ballot.

Attachment
Add a definition of "normally unoccupied area" to Section 3.3 as follows:

3.3.x* Normally Unoccupied Area. A building service equipment support area in which people are not expected to be present on a regular basis.

A.3.3.x Examples of such areas include interstitial spaces, crawl spaces, tunnels, attics and service vaults. 29 CFR 146 of the OSHA regulations describe the aspects of normally unoccupied areas. (for example, hazardous atmosphere criteria, asphyxiation risk of an entrance being engulfed, etc.). These areas described by CFR 146 would be considered hazardous if located within a building or structure regulated by NFPA 101.

The definition is being added to support new Section 7.1.2 and 7.1.13 on normally unoccupied areas being proposed by a separate proposals. The definition captures the key feature of persons not being present on a regular basis and such area being characteristic of interstitial spaces, crawl spaces, tunnels, and attics used as building service equipment support spaces.

Committee Meeting Action: Accept in Principle

Committee Statement: The Committee Meeting Action on the referenced proposal should meet the submitter’s intent.

Number Eligible to Vote: 28
Ballot Results: Affirmative: 26 Negative: 1
Ballot Not Returned: 1 McMahon, C.
Explanation of Negative:

LATHROP, J.: See ballot on 101-34.
Submitters: Thomas L. Allison, Savannah River Nuclear Solutions

Recommendation: Add a definition as follows:

3.3.xx* Normally Unoccupied Building Service Equipment Support Area. A building service equipment support area in which people are not expected to be present on a regular basis and where such area is characteristic of interstitial spaces, crawl spaces, tunnels, and attics and not used for storage or routine inspection, maintenance and testing.

A.3.3.xx Normally unoccupied building service support areas are often found in attics, crawl spaces, basements, and other interstitial areas where the space is vacant or intended exclusively for routing ductwork, cables, conduits, piping and similar services and are rarely accessed. It is often difficult or impossible to fully comply with the egress requirements of Chapter 7. Where portions of such spaces are routinely visited for storage, maintenance, testing or inspection, that portion is excluded from this definition, but the remainder of the space may be considered a normally unoccupied building service equipment support area.

Substantiation: The definition is being added to support new Section 7.x.x on normally unoccupied building service equipment support areas being proposed by a separate proposal. See 2008 Proposal 101-165a (Log #CP102). The definition captures the key feature of persons not being present on a regular basis and such area being characteristic of interstitial spaces, crawl spaces, tunnels and attics used as building service equipment support spaces. The definition differs slightly from what was previously proposed in that it includes the words “and not used for storage or routine inspection, maintenance and testing”. It is the submitters belief that spaces or portions of spaces regularly or routinely accessed for storage or inspection, testing or maintenance of equipment are not normally unoccupied and should meet the egress requirements. However, it is not the intent that this be applied for the entire remaining space used exclusively for routing utilities or left vacant.

This action was approved by the committee in the 2008 ROP 101-33, but overturned in the 2008 ROC 101-383. This action is needed to exclude various portions of a building from the specific egress requirements of Chapter 7. The Code, as currently written, mandates all portions of the building to meet the egress requirements for all occupancies except industrial and storage.

This is not original material; its reference/source is as follows:


Committee Meeting Action: Accept in Principle in Part

See Committee Action on Proposal on 101-34.

Committee Statement: The Committee Meeting Action on the referenced proposal should meet most of the submitter’s intent. The portion of the submitter’s recommendation that was not accepted relates to prohibiting the space from being used for routine inspection, maintenance and testing. Such spaces are used, and need to be used, for such purposes as they are permitted to include non-fuel-fired equipment like fans or blowers.

Number Eligible to Vote: 28

Ballot Results: Affirmative: 26 Negative: 1

Ballot Not Returned: 1 McMahon, C.

Explanation of Negative:

LATHROP, J.: See ballot on 101-34.
Proposals – June 2011

101-34  Log #280  SAF-MEA
(3.3.x Normally Unoccupied Building Service Equipment Support Area and A.3.3.x (New) )

Submitter: Joshua Elvove, U.S. General Services Administration
Recommendation: Add a new definition to Section 3.3 and supporting annex as follows:

3.3.xx* Normally Unoccupied Building Service Equipment Support Area.
A building service equipment support area in which people are not expected to be present on a regular basis.
A.3.3.x.x Examples of such areas include interstitial spaces, crawl spaces, chases, tunnels, attics and service vaults.
Storage would not be expected to be permitted in these locations.
Substantiation: The definition is being added to support new Section 7.13 on normally unoccupied building service equipment support areas being proposed by separately. The annex lists examples of spaces where persons would not be expected to be present on a regular basis and clarifies that such spaces not be used for storage.

Committee Meeting Action: Accept in Principle
Add a new definition to Section 3.3 and supporting annex as follows:

3.3.xx* Normally Unoccupied Building Service Equipment Support Area. A building service equipment support area in which people are not expected to be present on a regular basis.
A.3.3.x.x Examples of such areas include interstitial spaces, crawl spaces, chases, tunnels, attics and service vaults.
Storage and fuel-fired equipment would not be expected to be permitted in these locations. Roofs are not considered to be normally unoccupied building service equipment support areas.

Committee Statement: The Committee Meeting Action should meet the submitter’s intent. The committee expanded the advisory annex text to address fuel-fire equipment which it believes should not be in such spaces. The committee also clarified that roofs are not considered to be normally unoccupied building service equipment support areas.

Number Eligible to Vote: 28
Ballot Results: Affirmative: 26 Negative: 1
Ballot Not Returned: 1 McMahon, C.
Explanation of Negative:

LATHROP, J.: I think this definition still leaves a lot to be desired. Even the proponents were talking about different types of spaces. Does this include an elevator machine room, a typical mechanical floor with extensive equipment as long as it is not fuel fired? I understand this issue but this series of proposals eliminates almost all safeguards while at the same time is not clear as to the areas that they apply to. One proponent was talking about areas for ducts that would only be entered when rearranging ducts, others were referring to equipment areas that visited frequently but not "normally occupied."

Comment on Affirmative:

BONISCH, W.: Agree with concept however words like “normally”, “are not expected,” “regular” are difficult to enforce.
TAPPER, P.: I still believe there needs to be language added with regard ‘limited access’ to be more consistent with NFPA 13 language regarding sprinkler criteria associated with concealed spaces. Restricted access is necessary to reduce opportunities for storage and to ensure only those familiar with the space are allowed to temporarily occupy them for maintenance and testing.
Submitter: Joseph H. Versteeg, Versteeg Associates
Recommendation: Revise text to read as follows:

3.3.19.2.1* Gross Floor Area. The floor area within the inside perimeter of the outside walls of the building under consideration with no deductions for hallways, stairs, closets, thickness of interior walls, columns, elevator shafts, unenclosed vertical openings, non-combustible grated walking surfaces, or other features.

Substantiation: Clarifies that holes in the floor such as atriums, communicating spaces, or those permitted by the occupancy chapter as well as open grated walking surfaces as found within industrial occupancies are to be included within the gross floor area.

Committee Meeting Action: Accept in Principle in Part
Revise text to read as follows:

3.3.19.2.1* Gross Floor Area. The floor area within the inside perimeter of the outside walls of the building under consideration with no deductions for hallways, stairs, closets, thickness of interior walls, columns, elevator and building services shafts, or other features.

Committee Statement: The Committee Meeting Action on the referenced proposal should meet part of the submitter’s intent. The action adds shafts as requested by the submitter but not unenclosed vertical openings. Unenclosed vertical openings, like those created by an atrium should be deducted from the gross floor area as there is no floor at those levels to support and occupant load and such spaces can be large which could unfairly drive-up the occupant load of an atrium building. Grated walking surfaces have not been a problem with respect to code users understanding that such spaces are part of the gross area.

Number Eligible to Vote: 28
Ballot Results: Affirmative: 27
Ballot Not Returned: 1 McMahon, C.
3.3.75 Exit. That portion of a means of egress that is separated from all other spaces of a building or structure by construction or equipment as required to provide a protected way of travel to the exit discharge between the exit access and the exit discharge.

Substantiation: The current definition of "EXIT" contains several technical inaccuracies. The definition of exit includes absolute, universal criteria for an exit that describe protection and fire resistance that isn't required on all exit components. Obviously, exterior exit stairways and exterior exit ramps are not interior spaces nor are they necessarily constructed with fire-resistance rated construction and opening protectives. This proposal also acknowledges that some exit components (i.e., exterior exit door at the level of discharge) may lead directly to the public way. This change simplifies the definition by removing the absolutes and limiting it to describing what part an exit plays in the more general term and application of "means of egress."

The laundry list of "exterior exit doors at the level of exit discharge, vertical exit enclosures, exit passageways, horizontal exits, exterior exit stairways, and exterior exit ramps and horizontal exits" should also be removed, as they are not a definition, but a list of elements that the code includes as part of the "exit." Specific sections elsewhere in the code determine that the "components" are or are not acceptable as exits, such as the allowance for exit access on open stairways in exceptions 3 and 4 in Section 1016.1, which are permitted to be counted as exits from a floor by exceptions in Section 1021.1. This is already a convoluted procedure for determining what is an exit. Additional confusion caused by a list that is not inclusive is only an added burden to understanding exits. This list in the definition is at least incomplete or incorrect since it doesn't include the allowed exceptions. The proposed language will eliminate confusion and misunderstanding of what the code intends.

Committee Meeting Action: Reject
Committee Statement: The committee understands that the definition is flawed and that the submitter's recommendation is a step in the right direction for correcting the problem. However, the proposed definition will leave the user without guidance as to where the exit access leaves off and the exit begins. If the submitter's definition is to work, there must be criteria within Chapter 7 to detail what conditions must be met for something to be considered an exit. For example, the exit stair enclosure requirements of 7.1.3.2 provide some of that information. Similar requirements must be developed for doors to the outside, for example.

The SAF-MEA committee has formed a task group to work toward such changes.

Number Eligible to Vote: 28
Ballot Results: Affirmative: 27
Ballot Not Returned: 1 McMahon, C.
Comment on Affirmative:
ORLOWSKI, S.: NAHB agree with both the proponent and the committee that the current definition needs to be improved to provide a clearer understanding of what building components are or are not considered exits. The definition should provide the user with a general understanding that an exit is that portion between the exit access and the exit discharge that provides some type of protection to the occupant either by being separated from the exit access or a protected means of travel to the exit discharge. The various building components that can or are already designated as an exit should be outlined throughout Chapter 7 and not listed in the definition.
101-50 Log #CP5 SAF-MEA
(3.3.124.1 Fire Exit Hardware)
Final Action: Reject

Submitter: Technical Committee on Fundamentals,
Recommendation: Revise text to read as follows:
3.3.124.1 Fire Exit Hardware. Labeled devices for swinging fire doors installed to facilitate safe egress of persons and generally consisting of a cross bar and various types of latch mechanisms that cannot hold the latch in a retracted locked position. [80, 2007]
Substantiation: This definition is the preferred definition from the NFPA Glossary of Terms. Changing the secondary definition to the preferred definition complies with the Glossary of Terms Project.
Committee Meeting Action: Reject
Committee Statement: The proposed definition does not meet the needs of NFPA 101 as it lacks key features included in the current NFPA 101 definition. For example, it doesn't speak to the need to release the latch bolt upon force in the direction of egress travel. Nor does it speak to the device being fire-rated (the key point that makes fire exit hardware different from panic hardware). The proposed definition is too constricting in that it mentions a cross bar, but not a push pad, yet much of such hardware consists of a push pad.
Number Eligible to Vote: 28
Ballot Results: Affirmative: 27
Ballot Not Returned: 1 McMahon, C.
Comment on Affirmative:
PERRY, R.: Existing definition is clearer.

101-58 Log #CP10 SAF-MEA
(3.3.223 Self-Luminous)
Final Action: Reject

Submitter: Technical Committee on Fundamentals,
Recommendation: Revise text to read as follows:
3.3.223 Self-Luminous. A type of sign that is self-energized with respect to luminosity and requires no external power source. [170, 2009]
Substantiation: This definition is the preferred definition from the NFPA Glossary of Terms. Changing the secondary definition to the preferred definition complies with the Glossary of Terms Project.
Committee Meeting Action: Reject
Committee Statement: The proposed definition would be step backward from the current NFPA 101 definition. It mentions a sign, yet the adjective "self-luminous" can describe a marking (as in floor proximity egress path marking) that is not a sign.
Number Eligible to Vote: 28
Ballot Results: Affirmative: 27
Ballot Not Returned: 1 McMahon, C.
7.1.3.1 Exit Access Corridors. Corridors used as exit access and serving an area having an occupant load exceeding 30 shall be separated from other parts of the building by walls having not less than a 1-hour fire resistance rating in accordance with Section 8.3, unless otherwise permitted by one of the following:

(1) This requirement shall not apply to existing buildings, provided that the occupancy classification does not change.

(2) This requirement shall not apply where otherwise provided in Chapters 11 through 43.

7.1.5.1 Means of egress shall be designed and maintained to provide headroom in accordance with other sections of this Code, and such headroom shall be not less than 7 ft 6 in. (2285 mm), with projections from the ceiling not less than 6 ft 8 in. (2030 mm) with a tolerance of -¾ in. (-19 mm), above the finished floor, unless otherwise specified by any of the following:

(1) In existing buildings, the ceiling height shall be not less than 7 ft (2135 mm) from the floor, with projections from the ceiling not less than 6 ft 8 in. (2030 mm) nominal above the floor.

(2) Headroom in industrial equipment access areas as provided in 40.2.5.2 shall be permitted.

7.1.6.3 Level. Walking surfaces shall comply with all of the following:

(1) Walking surfaces shall be nominally level.

(2) The slope of a walking surface in the direction of travel shall not exceed 1 in 20, unless the ramp requirements of 7.2.5 are met.

(3) The slope perpendicular to the direction of travel shall not exceed 1 in 48.

7.2.1.2.3 Door openings in means of egress shall be not less than 32 in. (810 mm) in clear width, unless one of the following conditions exists except under any of the following conditions:

(1) Where a pair of door leaves is provided, one door leaf shall provide not less than a 32 in. (810 mm) clear width opening.

(2) Exit access door assemblies serving a room not exceeding 70 ft² (6.5 m²) and not required to be accessible to persons with severe mobility impairments shall be not less than 24 in. (610 mm) in door leaf width.

(3) Door openings serving a building or portion thereof not required to be accessible to persons with severe mobility impairments shall be permitted to be 28 in. (710 mm) in door leaf width.

(4) In existing buildings, the existing door leaf width shall be not less than 28 in. (710 mm).

(5) Door openings in detention and correctional occupancies, as otherwise provided in Chapters 22 and 23, shall not be required to comply with 7.2.1.2.3.

(6) Interior door openings in dwelling units as otherwise provided in Chapter 24 shall not be required to comply with 7.2.1.2.3.

(7) A power-operated door leaf located within a two-leaf opening shall be exempt from the minimum 32 in. (810 mm) single-leaf requirement in accordance with 7.2.1.9.1.5.

(8) Revolving door assemblies, as provided in 7.2.1.10, shall be exempt from the minimum 32 in. (810 mm) width requirement.

(9)* Where a single door opening is provided for discharge from a stairway required to be a minimum of 56 in. (1420 mm) wide in accordance with 7.2.2.2.1.2(B), and such door assembly serves as the sole means of exit discharge from such stairway, the clear width of the door opening, measured in accordance with 7.2.1.2.2, shall be not less than two-thirds the required width of the stairway.

7.2.1.4.1* Swinging-Type Door Assembly Requirement. Any door assembly in a means of egress shall be of the side-hinged or pivoted-swinging type, and shall be installed to be capable of swinging from any position to the full required width of the opening in which it is installed, unless otherwise specified as follows:

(3) Where permitted in Chapters 11 through 43, horizontal-sliding or vertical-rolling security grilles or door assemblies that are part of the required means of egress shall be permitted, provided that they meet all of the following criteria are met:

(a) Such grilles or door assemblies shall remain secured in the fully open position during the period of occupancy by the general public.

(b) On or adjacent to the grille or door opening, there shall be a readily visible, durable sign in letters not less than 1 in. (25 mm) high on a contrasting background that reads as follows: THIS DOOR TO REMAIN OPEN WHEN THE BUILDING IS OCCUPIED.

(c) Door leaves or grilles shall not be brought to the closed position when the space is occupied.
(d) Door leaves or grilles shall be operable from within the space without the use of any special knowledge or effort.
(e) Where two or more means of egress are required, not more than half of the means of egress shall be equipped with horizontal-sliding or vertical-rolling grilles or door assemblies.

7.2.1.4.2 Door Leaf Swing Direction. Door leaves required to be of the side-hinged or pivoted-swinging type shall swing in the direction of egress travel under any of the following conditions:
(1) Where serving a room or area with an occupant load of 50 or more, except under any of the following conditions:
   (a) Door leaves in horizontal exits shall not be required to swing in the direction of egress travel where permitted by 7.2.4.3.8.1 or 7.2.4.3.8.2.
   (b) Door leaves in smoke barriers shall not be required to swing in the direction of egress travel in existing health care occupancies, as provided in Chapter 19.
   (2) Where the door assembly is used in an exit enclosure, unless the door opening serves an individual living unit that opens directly into an exit enclosure.
   (3) Where the door opening serves a high hazard contents area.

7.2.1.4.5 Door Leaf Operating Forces.  
7.2.1.4.5.1 The forces required to fully open any door leaf manually in a means of egress shall not exceed 15 lbf (67 N) to release the latch, 30 lbf (133 N) to set the leaf in motion, and 15 lbf (67 N) to open the leaf to the minimum required width, unless otherwise specified as follows:
   (1) The forces specified in 7.2.1.4.5 shall be applied to the latch stile.
   (2) The opening forces for existing door leaves in existing buildings shall not exceed 50 lbf (222 N) applied to the latch stile.
   (3) The opening forces for horizontal-sliding door leaves in detention and correctional occupancies shall be as provided in Chapters 22 and 23.
   (4) The opening forces for power-operated door leaves shall be as provided in 7.2.1.9.

7.2.1.4.5.2 The forces specified in 7.2.1.4.5 shall be applied to the latch stile.

7.2.1.5.4.1 Exterior door assemblies shall be permitted to have key-operated locks from the egress side, provided that all of the following criteria are met:
(1) This alternative is permitted in Chapters 11 through 43 for the specific occupancy.
(2) A readily visible, durable sign in letters not less than 1 in. (25 mm) high on a contrasting background that reads as follows is located on or adjacent to the door leaf: THIS DOOR TO REMAIN UNLOCKED WHEN THE BUILDING IS OCCUPIED.
(3) The locking device is of a type that is readily distinguishable as locked.
(4) A key is immediately available to any occupant inside the building when it is locked.

7.2.1.5.5 Electrically Controlled Egress Door Assemblies. Door assemblies in the means of egress shall be permitted to be electrically locked if equipped with approved, listed hardware that incorporates a built-in switch, provided that all of the following conditions are met:
(1) The hardware for occupant release of the lock is affixed to the door leaf.
(2) The hardware has an obvious method of operation that is readily operated in the direction of egress.
(3) The hardware is capable of being operated with one hand in the direction of egress.
(4) Operation of the hardware interrupts the power supply directly to the electric lock and unlocks the door assembly in the direction of egress.
(5) Loss of power to the hardware automatically unlocks the door assembly in the direction of egress.

7.2.1.5.7.1 Door assemblies on stair enclosures shall be permitted to be equipped with hardware that prevents re-entry into the interior of the building, provided that all of the following criteria are met:
(1) There shall be not less than two levels where it is possible to leave the stair enclosure to access another exit.
(2) There shall be not more than four stories intervening between stories where it is possible to leave the stair enclosure to access another exit.
(3) Re-entry shall be possible on the top story or next-to-top story served by the stair enclosure, and such story shall allow access to another exit.
(4) Door assemblies allowing re-entry shall be identified as such on the stair side of the door leaf.
(5) Door assemblies not allowing re-entry shall be provided with a sign on the stair side indicating the location of the nearest door opening, in each direction of travel, that allows re-entry or exit.

7.2.1.5.10 Where pairs of door leaves are required in a means of egress, one of the following criteria shall be met:
(1) Each leaf of the pair shall be provided with a releasing device that does not depend on the release of one leaf before the other.
(2) Approved automatic flush bolts shall be used and arranged such that both of the following criteria are met:
(a) The door leaf equipped with the automatic flush bolts shall have no doorknob or surface-mounted hardware.
(b) Unlatching of any leaf shall not require more than one operation.

7.2.1.6.1 Delayed-Egress Locking Systems.

7.2.1.6.1.1 Approved, listed, delayed-egress locking systems shall be permitted to be installed on door assemblies serving low and ordinary hazard contents in buildings protected throughout by an approved, supervised automatic fire detection system in accordance with Section 9.6 or an approved, supervised automatic sprinkler system in accordance with Section 9.7, and where permitted in Chapters 11 through 43, provided that all of the following criteria are met:

(1) The provisions of 7.2.1.6.2 for access-controlled egress door assemblies shall not apply to door assemblies with delayed-egress locking systems.

(1)(2) The door leaves shall unlock upon actuation of one of the following:
(a) Approved, supervised automatic sprinkler system in accordance with Section 9.7
(b) Not more than one heat detector of an approved, supervised automatic fire detection system in accordance with Section 9.6
(c) Not more than two smoke detectors of an approved, supervised automatic fire detection system in accordance with Section 9.6

(2)(3) The door leaves shall unlock upon loss of power controlling the lock or locking mechanism.

(3) An irreversible process shall release the lock within 15 seconds, or 30 seconds where approved by the authority having jurisdiction, upon application of a force to the release device required in 7.2.1.5.9 under all of the following conditions:
(a) The force shall not be required to exceed 15 lbf (67 N).
(b) The force shall not be required to be continuously applied for more than 3 seconds.
(c) The initiation of the release process shall activate an audible signal in the vicinity of the door opening.
(d) Once the lock has been released by the application of force to the releasing device, relocking shall be by manual means only.

(4) A readily visible, durable sign in letters not less than 1 in. (25 mm) high and not less than 1/8 in. (3.2 mm) in stroke width on a contrasting background that reads as follows shall be located on the door leaf adjacent to the release device:

PUSH UNTIL ALARM SOUNDS
DOOR CAN BE OPENED IN 15 SECONDS

7.2.1.6.1.2 The provisions of 7.2.1.6.2 for access-controlled egress door assemblies shall not apply to door assemblies with delayed-egress locking systems.

7.2.1.7.1 Where a door assembly is required to be equipped with panic or fire exit hardware, such hardware shall meet all of the following criteria:

(1) It shall consist of a cross bar or a push pad, the actuating portion of which extends across not less than one-half of the width of the door leaf.
(2) It shall be mounted as follows:
(a) New installations shall be not less than 34 in. (865 mm), and not more than 48 in. (1220 mm), above the floor.
(b) Existing installations shall be not less than 30 in. (760 mm), and not more than 48 in. (1220 mm), above the floor.
(3) It shall be constructed so that a horizontal force not to exceed 15 lbf (66 N) actuates the cross bar or push pad and latches.

7.2.1.8.2 In any building of low or ordinary hazard contents, as defined in 6.2.2.2 and 6.2.2.3, or where approved by the authority having jurisdiction, door leaves shall be permitted to be automatic-closing, provided that the all of following criteria are met:

(1) Upon release of the hold-open mechanism, the leaf becomes self-closing.
(2) The release device is designed so that the leaf instantly releases manually and, upon release, becomes self-closing, or the leaf can be readily closed.
(3) The automatic releasing mechanism or medium is activated by the operation of approved smoke detectors installed in accordance with the requirements for smoke detectors for door leaf release service in NFPA 72, National Fire Alarm Code.
(4) Upon loss of power to the hold-open device, the hold-open mechanism is released and the door leaf becomes self-closing.
(5) The release by means of smoke detection of one door leaf in a stair enclosure results in closing all door leaves serving that stair.

7.2.1.10.1 Revolving door assemblies, whether used or not used in the means of egress, shall comply with all of the following:

(1) Revolving door wings shall be capable of being collapsed into a book-fold position, unless they are existing revolving doors approved by the authority having jurisdiction.

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(2) When revolving door wings are collapsed into the book-fold position, the parallel egress paths formed shall provide an aggregate width of 36 in. (915 mm), unless they are approved existing revolving door assemblies.

(3) Revolving door assemblies shall not be used within 10 ft (3050 mm) of the foot or the top of stairs or escalators.

(4) A dispersal area acceptable to the authority having jurisdiction shall be located between stairs or escalators and the revolving door assembly.

(5) The revolutions per minute (rpm) of revolving door wings shall not exceed the values in Table 7.2.1.10.1.

(6) Each revolving door assembly shall have a conforming side-hinged swinging door assembly in the same wall as the revolving door within 10 ft (3050 mm) of the revolving door, unless one of the following conditions applies:

(a) Revolving door assemblies shall be permitted without adjacent swinging door assemblies, as required by 7.2.1.10.1(6), in street floor elevator lobbies, provided that no stairways or door openings from other parts of the building discharge through the lobby and the lobby has no occupancy other than as a means of travel between the elevators and street.

(b) The requirement of 7.2.1.10.1(6) shall not apply to existing revolving door assemblies where the number of revolving door assemblies does not exceed the number of swinging door assemblies within 20 ft (6100 mm) of the revolving door.

7.2.1.10.2 Where permitted in Chapters 11 through 43, revolving door assemblies shall be permitted as a component in a means of egress, provided that all of the following criteria are met:

(1) Revolving door openings shall not be given credit for more than 50 percent of the required egress capacity.

(2) Each revolving door opening shall not be credited with more than a 50-person capacity or, if of not less than a 9 ft (2745 mm) diameter, a revolving door assembly shall be permitted egress capacity based on the clear opening width provided when collapsed into a book-fold position.

(3) Revolving door wings shall be capable of being collapsed into a book-fold position when a force not exceeding 130 lbf (580 N) is applied to the wings within 3 in. (75 mm) of the outer edge.

The requirement of 7.2.1.10.3 shall not apply to revolving door assemblies, provided that the collapsing force is reduced to a force not to exceed 130 lbf (580 N) under all of the following conditions:

(1) Power failure, or removal of power to the device holding the wings in position

(2) Actuation of the automatic sprinkler system, where such a system is provided

(3) Actuation of a smoke detection system that is installed to provide coverage in all areas within the building that are within 75 ft (23 m) of the revolving door assemblies

(4) Actuation of a clearly identified manual control switch in an approved location that reduces the holding force to a force not to exceed 130 lbf (580 N)

7.2.1.10.4 The requirement of 7.2.1.10.3 shall not apply to revolving door assemblies, provided that such turnstiles meet all of the following criteria:

(1) They freewheel in the egress direction when primary power is lost, and freewheel in the direction of egress travel upon manual release by an employee assigned in the area.

(2) They are not given credit for more than 50 percent of the required egress width.

(3) They are not in excess of 39 in. (990 mm) in height and have a clear width of not less than 16½ in. (420 mm).

7.2.1.14 Horizontal-Sliding Door Assemblies. Horizontal-sliding door assemblies shall be permitted in means of egress, provided that all of the following criteria are met:

(1) The door leaf is readily operable from either side without special knowledge or effort.

(2) The force that, when applied to the operating device in the direction of egress, is required to operate the door leaf is not more than 15 lbf (67 N).

(3) The force required to operate the door leaf in the direction of travel is not more than 30 lbf (133 N) to set the leaf in motion and is not more than 15 lbf (67 N) to close the leaf or open it to the minimum required width.

(4) The door leaf is operable using a force of not more than 50 lbf (222 N) when a force of 250 lbf (1100 N) is applied perpendicularly to the leaf adjacent to the operating device, unless the door opening is an existing horizontal-sliding exit access door assembly serving an area with an occupant load of fewer than 50.

(5) The door assembly complies with the fire protection rating, if required, and, where rated, is self-closing or automatic-closing by means of smoke detection in accordance with 7.2.1.8 and is installed in accordance with NFPA 80.

Spiral stairs shall be permitted, provided that all of the following criteria are met:

(1) Riser heights shall not exceed 7 in. (180 mm).

(2) The stairway shall have a tread depth of not less than 11 in. (280 mm) for a portion of the stairway width sufficient to provide egress capacity for the occupant load served in accordance with 7.3.3.1.

(3) At the outer side of the stairway, an additional 10½ in. (265 mm) of width shall be provided clear to the other handrail, and this width shall not be included as part of the required egress capacity.
(4) Handrails complying with 7.2.2.4 shall be provided on both sides of the spiral stairway.
(5) The inner handrail shall be located within 24 in. (610 mm), measured horizontally, of the point where a tread depth of not less than 11 in. (280 mm) is provided.
(6) The turn of the stairway shall be such that the outer handrail is at the right side of descending users.

7.2.2.2.3 Where the occupant load served does not exceed three, spiral stairs shall be permitted, provided that all of the following criteria are met:
(1) The clear width of the stairs shall be not less than 26 in. (660 mm).
(2) The height of risers shall not exceed 9½ in. (240 mm).
(3) The headroom shall be not less than 6 ft 6 in. (1980 mm).
(4) Treads shall have a depth not less than 7½ in. (190 mm) at a point 12 in. (305 mm) from the narrower edge.
(5) All treads shall be identical.
(6) Handrails shall be provided on both sides of the stairway.

7.2.2.4.1.2 In addition to the handrails required at the sides of stairs by 7.2.2.4.1.1, both of the following provisions shall apply:
(1) For new stairs, handrails shall be provided within 30 in. (760 mm) of all portions of the required egress width.
(2) For existing stairs, handrails shall meet the following criteria:
   (a) They shall be provided within 44 in. (1120 mm) of all portions of the required egress width.
   (b) Such stairs shall not have their egress capacity adjusted to a higher occupant load than permitted by the capacity factor in Table 7.3.3.1 if the stair’s clear width between handrails exceeds 60 in. (1525 mm).

7.2.2.4.4.8 Handrail brackets or balusters attached to the bottom surface of the handrail shall not be considered to be obstructions to graspability, provided that both of the following criteria are met:
(1) They do not project horizontally beyond the sides of the handrail within 1½ in. (38 mm) of the bottom of the handrail and provided that, for each additional ½ in. (13 mm) of handrail perimeter dimension greater than 4 in. (100 mm), the vertical clearance dimension of 1 ½ in. (38 mm) is reduced by in. (3.2 mm).
(2) They have edges with a radius of not less than 0.01 in. (0.25 mm).

7.2.2.5.3.2 Enclosed, usable space shall be permitted under stairs, provided both of the following criteria are met:
(1) The space shall be separated from the stair enclosure by the same fire resistance as the exit enclosure.
(2) Entrance to the enclosed, usable space shall not be from within the stair enclosure. (See also 7.1.3.2.3.)

7.2.2.5.4.2 Wherever an enclosed stair requires travel in an upward direction to reach the level of exit discharge, special signs with directional indicators showing the direction to the level of exit discharge shall be provided at each floor level landing from which upward direction of travel is required, unless otherwise provided in 7.2.2.5.4.2(A) and 7.2.2.5.4.2(B), and both of the following also shall apply:
(1) Such signage shall comply with 7.10.8.1 and 7.10.8.2.
(2) Such signage shall be visible when the door leaf is in the open or closed position.
   (A) The requirement of 7.2.2.5.4.2 shall not apply where signs required by 7.2.2.5.4.1 are provided.
   (B) The requirement of 7.2.2.5.4.2 shall not apply to stairs extending not more than one story below the level of exit discharge where the exit discharge is clearly obvious.

7.2.2.5.4.3* Stairway Tread Marking. Where new contrasting marking is applied to stairs, such marking shall comply all of the following:
(1) The marking shall include a continuous strip as a coating on, or as a material integral with, the full width of the leading edge of each tread.
(2) The marking shall include a continuous strip as a coating on, or as a material integral with, the full width of the leading edge of each landing nosing.
(3) The marking strip width, measured horizontally from the leading vertical edge of the nosing, shall be consistent at all nosings.
(4) The marking strip width shall be 1 in. to 2 in. (25 mm to 51 mm).

7.2.2.5.5.1 Exit Stair Treads. Exit stair treads shall incorporate a marking stripe that is applied as a paint/coating or be a material that is integral with the nosing of each step. The marking stripe shall be installed along the horizontal leading edge of the step and shall extend the full width of the step. The marking stripe shall also meet all of the following requirements:
(1) The marking stripe shall be not more than ½ in. (13 mm) from the leading edge of each step and shall not overlap the leading edge of the step by more than ½ in. (13 mm) down the vertical face of the step.
(2) The marking stripe shall have a minimum horizontal width of 1 in. (25 mm) and a maximum width of 2 in. (51 mm).
(3) The dimensions and placement of the marking stripe shall be uniform and consistent on each step throughout the exit enclosure.
(4) Surface-applied marking stripes using adhesive-backed tapes shall not be used.

7.2.2.5.5.3 Exit Stair Handrails. All handrails and handrail extensions shall be marked with a solid and continuous
marking stripe and meet all of the following requirements:

1. The marking stripe shall be applied to the upper surface of the handrail or be a material integral with the upper surface of the handrail for the entire length of the handrail, including extensions.
2. The marking stripe shall have a minimum horizontal width of 1 in. (25 mm).
3. The dimensions and placement of the marking stripe shall be uniform and consistent on each handrail throughout the exit enclosure.

7.2.2.5.4 Perimeter Demarcation Marking. Stair landings, exit passageways, and other parts of the floor areas within the exit enclosure shall be provided with a solid and continuous perimeter demarcation marking stripe on the floor. The marking stripe shall also meet all of the following requirements:

1. The marking stripe shall have a minimum horizontal width of 1 in. (25 mm) and a maximum width of 2 in. (51 mm), with interruptions not exceeding 4 in. (100 mm).
2. The marking stripe shall be applied within 2 in. (51 mm) of the wall.
3. The marking stripe shall continue in front of all door openings swinging into the exit enclosure. However, the marking stripe shall not be applied in front of door openings discharging from the exit enclosure.
4. The dimensions and placement of the perimeter demarcation marking stripe shall be uniform and consistent throughout the exit enclosure.
5. Surface-applied marking stripes using adhesive-backed tapes shall not be used.

7.2.2.5.6 Doors Serving Exit Enclosure. All doors serving the exit enclosure that swing out from the enclosure in the direction of egress travel shall be provided with a marking stripe on the top and sides of the door(s) frame(s). The marking stripe shall also meet all of the following requirements:

1. The marking stripe shall have a minimum horizontal width of 1 in. (25 mm) and a maximum width of 2 in. (51 mm).
2. Gaps shall be permitted in the continuity of door frame markings where a line is fitted into a corner or bend, but shall be as small as practicable, and in no case shall gaps be greater than 1 in. (25 mm).
3. Where the door molding does not provide enough flat surface on which to locate the marking stripe, the marking stripe shall be located on the wall surrounding the frame.
4. The dimensions and placement of the marking stripe shall be uniform and consistent on all doors in the exit enclosure.

7.2.2.5.7 Door Hardware Marking. The door hardware for the doors serving the exit enclosure that swing out from the enclosure in the direction of egress travel shall be provided with a marking stripe. The marking stripe shall also meet the following requirements:

1. The door hardware necessary to release the latch shall be outlined with a marking stripe having a minimum horizontal width of 1 in. (25 mm).
2. Where panic hardware is installed, both of the following criteria shall be met:
   a. The marking stripe shall have a minimum horizontal width of 1 in. (25 mm) and be applied to the entire length of the actuating bar or touch pad.
   b. The placement of the marking stripe shall not interfere with viewing of any instructions on the actuating bar or touch pad.

7.2.2.5.8 Emergency Exit Symbol. An emergency exit symbol with a luminescent background shall be applied on all doors serving the exit enclosure that swing out from the enclosure in the direction of egress travel. The emergency exit symbol shall also meet all of the following requirements:

1. The emergency exit symbol shall meet the requirements of NFPA 170, Standard for Fire Safety and Emergency Symbols.
2. The emergency exit symbol applied on the door shall be not higher than 18 in. (455 mm) above the finished floor.

7.2.2.6 Roof construction required by 7.2.2.6.3.1 shall meet both of the following criteria:

1. It shall provide protection beneath the stairs.
2. It shall extend horizontally to each side of the stair for not less than 10 ft (3050 mm).

7.2.3.7 Natural Ventilation. Smokeproof enclosures using natural ventilation shall comply with 7.2.3.3 and all of the following:

1. Where access to the enclosure is by means of an open exterior balcony, the door assembly to the enclosure shall have a minimum ½-hour fire protection rating and shall be self-closing or shall be automatic-closing by actuation of a smoke detector.
2. Openings adjacent to the exterior balcony specified in 7.2.3.7(1) shall be protected in accordance with 7.2.2.6.4.
3. Every vestibule shall have a net area of not less than 16 ft² (1.5 m²) of opening in an exterior wall facing an exterior court, yard, or public space not less than 20 ft (6100 mm) in width.
4. Every vestibule shall have a minimum dimension of not less than the required width of the corridor leading to it and a dimension of not less than 6 ft (1830 mm) in the direction of travel.

7.2.4.3.3 Where a fire barrier provides a horizontal exit in any story of a building, such fire barrier shall not be required
on other stories, provided that all of the following criteria are met:

1. The stories on which the fire barrier is omitted are separated from the story with the horizontal exit by construction having a fire resistance rating at least equal to that of the horizontal exit fire barrier.
2. Vertical openings between the story with the horizontal exit and the open fire area story are enclosed with construction having a fire resistance rating at least equal to that of the horizontal exit fire barrier.
3. All required exits, other than horizontal exits, discharge directly to the outside.

### 7.2.5.2 Dimensional Criteria

#### (a) The maximum slope or maximum rise for a single ramp run shall not apply to ramps providing access to vehicles, vessels, mobile structures, and aircraft.

#### (b) The maximum slope or maximum height between landings for a single ramp run shall not apply to ramps providing access to vehicles, vessels, mobile structures, and aircraft.

#### (c) Approved existing ramps with slopes not steeper than 1 in 6 shall be permitted to remain in use.

#### (d) Existing ramps with slopes not steeper than 1 in 10 shall not be required to be provided with landings.

### 7.2.11.2 Alternating tread devices shall comply with all of the following:

1. Handrails shall be provided on both sides of alternating tread devices in accordance with 7.2.2.4.4, except as provided in 7.2.11.3.
2. The clear width between handrails shall be not less than 17 in. (430 mm) and not more than 24 in. (610 mm).
3. Headroom shall be not less than 6 ft 8 in. (2030 mm).
4. The angle of the device shall be between 50 degrees and 68 degrees to horizontal.
5. The height of the riser shall not exceed 9½ in. (240 mm).
6. Treads shall have a projected tread depth of not less than 5 in. (145 mm), measured in accordance with 7.2.2, with each tread providing 9½ in. (240 mm) of depth, including tread overlap.
7. A distance of not less than 6 in. (150 mm) shall be provided between the alternating tread device handrail and any other object.
8. The initial tread of the alternating tread device shall begin at the same elevation as the platform, landing, or floor surface.
9. The alternating treads shall not be laterally separated by a distance of more than 2 in. (51 mm).
10. The occupant load served shall not exceed three.

### 7.2.12.1.2 An area of refuge used as part of a required accessible means of egress in accordance with 7.5.4 in other than a building that is protected throughout by an approved, supervised automatic sprinkler system in accordance with Section 9.7 shall meet both of the following criteria:

1. The area of refuge shall meet the general requirements of Section 7.1.
2. The area of refuge shall meet the requirements of 7.2.12.2 and 7.2.12.3.

### 7.2.12.2.4* Where an elevator provides access from an area of refuge to a public way that is in accordance with

#### 7.2.12.2.2 all of the following criteria shall be met:

1. The elevator shall be approved for fire fighters' emergency operations as provided in ASME A17.1/CSA B44, Safety Code for Elevators and Escalators.
2. The power supply shall be protected against interruption from fire occurring within the building but outside the area of refuge.
3. The elevator shall be located in a shaft system meeting the requirements for smokeproof enclosures in accordance with 7.2.3, unless otherwise provided in 7.2.12.2.4.1 and 7.2.12.2.4.2.
4. The elevator shall comply with the requirements of Section 9.4 and 7.2.13 shall be permitted to be used as a second means of egress from a tower, as defined in 3.3.262, provided that all of the following criteria are met:
   1. The tower and any attached structure shall be protected throughout by an approved, supervised automatic sprinkler system in accordance with Section 9.7.
   2. The tower shall be subject to occupancy not to exceed 90 persons.
   3. Primary egress discharges shall be directly to the outside.
   4. No high hazard content areas shall exist in the tower or attached structure.
   5. One hundred percent of the egress capacity shall be provided independent of the elevators.
   6. An evacuation plan that specifically includes the elevator shall be implemented, and staff personnel shall be trained in operations and procedures for elevator emergency use in normal operating mode prior to fire fighter recall.
(7) The tower shall not be used by the general public.

7.3.4.1 The width of any means of egress, unless otherwise provided in 7.3.4.1.1 through 7.3.4.1.3, shall be as follows:

(1) Not less than that required for a given egress component in this chapter or Chapters 11 through 43
(2) Not less than 36 in. (915 mm) where another part of this chapter and Chapters 11 through 43 do not specify a minimum width.

7.5.1.2.1 Approved existing corridors that require passage through a room to access an exit shall be permitted to continue to be used, provided that all of the following criteria are met:

(1) The path of travel is marked in accordance with Section 7.10.
(2) Doors to such rooms comply with 7.2.1.
(3) Such arrangement is not prohibited by the applicable occupancy chapter.

7.5.1.4.2* Existing interlocking or scissor stairs shall be permitted to be considered separate exits, provided that they meet all of the following criteria:

(1) They are enclosed in accordance with 7.1.3.2.
(2) They are separated from each other by 2-hour fire resistance-rated noncombustible construction.
(3) No protected or unprotected penetrations or communicating openings exist between the stair enclosures.

7.5.2.2.2 Curtains shall be permitted across means of egress openings in tent walls, provided that all of the following criteria are met:

(1) They are distinctly marked in contrast to the tent wall so as to be recognizable as means of egress.
(2) They are installed across an opening that is at least 6 ft (1830 mm) in width.
(3) They are hung from slide rings or equivalent hardware so as to be readily moved to the side to create an unobstructed opening in the tent wall that is of the minimum width required for door openings.

7.7.6 Discharge to Roofs. Where approved by the authority having jurisdiction, exits shall be permitted to discharge to roofs or other sections of the building or an adjoining building where all of the following criteria are met:

(1) The roof/ceiling assembly construction has a fire resistance rating not less than that required for the exit enclosure.
(2) A continuous and safe means of egress from the roof is available.

7.10.1.3 Exit Door Tactile Signage. Tactile signage shall be provided to meet all of the following criteria, unless otherwise provided in 7.10.1.4:

(1) Tactile signage shall be located at each exit door requiring an exit sign.
(2) Tactile signage shall read as follows: EXIT.

7.10.6.2.1 Directional indicators, unless otherwise provided in 7.10.6.2.2, shall comply with all of the following:

(1) The directional indicator shall be located outside of the EXIT legend, not less than 3/8 in. (9.5 mm) from any letter.
(2) The directional indicator shall be of a chevron type, as shown in Figure 7.10.6.2.1.
(3) The directional indicator shall be identifiable as a directional indicator at a distance of 40 ft (12 m).
(4) A directional indicator larger than the minimum established for compliance with 7.10.6.2.1(3) shall be proportionately increased in height, width, and stroke.
(5) The directional indicator shall be located at the end of the sign for the direction indicated.

7.10.8.4 Elevator Signs. Elevators that are a part of a means of egress (see 7.2.13.1) shall have both of the following signs with a minimum letter height of 1 in. (16 mm) posted in every elevator lobby:

(1)* Signs that indicate that the elevator can be used for egress, including any restrictions on use
(2)* Signs that indicate the operational status of elevators

Substantiation: The SAF-MEA committee was directed by the Technical Correlating Committee to review all Chapter 7 provisions that are of the list-type format and to revise, as needed, to clearly indicate whether the items in the lists apply to "all of", "one of", or "any of" the items. The revisions shown in the Recommendation field clarify intent.

Committee Meeting Action: Accept
Number Eligible to Vote: 28
Ballot Results: Affirmative: 27
Ballot Not Returned: 1 McMahon, C.
101-67  Log #177  SAF-MEA
(7.1.1.1 and A.7.1.1.1)  
Final Action: Reject

Submitter: Michael A. Crowley, Rolf Jensen & Assoc., Inc
Recommendation:  Add a new Section and Annex note:

7.1.1.1* Normally unoccupied building service equipment support areas that are secured from unauthorized access and are used exclusively for routing of electrical, mechanical, or plumbing equipment shall not be required to comply with the provisions of Chapter 7.

A.7.1.1.1 Interstitial spaces, crawl spaces, tunnels, attics, service vaults, horizontal and vertical utility chases in large industrial buildings and areas used for routing of piping, ducts, and wiring must provide a reasonable level of access for occasional maintenance workers but do not warrant compliance with the comprehensive egress requirements of Chapter 7. Minimum access in these cases is governed by electrical and mechanical codes; Industrial Equipment Access; and the Occupational Safety and Health Administration (OSHA) for facilities in the United States. Utility chases governed by this paragraph might involve tunnels or large open spaces located above or below occupied floors; however, such spaces differ from mechanical equipment rooms, boiler rooms, and furnace rooms, based on the anticipated frequency of use by maintenance workers. Portions of utility chases where the anticipated presence of maintenance workers is routine are not intended to be included by this paragraph.

Substantiation:  This issue of how to design life safety for these spaces has been unclear for years. Chapter 40 has this allowance for at least 2 cycles. These changes are making the allowance better exposed to the user of the Code. While this allowance does not give hard area or occupant load numbers, it does give users and enforcers a starting point to discuss these areas of the building.

Committee Meeting Action:  Reject
Committee Statement:  The proposed text would provide blanket exemption from the provisions of Chapter 7 for anything that is considered a normally unoccupied building service equipment support area. It sets no limits and the submitter has not provided adequate substantiation for so drastic a change. However, the submitter should see the committee action on Proposal 101-160 which should meet some of his intent.

Number Eligible to Vote:  28
Ballot Results:  Affirmative: 27
Ballot Not Returned:  1 McMahon, C.

101-68  Log #322  SAF-MEA
(7.1.3.2.1(1))  
Final Action: Accept in Principle

Submitter: Ignatius Kapalczynski, CT Office of State Fire Marshal
Recommendation:  New/Revise text to read as follows:

7.1.3.2.1 (1) The separation shall have a minimum 1-hour fire resistance rating where the exit connects three or fewer stories. The separation shall be supported by construction having not less than a 1-hour fire resistance rating.

Substantiation:  Submitted for consistency with 5000 11.1.3.2.1.1
This is not original material; its reference/source is as follows:
2009 5000 Building and Constructions Safety Code 11.1.3.2.1.1
Committee Meeting Action:  Accept in Principle
Revise text to read as follows:

7.1.3.2.1 Where...following:
(1) The separation shall have a minimum 1-hour fire resistance rating where the exit connects three or fewer stories. The separation, other than an existing separation, shall be supported by construction having not less than a 1-hour fire resistance rating.

Committee Statement:  The Committee Meeting Action does what the submitter requested but adds an exemption for existing conditions so as not to unfairly throw a previously compliant situation into noncompliance.

Number Eligible to Vote:  28
Ballot Results:  Affirmative: 27
Ballot Not Returned:  1 McMahon, C.
Technical Committee on Means of Egress,

Add a new item (11) as follows:

7.1.3.2.1 Where this Code requires an exit to be separated from other parts of the building, the separating construction shall meet the requirements of Section 8.2 and the following:

[for items (1) through (10), no change]

(11) Membrane penetrations shall be permitted on the exit access side of the exit enclosure. Such penetrations shall be protected in accordance with 8.3.5.6.

Substantiation: The purpose of 7.1.3.2.1 is to limit through-penetrations into an exit enclosure; however, membrane penetrations should be permitted on the outside of the exit enclosure. As currently written, a fire alarm system manual pull station next to a door into the stair, fire hose cabinets, fire extinguisher cabinets, request-to-exit devices related to access control locks, notification appliances, etc., are not permitted on the outside of the exit enclosure. This exception is needed to clarify the intent of 7.1.3.2.1.

Committee Meeting Action: Accept

Number Eligible to Vote: 28
Ballot Results: Affirmative: 27
Ballot Not Returned: 1 McMahon, C.

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Ignatius Kapalczynski, CT Office of State Fire Marshal

New text to read as follows:

7.1.3.2.1 (8) (d) Existing openings in exit enclosures to normally unoccupied attics and basements shall be permitted when:

(i) Provided with fire resistance rated door assemblies and either;
(ii) Detection throughout the attic or basement with building wide notification or;
(iii) Automatic sprinklers according to 9.7 throughout the attic or basement.

Substantiation: Common modification for frequently occurring code deficiency in existing buildings that eliminates the use of "vestibules" for achieving "literal" compliance versus functional compliance.

This is not original material; its reference/source is as follows:


Committee Meeting Action: Reject

Committee Statement: The proposed exemption sets no limitations on basements, for example, with high fire loading as might occur with combustible storage. The introduction of a door ratings criterion would cause confusion with other exemptions in 7.1.3.2.1 as the other exemptions address the rated wall and rely on the corresponding door provisions to come from Table 8.3.4.2. It is unclear whether the submitter intends sprinklers to be in all attics and basements or just in those that make use of the proposed exemption. The submitter has not provided technical justification for the change and simply states that the conditions described are a common modification.

Number Eligible to Vote: 28
Ballot Results: Affirmative: 27
Ballot Not Returned: 1 McMahon, C.
7.1.9.1 Security Devices. Any security device or system that emits any medium that could obscure a means of egress in any building, structure or premises shall be prohibited.

Consistent with International Building Code requirement. Prohibits security systems that generate smoke, fog, or gas to incapacitate intruders and the appearance of a fire emergency within the premises.

This is not original material; its reference/source is as follows:
Connecticut State Fire Safety Code

Committee Meeting Action: Reject
Committee Statement: The subject is a fire code issue.
Number Eligible to Vote: 28
Ballot Results: Affirmative: 27
Ballot Not Returned: 1 McMahon, C.

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Relocate 7.1.10 from Chapter 7 to Chapter 4 as new 4.5.9. Renumber Chapter 7 provisions as appropriate. The new 4.5.9 would be as noted below: Renumber annex notes as appropriate.

Means of Egress Reliability.
4.5.9.1* General. Means of egress shall be continuously maintained free of all obstructions or impediments to full instant use in the case of fire or other emergency.

4.5.9.2 Furnishings and Decorations in Means of Egress. No furnishings, decorations, or other objects shall obstruct exits or their access thereto, egress therefrom, or visibility thereof.

4.5.9.2.2 No obstruction by railings, barriers, or gates shall divide the means of egress into sections appurtenant to individual rooms, apartments, or other occupied spaces. Where the authority having jurisdiction finds the required path of travel to be obstructed by furniture or other movable objects, the authority shall be permitted to require that such objects be secured out of the way or shall be permitted to require that railings or other permanent barriers be installed to protect the path of travel against encroachment.

4.5.9.2.3 Mirrors shall not be placed on exit door leaves. Mirrors shall not be placed in or adjacent to any exit in such a manner as to confuse the direction of egress."

Substantiation: As a long time user of the LSC, I believe that the provisions of current 7.1.10 are fundamental provisions and need to be relocated as suggested. The provisions would then be more properly located in support of other fundamentals. They would also be easier to locate at the front of the document than much later in Chapter 7. The proposal is intended to make the LSC just a little more user friendly to AHJ’s in the application of the LSC.

Committee Meeting Action: Reject
Committee Statement: The subject is a means of egress issue that the code user would expect to find in Chapter 7, not in Chapter 4. Much of the egress provisions of Chapter 7 are “fundamental,” but egress has its own chapter. Note that 4.5.3.2 already addresses the issue generically.

Number Eligible to Vote: 28
Ballot Results: Affirmative: 27
Ballot Not Returned: 1 McMahon, C.
Add new text as follows:

No furnishings, decorations, or other objects shall obstruct exits or their access thereto, egress therefrom, or visibility thereof.

Exception: In Hospitals and Nursing Homes, devices used for the aid of occupant movement shall be allowed in the means of egress provided:

1) The number of devices is equal to or less than the number of occupants at any given time
2) The devices do not encroach on the required width of the means of egress

Revise text to read as follows:

No obstruction by railings, barriers or gates shall divide the means of egress into sections appurtenant to individual rooms, apartments or other occupied spaces. Where the authority having jurisdiction finds the required path of travel to be obstructed by furniture or other movable objects not otherwise permitted by this code, the authority shall be permitted to require corrective action that will result in an unobstructed path of egress that such objects be secured out of the way or shall be permitted to require that railings or other permanent barriers be installed to protect the path of travel against encroachment.

The current provisions of this section allow the authority having jurisdiction to require certain corrective actions, some of them specific ("securing objects out of the way, installing railings or other permanent barriers, etc."); if the authority finds obstructions by movable objects in the required path of egress. This does not allow the operator the latitude or opportunity to develop creative solutions that respond to the authority's concerns, but are also in keeping with the operator's mission or philosophy of care. The proposed language leaves absolute authority with the AHJ, but allows the operator the chance to develop solutions that are appropriate both from a life safety standpoint, from a care standpoint and from a quality of life standpoint. Further, adding the words "not otherwise permitted by this code" responds to the concepts being promoted by other proposals to Sections 18.2.3.5 and 19.2.3.4 which will allow movable objects in corridors as long as they are not within the required egress width or are easily movable by one person in the event of an emergency.

Note: Supporting material is available for review at NFPA Headquarters.

101-74 Log #325 SAF-MEA
(7.2.1.1.3.2)
Final Action: Reject

Submitter: Ignatius Kapalczynski, CT Office of State Fire Marshal
Recommendation: New text to read as follows:
7.2.1.1.3.2 "health care occupancies and locked elevator lobbies in existing buildings according to 7.2.1.6.3."
Substantiation: Adds the new locked area (elevator lobbies) to the ones listed by this requirement.
Committee Meeting Action: Reject
Committee Statement: The paragraph that the submitter asks be revised applies to non-occupied buildings, but the elevator provisions addressed in 7.2.1.6.3 are for use in occupied buildings.
Number Eligible to Vote: 28
Ballot Results: Affirmative: 27
Ballot Not Returned: 1 McMahon, C.

101-75 Log #273 SAF-MEA
(7.2.1.5)
Final Action: Accept in Principle

Submitter: Michael Tierney, Builders Hardware Manufacturers Association
Recommendation: Revise text to read as follows:
7.2.1.5 Locks, Latches, and Alarm Devices.
7.2.1.5.1 Door leaves shall be arranged to be opened readily from the egress side whenever the building is occupied.
7.2.1.5.2 The requirement of 7.2.1.5.1 shall not apply to door leaves of fire door assemblies after exposure to elevated temperature disables the latch release mechanism in accordance with its listing based on laboratory fire test procedures.
7.2.1.5.3 7.2.1.5.2 Locks, if provided, shall not require the use of a key, a tool, or special knowledge or effort for operation from the egress side.
7.2.1.5.4 The requirements of 7.2.1.5.1 and 7.2.1.5.3 7.2.1.5.2 shall not apply where otherwise provided in Chapters 18 through 23.
A.7.2.1.5.2 Some fire door assemblies are listed for use with fire pins or fusible links that render the door leaf release inoperative upon exposure to elevated temperature during a fire. The door leaf release mechanism is made inoperative where conditions in the vicinity of the door opening become untenable for human occupancy and such door opening no longer provides a viable egress path.
Substantiation: To clarify conditions under which latching devices shall be permitted to prevent door operation.
Committee Meeting Action: Accept in Principle
Revise text to read as follows:
7.2.1.5 Locks, Latches, and Alarm Devices.
7.2.1.5.1 Door leaves shall be arranged to be opened readily from the egress side whenever the building is occupied.
7.2.1.5.2 The requirement of 7.2.1.5.1 shall not apply to door leaves of listed fire door assemblies after exposure to elevated temperature in accordance with the listing based on laboratory fire test procedures.
7.2.1.5.3 7.2.1.5.2 Locks, if provided, shall not require the use of a key, a tool, or special knowledge or effort for operation from the egress side.
7.2.1.5.4 The requirements of 7.2.1.5.1 and 7.2.1.5.3 7.2.1.5.2 shall not apply where otherwise provided in Chapters 18 through 23.
A.7.2.1.5.2 Some fire door assemblies are listed for use with fire pins or fusible links that render the door leaf release inoperative upon exposure to elevated temperature during a fire. The door leaf release mechanism is made inoperative where conditions in the vicinity of the door opening become untenable for human occupancy and such door opening no longer provides a viable egress path.
Committee Statement: The Committee Meeting Action does what the submitter requested but reworks the text for clarity.
Number Eligible to Vote: 28
Ballot Results: Affirmative: 27
Ballot Not Returned: 1 McMahon, C.

Printed on 11/16/2009
7.2.1.5.5 Electrically Controlled Egress Door Assemblies. Door assemblies in the means of egress shall be permitted to be electrically locked if equipped with approved hardware, listed in accordance with UL 294, *Standard for Access Control System Units*, hardware that incorporates a built-in switch, provided that the following conditions are met:

1. The hardware for occupant release of the lock is affixed to the door leaf.
2. The hardware has an obvious method of operation that is readily operated in the direction of egress.
3. The hardware is capable of being operated with one hand in the direction of egress.
4. Operation of the hardware interrupts the power supply directly to the electric lock and unlocks the door assembly in the direction of egress.
5. Loss of power to the listed releasing hardware automatically unlocks the door assembly in the direction of egress.
6. Hardware for new installations is listed in accordance with UL 294, *Standard for Access Control System Units*.

Committee Statement: The Committee Meeting Action does what the submitter requested but reworks the text for clarity. The action also applies the UL 294 listing requirement to new installations as it would be unfair to impose such requirement on existing installations without substantiation that such listing is needed on a retroactive basis.

Number Eligible to Vote: 28
Ballot Results: Affirmative: 27
Ballot Not Returned: 1 McMahon, C.
101-77 Log #282 SAF-MEA
(7.2.1.5.5(5) and A.7.2.1.5.5(5))
Final Action: Accept in Principle in Part

Submitter: Joshua Elvove, U.S. General Services Administration
Recommendation: Revise text to read as follows:
7.2.1.5.5(5)* Loss of power to the listed hardware that incorporates a built-in switch automatically unlocks the door assembly in the direction of egress.

A.7.2.1.5.5(5) Separate power supplies may be provided to the electronic lock and the built-in switch. In this case, it is critical that the lock be arranged to release upon loss of power to the switch in order to ensure occupants can egress in the event of a power failure.

Substantiation: 7.2.1.5.5 has been modified to make it perfectly clear, that this provision applies to the switch on the door hardware, and not just to the locking mechanism. The annex has been provided to inform users why this provision is necessary and why it’s critical that the switch be arranged to open upon loss of power.

Committee Meeting Action: Accept in Principle in Part
Add annex text as follows:
7.2.1.5.5(5)* Loss of power...

A.7.2.1.5.5(5) Separate power supplies may be provided to the electronic lock and the releasing hardware. In this case, it is critical that the lock be arranged to release upon loss of power to the releasing hardware to ensure occupants can egress in the event of a power failure.

Committee Statement: The Committee Meeting Action does what the submitter requested with respect to the annex but makes additional changes for clarity as the "switch" is no longer mentioned in 7.2.1.5.5 based on the action taken on Proposal 101-76. The submitter’s change to 7.2.1.5.5(5) is unnecessary given the change being made via the action on Proposal 101-76. The changes made via the referenced proposal should meet the submitter’s intent.

Number Eligible to Vote: 28
Ballot Results: Affirmative: 27
Ballot Not Returned: 1 McMahon, C.

101-78 Log #326 SAF-MEA
(7.2.1.5.7 (New))
Final Action: Reject

Submitter: Ignatius Kapalczynski, CT Office of State Fire Marshal
Recommendation: New text to read as follows:
7.2.1.5.7 Stair enclosure doors automatically released by the initiation of the building fire alarm system to allow reentry shall not automatically re-lock upon reset of the fire alarm system unless:
(i) Door locking is manually reset at each door by key or tool from the stairway side or;
(ii) Manual fire alarm pull stations are provided within the stairwell to allow trapped occupants to re-initiate the fire alarm condition to release the doors or;
(iii) Doors unlocked by means of remote control under emergency conditions shall not automatically relock when closed, unless specific manual action is taken at the remote control location to enable doors to relock.
(iv) A sign stating that resetting of the fire alarm system will cause stairwell doors to be relocked shall be provided at the fire alarm control panel.

Substantiation: To prevent occupants from getting trapped in stairwells prior to exiting by a reset of the fire alarm system.

This is not original material; its reference/source is as follows:
Some of the specific requirements for unlocking come from other sections of this code.

Committee Meeting Action: Reject
Committee Statement: Re-locking upon reset means that the emergency is over, so occupants "trapped" within the stair enclosure can travel within the stair to the level of exit discharge. As written, the submitter’s text would require all facilities to release the door where 7.2.1.5.7(2) is used and such requirement is not technically justified. If building staff attempts to reset the system when an initiating device is still in alarm, it will not reset. The issue raised is a non-issue.
Number Eligible to Vote: 28
Ballot Results: Affirmative: 27
Ballot Not Returned: 1 McMahon, C.
Submitter: Technical Committee on Means of Egress,
Recommendation: Revise text to read as follows:

7.2.1.5.7.2 The requirements..."

(2) Existing installations in high-rise buildings as permitted in Chapters 11 through 43 where the occupancy is within a building protected throughout by an approved, supervised automatic sprinkler system in accordance with 9.7.1

Substantiation: Clarification that applicable portions of Section 9.7 apply in addition to 9.7.1. For example, the requirement for supervision is meant to lead the user to 9.7.2. The change was made in response to a request from the Technical Correlating Committee that all occurrences of supervision for sprinkler systems be made clear.

Committee Meeting Action: Accept
Number Eligible to Vote: 28
Ballot Results: Affirmative: 27
Ballot Not Returned: 1 McMahon, C.

Submitter: Technical Committee on Means of Egress,
Recommendation: Revise text to read as follows:

7.2.1.5.9.1 The releasing mechanism for any latch, other than for existing installations, shall be located as follows:

(1) Not less than 34 in. (865 mm) above the finished floor for other than existing installations; and
(2) Not more than 48 in. (1220 mm) above the finished floor.

Substantiation: The sentence construction used in 7.2.1.5.9.1 does not clearly reflect intent with respect to existing installations. In editions of the Code through 2000, exemptions were formatted as self-contained exceptions. The applicable exception clearly stated that only the 34-in. (865-mm) minimum mounting height was not applicable to existing installations. The exception did not exempt existing installations from the 48-in. (1220-mm) maximum mounting height. The editorial reformatting that was done in preparation of the 2003 edition of the Code unintentionally confused the issue. This proposal corrects the problem.

Committee Meeting Action: Accept
Number Eligible to Vote: 28
Ballot Results: Affirmative: 27
Ballot Not Returned: 1 McMahon, C.

Comment on Affirmative:
BONISCH, W.: Strike the second 'not' in 7.2.1.5.9.1 92).
Revise/New text to read as follows:

7.2.1.5.9.2 The releasing mechanism shall open the door leaf with not more than one releasing operation, unless otherwise specified in 7.2.1.5.9.3, and 7.2.1.5.9.4 or 7.2.1.5.9.6.

7.2.1.5.9.6 Two releasing operations shall be permitted on doors serving an area having an occupant load not exceeding 10 provided the releasing operation does not require more than one hand.

Substantiation: This will allow a very common arrangement found on doors to rest rooms and individual offices. It is tied into the same occupant load that allows sliding doors, and in some cases roll-up doors. If such doors are allowed, then allowing the release of a lock and separate latch, as long as one does not have to release them both simultaneously, should be allowed.

Committee Meeting Action: Accept in Principle

Revise text to read as follows:

7.2.1.5.9.2 The releasing mechanism shall open the door leaf with not more than one releasing operation, unless otherwise specified in 7.2.1.5.9.3, and 7.2.1.5.9.4 or 7.2.1.5.9.6.

7.2.1.5.9.6 Two releasing operations shall be permitted for existing hardware on a door leaf serving an area having an occupant load not exceeding 3 provided releasing does not require simultaneous operations.

Committee Statement: The Committee Meeting Action does what the submitter requested but reworks the text for clarity.

Number Eligible to Vote: 28

Ballot Results: Affirmative: 26 Negative: 1

Ballot Not Returned: 1 McMahon, C.

Explanation of Negative:

FRABLE, D.: In concept, I agree with the intent of the proposal. However, no substantial has been provided that explains how the occupant load factor of 3 or less was selected or if the door will be readily operable without any special knowledge.

Comment on Affirmative:

LATHROP, J.: I concur with the committee action, but it should be noted that the committee reduced the number of occupants from 10 as it was the consensus of the committee that this should be limited to very small rooms such as individual lavatories and small office areas. The committee also felt that this should be limited to existing hardware as in new installations there is adequate hardware available to meet the basic one operation rule. This does meet the intent of the submitter.

ORLOWSKI, S.: NAHB agrees with the action of the committee that will permit the continued use of an appropriate door hardware that is commonly found throughout existing buildings where the occupant load is not detrimental to the safe evacuation of a space or area.
Submitter: Joshua Elvove, U.S. General Services Administration
Recommendation: Revise text to read as follows:

(2) The door leaves shall unlock in the direction of egress upon actuation …:
(3) The door leaves shall unlock in the direction of egress upon loss of power controlling the lock…
(4)* An irreversible process shall release the lock in the direction of egress within 15 seconds…
(5)* A readily visible, durable sign … that reads as follows shall be located on the door leaf adjacent to the release device in the direction of egress:

Substantiation: Just to be sure that all provisions are applied on the side of the door that is in the direction of egress. Note: this is consistent with existing text used in 7.2.1.6.2 for access control. If the proposed text for this proposal is deemed unwarranted, then consider deleting similar existing text (“in the direction of egress”) from 7.2.1.6.2 for consistency.

Committee Meeting Action: Accept
Number Eligible to Vote: 28
Ballot Results: Affirmative: 27
Ballot Not Returned: 1 McMahon, C.

Comment on Affirmative:
BONISCH, W.: Does this now imply that all doors ‘not in the direction of egress’ are locked?

Submitter: Ignatius Kapalczynski, CT Office of State Fire Marshal
Recommendation: New text to read as follows:

7.2.1.6.1 (6) The egress side of doors equipped with delayed egress locks shall be provided with emergency lighting.

Substantiation: Enables the required sign to be seen and read. Consistency with 5000 11.2.1.6.1.7

This is not original material; its reference is as follows:
5000 - 11.2.1.6.1.7

Committee Meeting Action: Accept in Principle
Add new text to read as follows:
7.2.1.6.1 Delayed …are met:
(6) The egress side of doors equipped with delayed egress locks shall be provided with emergency lighting in accordance with Section 7.9.

Committee Statement: The Committee Meeting Action does what the submitter requested but adds the words “in accordance with Section 7.9” for consistency with other emergency lighting requirements in the chapter. Note that the requirement recommended by the submitter is already part of 7.9.1.1(4). The committee agrees that the text should be part of 7.2.1.6.1 to assist the user.

Number Eligible to Vote: 28
Ballot Results: Affirmative: 27
Ballot Not Returned: 1 McMahon, C.
7.2.1.6.1 (x) The door locks shall have the capability of being unlocked by a signal from the fire command center.

Building code requirement (IBC)

The submitter did not provide technical substantiation for the requested change. Why is the recommended feature needed? Not all buildings have a command center.

Number Eligible to Vote: 28
Ballot Results: Affirmative: 27
Ballot Not Returned: 1 McMahon, C.
7.2.1.6.2 Access-Controlled Egress Door Assemblies. Where permitted in Chapters 11 through 43, door assemblies in the means of egress shall be permitted to be equipped with electronic lock hardware that prevents egress, and will unlock the door in the direction of egress upon detection of an approaching occupant or upon loss of power to the sensor.

1. A sensor shall be provided on the egress side, arranged to detect an occupant approaching and will unlock the door leaves in the direction of egress upon detection of that approaching occupant or upon loss of power to the sensor.

2. Loss of power to the part of the electronic locking access control system that unlocks the door leaves shall automatically unlock the door leaves in the direction of egress travel.

3. Door leaves shall be arranged to unlock in the direction of egress from a manual release device located 40 in. to 48 in. (1015 mm to 1220 mm) vertically above the floor and within 60 in. (1525 mm) of the secured door openings.

4. The manual release device specified in 7.2.1.6.2 (3) shall be readily accessible and clearly identified by a sign that reads as follows: PUSH TO EXIT.

5. When operated, the manual release device shall result in direct interruption of power to the lock-independent of the locking access control system electronics — and the door leaves shall remain unlocked for not less than 30 seconds.

6. Activation of the building fire-protective signaling system, if provided, shall automatically unlock the door leaves in the direction of egress, and the door leaves shall remain unlocked until the fire-protective signaling system has been manually reset.

7. The activation of manual fire alarm boxes that activate the building fire-protective signaling system specified in 7.2.1.6.2 (6) shall not be required to unlock the door leaves.

8. Activation of the building automatic sprinkler or fire detection system, if provided, shall automatically unlock the door leaves in the direction of egress travel, and they shall remain unlocked until the fire-protective signaling system has been manually reset.

A 7.2.1.6.2 [add to existing material] The words “access controlled” in this context were applied many years ago to describe the function of doors being electronically locked from the inside in a way to restrict egress. Methods of securing the door from the outside with access control products is separate from this requirement as long as the egress requirements of this section are not affected.

Substantiation: Further clarification of a section which is often misinterpreted to apply requirements to any door with access control hardware.

Committee Meeting Action: Accept in Principle in Part

Revise text to read as follows:

7.2.1.6.2 Access-Controlled Egress Door Assemblies. Where permitted in Chapters 11 through 43, door assemblies in the means of egress shall be permitted to be equipped with electrical lock hardware that prevents egress, and will unlock the door leaves in the direction of egress.

1. A sensor shall be provided on the egress side, arranged to detect an occupant approaching and will unlock the door leaves in the direction of egress upon detection of that approaching occupant or upon loss of power to the sensor.

2. Loss of power to the part of the access control system that locks the door leaves shall automatically unlock the door leaves in the direction of egress travel.

3. Door leaves shall be arranged to unlock in the direction of egress from a manual release device complying with all of the following criteria:

   (a) The manual release device shall be located 40 in. to 48 in. (1015 mm to 1220 mm) vertically above the floor and within 60 in. (1525 mm) of the secured door openings.

   (b) The manual release device specified in 7.2.1.6.2 (3) shall be readily accessible and clearly identified by a sign that reads as follows: PUSH TO EXIT.

   (c) When operated, the manual release device shall result in direct interruption of power to the lock — independent of the access control locking system electronics — and the door leaves shall remain unlocked for not less than 30 seconds.

   (d) Activation of the building fire-protective signaling system, if provided, shall automatically unlock the door leaves in the direction of egress, and they shall remain unlocked until the fire-protective signaling system has been manually reset.

   (e) The activation of manual fire alarm boxes that activate the building fire-protective signaling system specified in...
7.2.1.6.2(4) shall not be required to unlock the door leaves.

(6) Activation of the building automatic sprinkler or fire detection system, if provided, shall automatically unlock the door leaves in the direction of egress, and the door leaves shall remain unlocked until the fire-protective signaling system has been manually reset.

A.7.2.1.6.2 It is not the intent to require doors that restrict access but comply with 7.2.1.5.9 to comply with the access-controlled egress door provisions of 7.2.1.6.2. The term "access-controlled" was chosen when the requirements of 7.2.1.6.2 were first added to the Code to describe the function where a door is electronically locked from the inside in a way that restricts egress. It is not the Code’s intent to prohibit methods of securing the door in a locked position from the outside with access control products provided that the egress requirements of 7.2.1.6.2 are met.

Committee Statement: The Committee Meeting Action does what the submitter requested with respect to the base paragraph and the combination of items (3) through (5), but reworks the text for clarity. The portions of the submitter’s Recommendation related to the text of items (1) through (3) were not accepted as adequate revision is being accomplished via Proposal 101-84. The actions on this and the referenced proposal should meet the submitter’s intent.

Number Eligible to Vote: 28
Ballot Results: Affirmative: 27
Ballot Not Returned: 1 McMahon, C.

Comment on Affirmative:
BONISCH, W.: Please verify that in 7.2.1.6.2, use of phrase "electrical lock hardware..." is correct.
(1) A sensor shall be provided on the egress side, arranged to detect an occupant approaching door leaves that are arranged to unlock the door(s) in the direction of egress upon detection of an approaching occupant or loss of power to the sensor.

(2) Door leaves shall automatically unlock in the direction of egress upon loss of power to the sensor or to the part of the access control system that locks the door leaves shall automatically unlock the door leaves in the direction of egress.

(3) Door leaves shall be arranged to unlock in the direction of egress from a manual release device located 40 in. to 48 in. (1015 mm to 1220 mm) vertically above the floor and within 60 in. (1525 mm) of the secured door openings on the egress side.

Substantiation: This is basically an editorial revision that does not aim to make any technical changes. Some text from (1) has been deleted as it is superfluous and other text from (1) has been relocated to (2) where more applicable. (2) has been rewritten so it reads similar to (3). “on the egress side” was added to (3) to ensure the sign is appropriately located.

Committee Meeting Action: Accept in Principle

Further revise items (1) through (3) from what is being directed in the Committee Action on Proposal 101-83 so that they read as follows:

(1) A sensor shall be provided on the egress side, arranged to detect an occupant approaching door leaves that are arranged to unlock the door leaf in the direction of egress upon detection of an approaching occupant or loss of power to the sensor.

(2) Door leaves shall automatically unlock in the direction of egress upon loss of power to the sensor or to the part of the access control system that locks the door leaves shall automatically unlock the door leaves in the direction of egress.

(3) Door leaves locks shall be arranged to unlock in the direction of egress from a manual release device complying with all of the following criteria:

(a) The manual release device shall be located on the egress side, 40 in. to 48 in. (1015 mm to 1220 mm) vertically above the floor, and within 60 in. (1525 mm) of the secured door openings.

Committee Statement: The Committee Meeting Action should meet the submitter’s intent. It does what the submitter requested but reworks the text for clarity. See referenced Proposal 101-83.

Number Eligible to Vote: 28
Ballot Results: Affirmative: 27
Ballot Not Returned: 1 McMahon, C.
### 101-85 Log #330 SAF-MEA

**Final Action:** Reject

**Submitter:** Ignatius Kapalczynski, CT Office of State Fire Marshal

**Recommendation:** New text to read as follows:

7.2.1.6.2 Access-Controlled Egress Doors. Where permitted in Chapter 11 through Chapter 43, entrance doors to buildings and tenant spaces in the means of egress shall be permitted to be equipped with an approved entrance and egress access control system, provided that the following criteria are met:

1. One of the following shall be provided:
   a. A sensor on the egress side, arranged to detect an occupant approaching doors that are arranged to unlock in the direction of egress upon detection of an approaching occupant or loss of power to the sensor; or
   b. Listed panic hardware or fire exit hardware that, when operated, unlocks the door.

**Substantiation:** Clarifies application of access-controlled egress doors and provides additional safeguard.

This is not original material; its reference/source is as follows:


**Committee Meeting Action:** Reject

**Committee Statement:** The submitter has provided no technical justification as to why the use of the access-controlled door locking provisions should be limited to entrance doors.

The suggested change with respect to proving a lock release on the door leaf is not needed here in the access-controlled egress door provisions as an alternative form of lock/latch release to the motion detector. The submitter is describing the form of door locking addressed by 7.2.1.5.5 (new to 2009 edition) which requires a lock/latch release right on the door leaf so as not to create a special form of door locking. That is why 7.2.1.5.5 is not positioned in the 7.2.1.6 provisions related to special door locking. It is a door that is held closed by electromagnet but which can be released like any mechanically latched/locked door.

**Number Eligible to Vote:** 28

**Ballot Results:** Affirmative: 27

**Ballot Not Returned:** 1 McMahon, C.

### 101-86 Log #329 SAF-MEA

**Final Action:** Accept in Principle

**Submitter:** Ignatius Kapalczynski, CT Office of State Fire Marshal

**Recommendation:** New text to read as follows:

7.2.1.6.2 (9) The egress side of access controlled egress doors shall be provided with emergency lighting.

**Substantiation:** Enables the required sign to be seen and read. Consistency with 5000 11.2.1.6.1.7

This is not original material; its reference/source is as follows:

5000 - 11.2.1.6.1.7

**Committee Meeting Action:** Accept in Principle

Add text to read as follows:

7.2.1.6.2 Access-Controlled ...are met:

7. The egress side of access-controlled egress doors, other than existing access-controlled egress doors, shall be provided with emergency lighting in accordance with Section 7.9.

**Committee Statement:** The committee action does what the submitter requested but:

1. Inserts the material as new item (7) given that the Committee Action on Proposal 101-83 combines existing items (3) through (5) into item (3)
2. Adds an exemption for existing hardware so as not to place existing installations unfairly into noncompliance
3. Adds reference to Section 7.9 as is done other places in the Code where emergency lighting is required.

**Number Eligible to Vote:** 28

**Ballot Results:** Affirmative: 27

**Ballot Not Returned:** 1 McMahon, C.
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Submitter: Ignatius Kapalczynski, CT Office of State Fire Marshal

Recommendation: New text to read as follows:

7.2.1.6.2 (x) The door locks shall have the capability of being unlocked by a signal from the fire command center.

Substantiation: Building code requirement (IBC)

This is not original material; its reference/source is as follows:


Committee Meeting Action: Reject

Committee Statement: The submitter did not provide technical substantiation for the requested change. Not all buildings are required to have a fire command center.

Number Eligible to Vote: 28

Ballot Results: Affirmative: 27

Ballot Not Returned: 1 McMahon, C.
7.2.1.6.3 Elevator Lobby Exit Access Door Assemblies Locking. Where permitted in Chapters 11 through 43, door assemblies separating the elevator lobby from the exit access required by 7.4.1.6.1 shall be permitted to be electronically locked, provided that all the following criteria are met:

1. The electronic switch for releasing the lock is listed in accordance with ANSI/UL 294, Standard for Access Control System Units.
2. The building is protected throughout by a fire alarm system in accordance with Section 9.6.
3. The building is protected throughout by an approved, supervised automatic sprinkler system in accordance with Section 9.7.
4. Waterflow in the sprinkler system required by 7.2.1.6.3(3) is arranged to initiate the building fire alarm system.
5. The elevator lobby is protected by an approved, supervised smoke detection system in accordance with Section 9.6.
6. Detection of smoke by the detection system required by 7.2.1.6.3(5) is arranged to initiate the building fire alarm system.
7. Initiation of the building fire alarm system by other than manual fire alarm boxes unlocks the elevator lobby door assembly.
8. Loss of power to the elevator lobby electronic lock system unlocks the elevator lobby door assemblies.
9. The elevator lobby electronic lock system is not supplied with emergency or standby electrical power.
10. Once unlocked, the elevator lobby door assemblies remain unlocked until the building fire alarm system has been manually reset.
11. Where the elevator lobby door assemblies remain latched after being unlocked, latch-releasing hardware in accordance with 7.2.1.5.9 is affixed to the door leaves.
12. A two-way communication system is provided for communication between the elevator lobby and a central control point that is constantly staffed.
13. The central control point staff required by 7.2.1.6.3(12) is capable, trained, and authorized to provide emergency assistance.
14. The provisions of 7.2.1.6.1 for delayed-egress locking systems are not applied to the elevator lobby door assemblies.
15. The provisions of 7.2.1.6.2 for access-controlled egress door assemblies are not applied to the elevator lobby door assemblies.

Substantiation: Update referenced standard to reflect ANSI approval.
Committee Meeting Action: Accept
Number Eligible to Vote: 28
Ballot Results: Affirmative: 27
Ballot Not Returned: 1 McMahon, C.
Joshua Elvove, U.S. General Services Administration

Recommendation: Revise 7.2.1.6.3 as follows:

(4) Waterflow in the sprinkler system required by 7.2.1.6.3(3) is arranged to initiate the building fire alarm system.

(6) Detection of smoke by the detection system required by 7.2.1.6.3(5) is arranged to initiate the building fire alarm system and notify building occupants.

(8) Loss of power to the elevator lobby electronic lock system unlocks the elevator lobby door assemblies.

(9) The elevator lobby electronic lock system is not supplied with emergency or standby electrical power.

Substantiation: Item (6) has been revised to ensure that elevator lobby smoke detectors not only activate the fire alarm system, but notify building occupants (especially those who may be trapped in the elevator lobby) of a fire alarm. This is because per 9.6.3.2.1, elevator lobby smoke detectors are not always required to activate the building fire alarm system and thus may not be configured to notify the building occupants (i.e., just initiating the fire alarm system may not guarantee occupant notification). Note: similar language was not proposed for Item (4) since sprinkler activation is always configured to notify building occupants. Item (9) was deleted as there should be no need to drop power to the elevator lobby electronic lock system when similar provisions are not required for the other special locking arrangements of Section 7.2.1.6.

Committee Meeting Action: Accept

Affirmative: 27

1 McMahon, C.

Ignatius Kapalczynski, CT Office of State Fire Marshal

New text to read as follows:

7.2.1.6.3 Where permitted in existing occupancy Chapters, door assemblies...

Substantiation: The need for this section came from the need to correct deficiencies in existing buildings. There is no need to permit this deficiency to be designed into new buildings. Exit access is meant to be unrestricted by 7.5.1.

Committee Meeting Action: Reject

Committee Statement: The submitter did not provide technical substantiation for the requested change. A prohibition on using the lobby locking provisions for new installations/construction would dictate building design so as to require a stair at the elevator lobby or wasting space so as to provide exit access to different stair. The provision was not written only to help correct existing deficiencies. Tenant spaces are rehabilitated and repositioned so as to make the issue real for a variety of buildings. In some cases Chapter 43 forces the rehabilitation work to be done in accordance with the chapters for new construction and a stair cannot be feasibly added retroactively.

Any occupancy chapter can prohibit the use of the provisions of 7.2.1.6.3. There is not adequate reason to prejudge the issue here in Chapter 7. Let the occupancy chapters make such determination.

Affirmative: 27

1 McMahon, C.
Submitter: Kurt A. Roeper, Ingersoll Rand Security Technologies

Recommendation: Revise text to read as follows:

7.2.1.6.3 Elevator Lobby Exit Access Door Assemblies Locking. Where permitted in Chapters 11 through 43, door assemblies separating the elevator lobby from the exit access required by 7.4.1.6.1 shall be permitted to be electronically locked, provided that all the following criteria are met:

(1) The electronic switch for releasing the lock is listed in accordance with UL294, Standard for Access Control System Units

Substantiation: The practical intent of this section is to ensure the reliable function of the entire electronic locking mechanism permitted on the opening. Limiting the listing requirement to only a switch does not provide the necessary assessment of the integration of the switch, software, firmware and hardware, i.e. the electronic lock assembly. The proposed language provides this assurance via listing of the lock.

Committee Meeting Action: Accept in Principle

Revise text to read as follows:

7.2.1.6.3 Elevator Lobby Exit Access Door Assemblies Locking. Where permitted in Chapters 11 through 43, door assemblies separating the elevator lobby from the exit access required by 7.4.1.6.1 shall be permitted to be electronically locked, provided that all the following criteria are met:

(1) The electronic switch for releasing the lock is listed in accordance with UL294, Standard for Access Control System Units

Committee Statement: The Committee Meeting Action does what the submitter requested but also changes the word "electronically" to "electrically" in the base paragraph for correctness.

Number Eligible to Vote: 28
Ballot Results: Affirmative: 27
Ballot Not Returned: 1 McMahon, C.

Submitter: Ignatius Kapalczynski, CT Office of State Fire Marshal

Recommendation: New text to read as follows:

7.2.1.6.3(10) A sign stating that resetting of the fire alarm system will cause stairwell doors to be relocked shall be provided at the fire alarm control panel.

Substantiation: Alerts anyone resetting the fire alarm that they may be relocking doors for any occupants or firefighters remaining in the stairwells.

Committee Meeting Action: Reject

Committee Statement: What is so different here as to justify treating this form of locking differently than others? If still in alarm mode, the device cannot be reset. The recommendation refers to stairwell doors, but the provisions of 7.2.1.6.3 apply to any door between the elevator lobby and the remainder of the egress path.

Number Eligible to Vote: 28
Ballot Results: Affirmative: 27
Ballot Not Returned: 1 McMahon, C.
101-93  Log #333  SAF-MEA
(7.2.1.6.3.x (New))

Final Action: Reject

Submitter: Ignatius Kapalczynski, CT Office of State Fire Marshal
Recommendation: New text to read as follows:
7.2.1.6.3 (x) The door locks shall have the capability of being unlocked by a signal from the fire command center.
Substantiation: Building code requirement (IBC)
This is not original material; its reference/source is as follows:
Committee Meeting Action: Reject
Committee Statement: The 2-way communication system required by (12) is for nonemergency use. In an emergency, the doors unlock automatically. There is no demonstrated need for the requested text.
Number Eligible to Vote: 28
Ballot Results: Affirmative: 27
Ballot Not Returned: 1 McMahon, C.

101-94  Log #275  SAF-MEA
(7.2.1.7.2)

Final Action: Accept in Principle

Submitter: Michael Tierney, Builders Hardware Manufacturers Association
Recommendation: Revise text to read as follows:
7.2.1.7.2 Only approved panic hardware shall be used on door assemblies that are not fire-rated door assemblies. Only approved fire exit hardware shall be used on fire-rated door assemblies. New panic hardware and new fire exit hardware shall comply with UL 305, Standard for Safety Panic Hardware and ANSI/BHMA A156.3, Exit Devices.
Substantiation: This proposal adds to 101 the industry standards to which panic hardware and fire exit hardware are tested to help assure performance and durability.
Committee Meeting Action: Accept in Principle
Revise text to read as follows:
7.2.1.7.2 Only approved panic hardware shall be used on door assemblies that are not fire-rated door assemblies. Only approved fire exit hardware shall be used on fire-rated door assemblies. New panic hardware and new fire exit hardware shall comply with ANSI/UL 305, Standard for Safety Panic Hardware and ANSI/BHMA A156.3, Exit Devices.
In Chapter 2, add ANSI/BHMA A156.3 and reference the 2008 edition.
Committee Statement: The Committee Meeting Action does what the submitter requested but changes UL 305 to ANSI/UL 305 for correctness and adds the newly referenced publications, complete with edition date, to Chapter 2 for completeness.
Number Eligible to Vote: 28
Ballot Results: Affirmative: 27
Ballot Not Returned: 1 McMahon, C.

101-95     Log #335 SAF-MEA

(7.2.1.10.3) Final Action: Accept in Principle

Submitter: Ignatius Kapalczynski, CT Office of State Fire Marshal
Recommendation: New text to read as follows:

7.2.1.10.3 "...(800 N) applied at the middle of the door height on the outside edge."
Substantiation: Consistent with the intent of the code and to clarify to designers that in air supported structures, the forc...collapse. Committee may wish to consider this as an Annex comment.

Committee Meeting Action: Accept in Principle
Revise text to read as follows:

7.2.1.10.3 Revolving door assemblies not used as a component of a means of egress shall have a collapsing force not exceeding 180 lbf (800 N) applied at a point 3 in. (76 mm) from the outer edge of the outer wing stile and 40 in. (1020 mm) above the floor.

Committee Statement: The committee action draws from language in BHMA A156.27 for standardization. The revised wording should meet the submitter's intent.

Number Eligible to Vote: 28
Ballot Results: Affirmative: 27
Ballot Not Returned: 1 McMahon, C.

101-96     Log #24 SAF-MEA

(7.2.1.14(5)) Final Action: Reject

Submitter: John W. Park, John Park Consulting
Recommendation: Add new text as follows:

7.2.1.14 Horizontal-Sliding Doors. Horizontal-sliding doors shall be permitted in means of egress, provided that the following criteria are met:

(5) The door assembly complies with the fire protection rating, if required, and, where rated, is self closing or automatic closing by means of smoke detection in accordance with 7.2.1.8, is listed in accordance with UL 864, Standard for Control Units and Accessories for Fire Alarm Systems, and is installed in accordance with NFPA 80, Standard for Fire Doors and Fire Windows.

Substantiation: Self closing or automatic closing devices referenced need to work seamlessly with fire alarm systems, including providing feedback signals to achieve joint control with the fire control center. UL 864, Standard for Control Units and Accessories for Fire Alarm Systems is a nationally recognized standard that provides appropriate tests and guidelines to assure compatibility. It further deals with critical functions such as alarm verification, endurance, life safety networks, notification, power supplies, resets, risk of electrical shock, risk of fire, standby power sources, storage batteries, dual power source systems, supervisory signals, and trouble signals. Since the closing device essentially releases the door from its open to closed position on receipt of a signal from the fire alarm system, they should be evaluated to the 864 standard under the "Releasing Device" category. Holding said closing devices to nationally recognized standards ensures consistency and compatibility for these types of products.

Committee Meeting Action: Reject
Committee Statement: The provisions of 7.2.1.14 are not the appropriate location for referencing UL 864. The submitter's substantiation would need to justify the implications of referencing this standard. If warranted, the material should be considered for inclusion in NFPA 101 in a more appropriate location, like 7.2.1.8.

Number Eligible to Vote: 28
Ballot Results: Affirmative: 27
Ballot Not Returned: 1 McMahon, C.
A periodic and consistent test/check of exit doors. A gauged "push check" with the required force pounds applied toward the direction of exit swing on the door. The gauge should be conducted as close as possible to the strike and/or latch area of the door hardware (generally center of the door closest to jamb). This applies to vertical rod devices; consider pressure is still applied at the center of the door push bar. The gauged "push check" is a more accurate, i.e. as a fire hose stream test or a person(s) pushing. I suggest there should be two tests. one gauged "push check" with continuous applied pressure, and one "push check" with a strike and then continuous applied pressure.

Additionally, Exit Doors regardless of jurisdiction should have an exit bar (panic bar) to push. Whether the door opens or remains lock (i.e. delay, security exits), this bar acts as center point and focus for people to push (grab). All people will push on the bar, including ADA. This will allow the activation of the egress system or the door to open. The bar will strengthen the door system. The bar on some exit application may be for touch or aesthetics only (i.e. delay egress applications).

Exit doors are rated to prevent the spread of fire and smoke. The hardware installed in and/or on these doors are also rated (fire door). When the hardware on the door is activated the bolt/latch must retract, any individual push usually allows the door to open. Some doors depending local jurisdiction may be locked i.e., delayed egress devices (retail stores) and some are allowed to remain open. However these fire doors do have to latch closed, allowing the door to latch (not lock) closed, usually assisted by door closures. Will the door open? There has been already too many injuries and deaths related to doors and exit doors not opening when they should.

These doors are left for local jurisdictions or businesses to maintain. How often are they checked? The fire inspector may or may not come inspect regularly (usually only upon request) and more often (today) with limited resources. Businesses may have service maintenance personnel or other maintenance staff working in the area to check.

There is no consistent method of checking these doors. NFPA, should at least comment on a standard method to check these doors.

Committee Meeting Action: Reject
Committee Statement: The committee notes that the underlining in the submitter’s recommendation is meant for emphasis, as both paragraphs are new text recommended for addition. None of the material currently resides in NFPA 101.

The recommended language is not in the form of mandates. It is unclear how the text should fit and whether some or all of it could better serve as advisory annex material. The submitted text is not in a format that can be accepted.

Number Eligible to Vote: 28
Ballot Results: Affirmative: 27
Ballot Not Returned: 1 McMahon, C.
Submitter: Joshua Elvove, U.S. General Services Administration

Recommendation: Revise text to read as follows:

7.2.1.15.1 Where required by Chapters 11 through 43 door assemblies for which the door leaf is required to swing by this code in the direction of egress travel shall be inspected and tested not less than annually in accordance with 7.2.1.15.2 through 7.2.1.15.8.

7.2.1.15.4 A written record of the inspections and testing shall be signed and kept for inspection by the authority having jurisdiction.

7.2.1.15.4.1* Written records shall not be required for doors that are operated on a normal basis.

7.2.1.15.5 Functional testing of door assemblies shall be performed by individuals who can demonstrate knowledge and understanding of the operating components of the type of door being subjected to testing.

7.2.1.15.5.1 Special knowledge and understanding shall not be required for doors that are operated on a normal basis...

A.7.2.1.15.4.1* Doors operated on a normal basis are doors serving as primary exits or exit access.

Substantiation: Doors that need to be included in this program are those doors that are required by this code to swing in the direction of egress (not just because a door happens to swing in that direction). In addition, written records and someone with special knowledge should not be required especially for any door that is normally operable, as any problem with such doors would be identified and corrected well before an annual inspection is conducted.

Committee Meeting Action: Reject

Committee Statement: All doors that are required to be inspected should to be inspected. There are performance options that could be used to meet the intent of the proposal. Doors that are operated on a normal basis may have issues that are not detected by users. The requested change is not substantiated.

If the committee were to add the words "by this Code" after the word required, it would need to do so in hundreds of other places so as not to create an inconsistency. The word "required" means "required by this Code" without having to add the submitter's words.

Number Eligible to Vote: 28

Ballot Results: Affirmative: 26 Negative: 1

Ballot Not Returned: 1 McMahon, C.

Explanation of Negative:

FRABLE, D.: In concept, I agree with the intent of the proposal. The existing language within 7.2.1.15 regarding the inspection of all doors and the requirement for written records of the inspection and functional testing performed by knowledgeable individuals is very subjective regarding enforceability. For example, how long are the written records to be kept?

Comment on Affirmative:

PERRY, R.: Several occupancy chapters included door inspection in their chapters at the last code cycle. 7.2.1.15 was inserted by the correlating committee and we should not reduce the protection desired by those occupancy chapters. Also, the inspection requirement has been well received by the industry.
Fire-rated door assemblies shall be inspected and tested in accordance with NFPA 80, *Standard for Fire Doors and Other Opening Protectives*. Smoke door assemblies shall be inspected and tested in accordance with NFPA 105, *Standard for the Installation of Smoke Door Assemblies and Other Opening Protectives*.

Where door assemblies are required elsewhere in this Code to be smoke leakage–rated in accordance with 8.2.2.5, door assemblies shall comply with the following:

1. They shall be tested in accordance with ANSI/UL 1784, *Standard for Air Leakage Tests for Door Assemblies*.
2. The maximum air leakage rate of the door assembly shall be 3.0 ft³/min/ft² (0.9 m³/min/m²) of door opening at 0.10 in. water column (25 N/m²) for both the ambient and elevated temperature tests.
3. Door assemblies shall be installed in accordance with NFPA 105, *Standard for the Installation of Smoke Door Assemblies and Other Opening Protectives*.
4. Door assemblies shall be inspected in accordance with 7.2.1.15.

Substantiation: This proposal compliments existing inspection requirements for fire-rated doors by including smoke-rated doors into the scope of the requirements for door inspections. As with fire-rated doors, smoke doors provide critical life-safety functions in the event of a fire. Smoke doors should be inspected (and maintained) to help assure operation when needed.

Committee Meeting Action: Accept in Part
Revise text to read as follows:

7.2.1.15.2 Fire-rated door assemblies shall be inspected and tested in accordance with NFPA 80, *Standard for Fire Doors and Other Opening Protectives*. Smoke door assemblies shall be inspected and tested in accordance with NFPA 105, *Standard for the Installation of Smoke Door Assemblies and Other Opening Protectives*.

Committee Statement: The Committee Action by SAF-MEA does what the submitter requested, but only for Chapter 7 as the MEA committee does not have jurisdiction over the provisions of Chapter 8. The SAF-MEA committee defers to the action of SAF-FIR on the submitter's recommended change to Chapter 8.

Number Eligible to Vote: 28
Ballot Results: Affirmative: 27
Ballot Not Returned: 1 McMahon, C.
Revise existing Section: 7.2.2.2.1.1 Stairs shall meet the following criteria:

(1) New stairs shall be in accordance with Table 7.2.2.2.1.1(a) and 7.2.2.2.1.2.

(2)* Existing stairs shall be permitted to remain in use, provided that they meet the requirements for existing stairs shown in Table 7.2.2.2.1.1(b).

(3) Approved existing stairs shall be permitted to be rebuilt in accordance with the following:

(a) Dimensional criteria of Table 7.2.2.2.1.1(b)

(b) Other stair requirements of 7.2.2

(4) The requirements for new and existing stairs shall not apply to stairs located in industrial equipment access work areas where otherwise provided in 40.2.5.2.

Substantiation: This change exempts stairs from industrial work areas versus industrial equipment access areas based on proposed revised text in Section 40.2.52.

Committee Meeting Action: Accept in Principle

Revise 7.2.2.2.1.1(4) as follows:

7.2.2.2.1.1 Stairs shall meet the following criteria:

(1) ...

(2)* ...

(3) ...

(4) The requirements for new and existing stairs shall not apply to stairs located in industrial equipment access work areas where otherwise provided in 40.2.5.2.

Committee Statement: The action of Accept in Principle, rather than a straight Accept, in made as the change should occur only if the SAF-IND committee acts favorably on the submitter's Proposal 101-393 so as to change the term "industrial equipment access" to "industrial work area access."

Number Eligible to Vote: 28

Ballot Results: Affirmative: 27

Ballot Not Returned: 1 McMahon, C.
Submitter: Jake Pauls, Jake Pauls Consulting Services
Recommendation: Revise text as follows:

7.2.2.3.6* Dimensional Uniformity.

7.2.2.3.6.1 Variation in excess of $3/16$ in. (4.8 mm) in the depth sizes of adjacent tread depths or in the height of adjacent risers shall be prohibited, unless otherwise permitted in 7.2.2.3.6.3. Size of permitted variations shall be based on the nosing-to-nosing dimensions of the tread depths and riser heights, consistent with the measurement details set out in 7.2.2.3.5.

7.2.2.3.6.2 The tolerance variation between the sizes of the largest and smallest riser or between the largest and smallest tread depths shall not exceed $3/16$ in. (9.5 mm) in any flight. Size of permitted variations shall be based on the nosing-to-nosing dimensions of the tread depths and riser heights, consistent with the measurement details set out in 7.2.2.3.5.

7.2.2.3.6.3 Where the bottom or top riser adjoins a sloping public way, walk, or driveway having an established finished ground level and serves as a landing, the bottom or top riser shall be permitted to have a variation in height of not more than 1 in. in every 12 in. (25 mm in every 305 mm) of stairway width. Size of permitted variations shall be based on the nosing-to-nosing dimensions of the tread depths and riser heights, consistent with the measurement details set out in 7.2.2.3.5.

7.2.2.3.6.4* [No change to requirement or annex note.]

7.2.2.3.6.5* The variation in the horizontal projection of all nosings within each stair flight, including the projection of the landing nosing, shall not exceed $3/16$ inch within the stair flight.

A.7.2.2.3.6 A fairly reliable test of step dimension uniformity is the crouch and sight test in which the inspector crouches on the landing above a flight to confirm that all of the nosings, including the landing nosing, line up. Unless there is a rare matched variation in the height of a step riser and in the tread depth, both proportionally larger or smaller than other steps in the flight—such that the inter-nosing slope or pitch is maintained consistent in the flight, the visual alignment of the nosings in the crouch and sight test will indicate dimensional uniformity. Thus, as a first task in any stair inspection, the crouch and sight test should be routinely performed. If the stair does not pass this visual test, careful measurements performed in accordance with 7.2.2.3.5 are essential. If the stair appears to pass this test—indicating the inter-nosing slope or pitch is consistent, a prudent second, quick test is to measure the inter-nosing distances for each step to confirm their consistency.

Never should an inspector measure step dimensions or their uniformity by simply laying a measuring tape or stick on the tread or against the riser. Such measurements are misleading and erroneous relative to the criteria set out in 7.2.2.3.5, particularly if nosing projections are not uniform (as addressed in 7.2.2.3.6.5) or if treads slope or the slopes vary within a stair flight. (See also A.7.2.2.3.5.)

A.7.2.2.3.6.5 A relatively common error in much home stair construction and, more rarely, in other stair construction is to fail to make the landing nosing projection consistent with the projection of all other nosings in the stair flight. (Such an error can easily occur if the stair flight is installed as a prefabricated unit and the unit includes nosing projections.) This is an extremely dangerous condition as it greatlyheightens the risk of an overstepping misstep, at the second or third step down, by a descending person. Adding to the danger is the fact that, to an normally approaching, erect stair user, the flight will appear to have uniformly sized steps whereas, in fact, as is clear if one crouches to check nosing alignment, the top-of-flight, dimensional defect will almost always be revealed.

Substantiation: Much stair inspection is flawed, especially regarding step dimensions. So this proposal clarifies the rules (consistent with current Code) and adds a new rule for nosing projection uniformity. As shown in much stairway safety research (including relatively recently in the article by Cohen, J, LaRue, C.A. and Cohen, H.H. “Stairway Falls: An ergonomic analysis of 80 cases,” Professional Safety, Vol. 54, No. 1, January 2009, pp. 27-32), step dimension uniformity is the most potent design and construction factor in stairway safety. The top-of-flight dimensional nonuniformity, due largely to nonuniform nosing projections, is a pervasive defect, especially on home stairs. The proposed changes address these problems, as well as the importance of dimensional uniformity generally, and the proposed annex notes provide prudent advice on inspection techniques which, if employed as part of a thorough inspection process, should greatly alleviate the problem and begin to eliminate many “excess” stair-related injuries.

As described in the proponent’s website, particularly the page at http://web.me.com/bldguse/Site/Stairways.html, there could be as many as a few hundred thousand “excess” home stair-related injuries each year that are hospital emergency department treated in the USA that are likely associated with the top-of-flight defect, likely in conjunction with other step geometry and handrail defects that the Code prohibits for new home stairs. Such “excess” stair-related
injuries exceed the total number of estimated fire-related injuries to civilians in the USA by a factor of over 25. The graph from the above noted web page is reproduced below to help describe the problem and explain what is meant by the term “excess” injuries, i.e., excess to expectation based on non-home injury trends. (The Downloads area of the website has much other information—in papers and presentations, all freely downloadable as PDF files along with a few QuickTime files in the case of videos.)

*****Insert Artwork Here*****

Committee Meeting Action: Accept in Principle in Part
Revise text as follows:

7.2.2.3.6.1 Dimensional Uniformity.

Variation in excess of \( \frac{3}{16} \) in. (4.8 mm) in the depth sizes of adjacent tread depths or in the height of adjacent risers shall be prohibited, unless otherwise permitted in 7.2.2.3.6.3.

7.2.2.3.6.2 The tolerance variation between the sizes of the largest and smallest riser or between the largest and smallest tread depths shall not exceed \( \frac{3}{8} \) in. (9.5 mm) in any flight.

7.2.2.3.6.3 Where the bottom or top riser adjoins a sloping public way, walk, or driveway having an established finished ground level and serves as a landing, the bottom or top riser shall be permitted to have a variation in height of not more than 1 in. in every 12 in. (25 mm in every 305 mm) of stairway width.

7.2.2.3.6.4 The size of the variations addressed by 7.2.2.3.6.1, 7.2.2.3.6.2 and 7.2.2.3.6.3 shall be based on the nosing-to-nosing dimensions of the tread depths and riser heights, consistent with the measurement details set out in 7.2.2.3.5.

All tread nosing...

"Safety Yellow" is...

The variation in the horizontal projection of all nosings, other than existing nosings, within each stair flight, including the projection of the landing nosing, shall not exceed \( \frac{3}{16} \) inch (9.5 mm) within the stair flight.

A fairly reliable test of step dimension uniformity is the crouch and sight test in which the inspector crouches on the landing above a flight to confirm that all of the nosings, including the landing nosing, line up. Unless there is a rare matched variation in the height of a step riser and in the tread depth, both proportionally larger or smaller than other steps in the flight—such that the inter-nosing slope or pitch is maintained consistent in the flight, the visual alignment of the nosings in the crouch and sight test will indicate dimensional uniformity. Thus, as a first task in any stair inspection, the crouch and sight test should be routinely performed. If the stair does not pass this visual test, careful measurements performed in accordance with 7.2.2.3.5 are essential. If the stair appears to pass this test—indicating the inter-nosing slope or pitch is consistent, a prudent second, quick test is to measure the inter-nosing distances for each step to confirm their consistency.

Committee Statement: The Committee Action adopts a 3/8 in. criterion for what appears as 7.2.2.3.6.6 in the Meeting Action field for consistency with 7.2.2.3.6.2 as it deals with variation over an entire flight. The submitter has not justified the stricter 3/16-in. criterion.

The action creates a new 7.2.2.3.6.4 as the single place to describe how the variations are to be measured, and references 7.2.2.3.6.1, 7.2.2.3.6.2 and 7.2.2.3.6.3 so that the same rule need not be repeated multiple times or create two requirements within a single numbered provision (a situation to avoid as addressed in the NFPA style manual).

Language has been added to the new 7.2.2.3.6.6 to exempt existing nosings as there is not adequate substantiation to make the new requirement retroactively applicable.

The submitter’s annex material is accepted in part. The first paragraph of A.7.2.2.3.6 is helpful in that it tells the user how to conduct the crouch and sight test. The second paragraph is not helpful to the user in that it tells the user what not to do.

The proposed annex material associated with the code text that is shown in the Meeting Action field as 7.2.2.3.6.6 was rejected as it provides substantiation for the new material rather than advisory text that will help the user to apply the requirement.

Number Eligible to Vote: 28
Ballot Results: Affirmative: 26 Negative: 1
Ballot Not Returned: 1 McMahon, C.

Explanation of Negative:
PAULS, J.: There are two problems with what the Technical Committee did with my proposal.

Printed on 11/16/2009
The first follows from an error on my part in specifying the uniformity of the nosing projection in terms of permitted variation rather than specifying uniformity and then making a small allowance for determination of uniformity. Nosing projections are small to begin with and there is no great difficulty in making them very uniform, to within 3/16 inch within a flight; 3/8 inch is too large for this small-dimensioned component. I will try again at public comment period to rephrase this and provide a better justification for the 3/16-inch criterion.

Secondly, I object to the Technical Committee’s action on deleting some important information from the proposed Annex note. This includes warning inspectors of the most common error in step geometry measurement (the second paragraph of my proposed Annex note A7.2.2.3.6.5). Also, with the proposed annex note A.7.2.2.3.6.5, I do not agree with the characterization of some committee members about the proposed text; they described it as, “the language is severe,” and “extreme.” For Technical Committee members to characterize my attempt to warn people about an extraordinarily dangerous defect—increasing the risk of a misstep and fall on a stair flight by one or two orders of magnitude (factors of ten or a hundred or more)—as “severe” or “extreme,” misses the point of the Code’s purpose to try to keep predictable and preventable dangers at a reasonable level of risk. The Technical Committee even rebuffed my attempt to amend by removing the words, “is an extremely dangerous condition as it” so the Annex note would say, “This greatly heightens the risk of an overstepping misstep.” I can understand the motivation of one committee member to try to suppress describing the problem in the stark terms it warrants, but this merely compounds the common construction errors apparently being made by his association’s members. As a safety and public health professional, my minimum duty when seeing a preventable danger is to warn and to provide people with the understanding needed to prevent such dangers in the future. Thus I object in the strongest possible terms to the Technical Committee’s actions.

My objection is not alleviated by being told that this information is better put into the Handbook. I would venture a guess that the Code is in many more users’ hands than is the Handbook (and I would like to have NFPA staff correct me if the Handbook sells anywhere near as well as the Code). Finally, I will leave for a future ballot or public comment my response to the Committee Statement on the matter of my proposed Annex material providing substantiation rather than advisory text; this requires more detailed analysis of the existing Annex than I can perform for this ballot.

Comment on Affirmative:

ORLOWSKI, S.: NAHB agrees with the action of the committee taken on this proposal by accepting in principle the concerns that the proponent felt were lacking in the Life Safety Code in regards to the uniformity of the nosing projections, while at the same time keeping with the policies already established by the model codes on the acceptable variations between the projections. As stated in the committee action, the variable projection of the nosing should not exceed 3/8 of an inch within the flight of the stairs to be in keeping with the variable allowances allowed for risers and treads.

Based on the testimony provided by the proponent during the technical committee meeting, NAHB encourages the proponent to address his concerns on the proper measurement of the nosing projections through material appropriate to the annex.

PEACOCK, R.: While I support the committee’s action on the portion of the submitter’s proposal accepted, the additional annex material submitted is appropriate for inclusion in a reworded form as it does provide explanatory guidance that points out the importance of a correct measurement of stair uniformity. I would suggest the following revision to A.7.2.2.3.6:

A relatively common error in much home stair construction and, more rarely, in other stair construction is a failure to make the landing nosing projection consistent with the projection of all other nosings in the stair flight. (Such an error can easily occur if the stair flight is installed as a prefabricated unit and the unit includes nosing projections.) This heightens the risk of an overstepping misstep, at the second or third step down, by a descending person. The following check is appropriate to check dimensional and nosing alignment.

A fairly reliable test of step dimension uniformity is the crouch and sight test in which the inspector crouches on the landing above a flight to confirm that all of the nosings, including the landing nosing, line up. Unless there is a rare matched variation in the height of a step riser and in the tread depth, both proportionally larger or smaller than other steps in the flight - such that the inter-nosing slope or pitch is maintained consistent in the flight, the visual alignment of the nosings in the crouch and sight test will indicate dimensional uniformity. Thus, as a first task in any stair inspection, the crouch and sight test should be routinely performed. If the stair does not pass this visual test, careful measurements performed in accordance with 7.2.2.3.5 are essential. If the stair appears to pass this test - indicating the inter-nosing slope or pitch is consistent, a prudent second, quick test is to measure the inter-nosing distances for each step to confirm their consistency.

Step dimensions or their uniformity should not be made by simply laying a measuring tape or stick on the tread or against the riser. Such measurements may be misleading and erroneous relative to the criteria set out in 7.2.2.3.5, particularly if nosing projections are not uniform (as addressed in 7.2.2.3.6.5), if treads slope, or if the slopes vary within a stair flight.
4. Statement of Problem and Substantiation for Proposal: (Note: State the problem that would be resolved by your recommendation; give the specific reason for your Proposal, including copies of tests, research papers, fire experience, etc. If more than 200 words, it may be abstracted for publication.)

Much stair inspection is flawed, especially regarding step dimensions. So this proposal clarifies the rules (consistent with current Code) and adds a new rule for nosing projection uniformity. As shown in much stairway safety research (including relatively recently in the article by Cohen, J., LaRue, C.A. and Cohen, H.H. "Stairway Falls: An ergonomic analysis of 80 cases," Professional Safety, Vol. 54, No. 1, January 2009, pp. 27-32), step dimension uniformity is the most potent design and construction factor in stairway safety. The top-of-flight dimensional nonuniformity, due largely to nonuniform nosing projections, is a pervasive defect, especially on home stairs. The proposed changes address these problems, as well as the importance of dimensional uniformity generally, and the proposed annex notes provide prudent advice on inspection techniques which, if employed as part of a thorough inspection process, should greatly alleviate the problem and begin to eliminate many "excess" stair-related injuries.

As described in the proponent's website, particularly the page at [http://www.moe.com/mbisque/Site/Stairways.html](http://www.moe.com/mbisque/Site/Stairways.html), there could be as many as a few hundred thousand "excess" home stair-related injuries each year that are hospital emergency department treated in the USA that are likely associated with the top-of-flight defect, likely in conjunction with other step geometry and handrail defects that the Code prohibits for new home stairs. Such "excess" stair-related injuries exceed the total number of estimated fire-related injuries to civilians in the USA by a factor of over 25. The graph from the above noted web page is reproduced below to help describe the problem and explain what it means by the term "excess" injuries, i.e., excess to expectation based on non-home injury trends. (The Downloads area of the website has much other information—in papers and presentations, all freely downloadable as PDF files along with a few QuickTime files in the case of videos.)

5. Copyright Assignment

(a) ☒ I am the author of the text or other material (such as illustrations, graphs) proposed in the Proposal.

(b) ☐ Some or all of the text or other material proposed in this Proposal was not authored by me. Its source is as follows: (please identify which material and provide complete information on its source)

I hereby grant and assign to the NFPA all and full rights in copyright in this Proposal and understand that I acquire no rights in any publication of NFPA in which this Proposal is included or another similar or analogous form is used. Except to the extent that I do not have authority to make an assignment in materials that I have identified in (b) above, I hereby warrant that I am the author of this Proposal and that I have full power and authority to enter into this assignment.

Signature (Required)    Jake L. Pauls

PLEASE USE SEPARATE FORM FOR EACH PROPOSAL

Mail to: Secretary, Standards Council, National Fire Protection Association
1 Batterymarch Park, Quincy, MA 02169-7471 OR
Fax to: (617) 770-3500 OR Email to: proposals_comments@nfpa.org

7/28/2009
Note: This proposal appeared as Comment 101-60 (Log #83) which was held from the Annual 2008 ROC.

Submitter: Allen Tsui, Rep. GSA

Recommendation: Revise text to read as follows:

In other than dwelling units, new handrails that are not continuous between flights shall extend horizontally, at the required height, not less than 12 in. (305 mm) beyond the top riser and continue to slope for a depth or distance of one tread beyond the bottom riser.

Substantiation: The existing word used: "depth", connotes a perpendicular orientation (i.e. up and down along the y-axis). Using the proposed new word: "distance" will connote a horizontal orientation (i.e. left and right along the x-axis), which is the true intent of 7.2.2.4.4.10. Additionally, using the word "distance" will eliminate any confusion regarding the intent of 7.2.2.4.4.10.

Committee Meeting Action: Reject

Committee Statement: The submitter's choice of "distance" would lead the user to measure the 12 in. along the slope of the handrail. It is meant to be a horizontal distance and, like done for tread depth, is correctly described as "depth."

Number Eligible to Vote: 28
Ballot Results: Affirmative: 27
Ballot Not Returned: 1 McMahon, C.

Submitter: Robert Howard, Harbor Beach, MI

Recommendation: Revise text to read as follows:

Open guards, other than approved existing open guards, shall have intermediate rails or an ornamental pattern such that a sphere 4 in. (100 mm) in diameter and vertical not horizontal is not able to pass through..."

***Insert Artwork Here***

Substantiation: Horizontal 4 in. space a child can climb up the railing vertically they can not. This change in verbiage will ensure that stair railing is always 4 in. width for vertical and not horizontal.

Committee Meeting Action: Reject

Committee Statement: The annex note already cautions that vertical intermediate rails are PREFERRED to reduce climbability. There is insufficient technical substantiation to change from an advisory statement of preference to a mandate.

Number Eligible to Vote: 28
Ballot Results: Affirmative: 27
Ballot Not Returned: 1 McMahon, C.
Child climbing present

4" spacing decorative bar w/ 4" spacing that is horizontal danger.

*BAD*
Should state vertically 4" only.

Reason - children can climb a 4" horizontal decorative rail on the open guards in the stair well and fall over to their death.

Suggested change to NFPA 101

4" spacing between decorative guards

Child cannot climb vertical guards

Should read vertically only for 7.2.4.5.3*

--See attachment--

Robert C. Howard
Asst. Chief Fire Prevention
586-239-4363

101 - Log# 8 Diagram
7.2.2.5.1 Where an exit connects the story of exit discharge with adjacent stories, the exit shall be permitted to be unenclosed when in an atrium conforming to Section 8.6.7.

The atrium enclosure provides adequate protection for occupants of the building by providing fire suppression, smoke removal systems and provides additional features that a stair enclosure lacks; the ability to observe the environment in which the stair is located. It would be a simple matter to glance down into the atrium prior to mounting the stairs to see if there are problems associated with the environment, making the decision to use the atrium stair much simpler than a stair whose environment is unknown beyond the one visible flight of stairs.

Committee Meeting Action: Reject

Committee Statement: The SAF-MEA committee is sympathetic to the concept being advanced by the submitter. But, there are too many problems with the proposed text. The text would be in conflict with other Code sections in that an unenclosed stair is not an exit. Where occupancy chapters, like business, require that two exits be ON the floor, the stair must be enclosed. Also, the committee is unsure of what the submitter intends with respect to floors other than those that are 1 above and 1 below the level of exit discharge. The committee welcomes public comments on the subject.

Number Eligible to Vote: 28

Ballot Results: Affirmative: 27

Ballot Not Returned: 1 McMahon, C.

Comment on Affirmative:

ORLOWSKI, S.: NAHB agrees with the committee that there are some provisions within the Life Safety Code that would not permit the use of an unenclosed stair to be used as an exit and encourages the proponent to come back during the comment stage with language that address the concerns of the committee and clarifies when an atrium stair could be permitted.
7.2.2.5.4.1 New enclosed stairs serving three or more stories and existing enclosed stairs serving five or more stories shall comply with 7.2.2.5.4.1(A) through (M).

(A) The stairs shall be provided with special signage within the enclosure at each floor landing.

(B) The signage shall indicate the floor level.

(C) The signage shall indicate the terminus of the top and bottom of the stair enclosure.

(D) The signage shall indicate the identification of the stair enclosure.

(E) The signage shall indicate the floor level of, and the direction to, exit discharge.

(F) The signage shall be located inside the enclosure approximately 60 in. (1525 mm) above the floor landing in a position that is visible when the door is in the open or closed position.

(G) The signage shall comply with 7.10.8.1 and 7.10.8.2 of this Code.

(H) The floor level designation shall also be tactile in accordance with ICC/ANSI A117.1, American National Standard for Accessible and Usable Buildings and Facilities.

(I) The signage shall be painted or stenciled on the wall or on a separate sign securely attached to the wall.

(J) The stairway identification letter shall be located at the top of the sign in a minimum 1 in. (25 mm) high lettering and shall be in accordance with 7.10.8.2.

(K)* Signage that reads NO ROOF ACCESS and is located under the stairway identification letter shall designate the stairways that do not provide roof access. Lettering shall be a minimum of 1 in. (25 mm) high and shall be in accordance with 7.10.8.2.

(L) The floor level number shall be located in the middle of the sign in minimum 5 in. (125 mm) high numbers and shall be in accordance with 7.10.8.2. Mezzanine levels shall have the letter "M" or other appropriate identification letter preceding the floor number, while basement levels shall have the letter "B" or other appropriate identification letter preceding the floor level number.

(M) Identification of the lower and upper terminus of the stairway shall be located at the bottom of the sign in minimum 1 in. (25 mm) high letters or numbers and shall be in accordance with 7.10.8.2.

Substantiation: New stairway signage requirements were added to the 2003 Edition of the Code detailing dimensional criteria for lettering. The existing code language would require that previously approved existing stair signage must be replaced to meet the new requirements. Stairway signage meeting the Code requirements of the 2000 Edition should be permitted to remain. A proposal modifying the stairway signage requirements has also been submitted to NFPA 1 to ensure consistency between the two documents.

Committee Meeting Action: Reject
Committee Statement: The requirement for letter heights and other features already required by NFPA 1, Fire Code, were added in to NFPA 101 in 2003, assumably for a purpose, and the submitter's substantiation doesn't address this. The requirements of 7.2.2.5.4 have applicability to new and existing buildings so as to provide consistency as recommended by the NIST World Trade Center report. The costs associated with providing code-compliant signs are not unduly burdensome.

Number Eligible to Vote: 28
Ballot Results: Affirmative: 25 Negative: 2
Ballot Not Returned: 1 McMahon, C.
Explanation of Negative:
FRABLE, D.: I believe the proponent has cited an issue that needs to be addressed by the Technical Committee. In addition, I am unaware of any cost data being provided to the Technical Committee for review that demonstrates that "the costs associated with providing code-compliant signs are not unduly burdensome" to building owners. Lastly, to infer that exempting previously approved stairway signage has a direct correlation to the NIST WTC report recommendations is a stretch.

ORLOWSKI, S.: NAHB disagrees with the committee comment that the replacement of these sign is not unduly cumbersome. Existing signage that is in compliance with items A-I provided much of the same critical information need for an effective evacuation of the building, as indicated in items J-M without the specifying the lettering width and height dimension. As for the concern of conflict between NFPA 1 and NFPA 101, the proponent states that a proposal has been submitted to modify the language in NFPA 1. NAHB encourages the technical committee to reconsider the action.

Comment on Affirmative:

PEACOCK, R.: I support the committee’s action on the proposal. It is appropriate to clarify what is contained in the NIST World Trade Center report referenced by the submitter. Specifically, NIST’s recommendation 18 included information on signage in egress systems as follows:

Recommendation 18. NIST recommends that egress systems should be designed: (1) to maximize remoteness of egress components (i.e., stairs, elevators, exits) without negatively impacting the average travel distance; (2) to maintain their functional integrity and survivability under foreseeable building-specific or large-scale emergencies; and (3) with consistent layouts, standard signage, and guidance so that systems become intuitive and obvious to building occupants during evacuations.

Egress systems should have consistent layouts with standard signage and guidance so that the systems become intuitive and obvious to all building occupants, including visitors, during evacuations. Particular consideration should be given to unexpected deviations in the stairwells (e.g., floors with transfer hallways).

_______________________________________________________________________________________________

101-108 Log #149 SAF-MEA
(7.2.2.5.4.4) Final Action: Accept in Principle

Submitter: James Weigand, National Code Services Assn.
Recommendation: Revise text as follows:

7.2.2.5.4.4 Where new contrast marking is provided for stairway handrails, it shall be applied to, or be part of, at least the upper surface of the handrail; have a minimum width of 1/2 in. (13 mm); and extend the full length of each handrail. After marking, the handrail shall comply with 7.2.2.4.4. Where handrails or handrail extensions bend or turn corners the stripe shall not have a gap of more than 4 inches (102 mm).

Substantiation: As written, there may be difficulties for certain markings to make bends or turns without providing a gap. Section 1024 of the 2009 IBC contains provisions for allowing a gap of 4 inches or less when handrails or handrail extensions bend or turn corners. This will permit the use of more cost-effective markings if a gap is allowed at handrail turns or bends. The minimum 1 inch width in (1) is not appropriate for perimeter demarcation markings listed in accordance with UL 1994 as that standard uses a performance based pass/fail visual test instead of using prescriptive width dimensions. This will provide harmonization between the model codes.

Committee Meeting Action: Accept in Principle

Revise text to read as follows:

7.2.2.5.4.4 Where new contrast marking is provided for stairway handrails, it shall be applied to, or be part of, at least the upper surface of the handrail; have a minimum width of 1/2 in. (13 mm); and extend the full length of each handrail. After marking, the handrail shall comply with 7.2.2.4.4. Where handrails or handrail extensions bend or turn corners the stripe shall be permitted to have a gap of not more than 4 inches (102 mm).

Committee Statement: The Committee Meeting Action does what the submitter requested but reworks the text for clarity.

Number Eligible to Vote: 28
Ballot Results: Affirmative: 27
Ballot Not Returned: 1 McMahon, C.
Revise text as follows:

Exit stair treads shall incorporate a marking stripe that is applied as a paint/coating or be a material that is integral with the nosing of each step. The marking stripe shall be installed along the horizontal leading edge of the step and shall extend the full width of the step. The marking stripe shall also meet the following requirements:

1. The marking stripe shall be not more than 1/2 in. (13 mm) from the leading edge of each step and shall not overlap the leading edge of the step by more than 1/2 in. (13 mm) down the vertical face of the step.

2. The marking stripe shall have a minimum horizontal width of 1 in. (25 mm) and a maximum width of 2 in. (51 mm).

3. The dimensions and placement of the marking stripe shall be uniform and consistent on each step throughout the exit enclosure.

4. Surface-applied marking stripes using adhesive-backed tapes shall not be used unless the stripes comply with an approved adhesive standard for use on walking surfaces.

Substantiation: Requirement (4) prohibits the use of adhesive backed surface-applied marking stripes. This prohibition discourages the development of a UL, ASTM or other applicable standard for cost-effective adhesive backed surface-applied marking stripes for use on walking surfaces. This is especially true for existing stairs where the more cost-effective adhesive backed surface-applied marking stripe could be applied. In prior committee discussions, the committee indicated that the lack of such a standard was the reason for Requirement (4). This change will encourage standards making bodies to develop such standards which would then have to be approved by the AHJ.

Committee Meeting Action: Reject

Committee Statement: The current prohibition against adhesive-backed tapes is exactly what drives manufacturers and the testing laboratories to develop new standards. Once an adequate standard is in place, the code can be relaxed. Simply relying on an "approved" standard is insufficient as the word approved means "acceptable to the AHJ" and the AHJ is not expected to have the expertise needed to judge whether a test standard is adequate.

Number Eligible to Vote: 28

Ballot Results: Affirmative: 27

Ballot Not Returned: 1 McMahon, C.
All handrails and handrail extensions shall be marked with a solid and continuous marking stripe and meet the following requirements:

1. The marking stripe shall be applied to the upper surface of the handrail or be a material integral with the upper surface of the handrail for the entire length of the handrail, including extensions. Where handrails or handrail extensions bend or turn corners, the stripe shall not have a gap of more than 4 inches (102 mm).

2. The marking stripe shall have a minimum horizontal width of 1 in. (25 mm). The minimum width of 1 inch (25 mm) shall not apply to outlining stripes listed in accordance with UL 1994.

3. The dimensions and placement of the marking stripe shall be uniform and consistent on each handrail throughout the exit enclosure.

The Committee Meeting Action does what the submitter requested but reworks the text for clarity.

**Committee Statement:** The Committee Meeting Action does what the submitter requested but reworks the text for clarity.

**Number Eligible to Vote:** 28

**Ballot Results:** Affirmative: 26  Negative: 1

**Ballot Not Returned:** 1  McMahon, C.

**Explanation of Negative:**

FRABLE, D.: I concur with the action by the Technical Committee regarding 7.2.2.5.5.3 (1). However, I do not agree that the minimum width of 1-inch of the marking stripe should be permitted to be reduced if it is listed in accordance with UL 1994 (see 7.2.2.5.5(2)). I believe inclusion of 7.2.2.5.5 (2) will lead to enforcement issues since the performance criterion for UL 1994 and the ASTM Standard are completely different and could lead to a varying degree of materials being installed having different performance results within the same stair enclosure.
Stair landings, exit passageways, and other parts of the floor areas within the exit enclosure shall be provided with a solid and continuous perimeter demarcation marking stripe on the floor or on the walls or a combination of both. The marking stripe shall also meet the following requirements:

1. The marking stripe shall have a minimum horizontal width of 1 in. (25 mm) and a maximum width of 2 in. (51 mm), with interruptions not exceeding 4 in. (100 mm). The minimum width of 1 inch (25 mm) shall not apply to outlining stripes listed in accordance with UL 1994.

2. The marking stripe shall be applied within 2 in. (51 mm) of the wall.

3. The marking stripe shall continue in front of all door openings swinging into the exit enclosure. However, the marking stripe shall not be applied in front of all door openings discharging from the exit enclosure.

4. The dimensions and placement of the perimeter demarcation marking stripe shall be uniform and consistent throughout the exit enclosure.

5. Surface-applied marking stripes using adhesive-backed tapes shall not be used unless the stripes comply with an approved adhesive standard for use on walking surfaces.

Perimeter floor demarcation lines shall be placed within 4 inches (102 mm) of the wall and shall extend to within 2 inches (51 mm) of the markings on the leading edge of landings. The demarcation lines shall continue across the floor in front of all doors. Demarcation lines shall not extend in front of exit doors that lead out of an exit enclosure and through which occupants must travel to complete the exit path.

Perimeter wall demarcation lines shall be placed on the wall with the bottom edge of the stripe no more than 4 inches (102 mm) above the finished floor. At the top or bottom of the stairs, demarcation lines shall drop vertically to the floor within 2 inches (51 mm) of the step or landing edge. Demarcation lines on walls shall transition vertically to the floor and then extend across the floor where a line on the floor is the only practical method of outlining the path. Where the wall line is broken by a door, demarcation lines on walls shall continue across the face of the door or transition to the floor and extend across the floor in front of such door. Demarcation lines shall not extend in front of exit doors that lead out of an exit enclosure and through which occupants must travel to complete the exit path. Where a wall-mounted demarcation line transitions to a floor-mounted demarcation line or vice versa the wall-mounted demarcation line shall drop vertically to the floor to meet a complementary extension of the floor-mounted demarcation line thus forming a continuous marking.

As written, perimeter demarcation markings are limited to the floor. New York City has shown that wall demarcation lines are just as effective. Section 1024 of the 2009 IBC also provides the option to use floor or wall perimeter demarcation markings. The minimum 1 inch width in (1) is not appropriate for perimeter demarcation markings listed in accordance with UL 1994 as that standard uses a performance based test instead of using prescriptive width dimensions. Additionally, requirement (5) prohibits the use of adhesive backed surface-applied marking stripes. This prohibition discourages the development of a UL, ASTM or other applicable standard for adhesive backed surface-applied marking stripes for use on walking surfaces. In prior committee discussions, the committee indicated that the lack of such a standard was the reason for Requirement (5). This change will encourage standards making bodies to develop such standards which would then have to be approved by the AHJ. This will provide harmonization between the model codes.

Committee Meeting Action: Accept in Principle in Part

Revise text to read as follows:

7.2.2.5.5.4 Perimeter Demarcation Marking. Stair landings, exit passageways, and other parts of the floor areas within the exit enclosure shall be provided with a solid and continuous perimeter demarcation marking stripe on the floor or on the walls or a combination of both. The marking stripe shall also meet the following requirements:

1. The marking stripe shall have a minimum horizontal width of 1 in. (25 mm) and a maximum width of 2 in. (51 mm), with interruptions not exceeding 4 in. (100 mm). The minimum width of 1 inch (25 mm) shall not apply to outlining stripes listed in accordance with UL 1994. Standard for Luminous Egress Path Marking Systems.

2. The marking stripe shall be applied within 2 in. (51 mm) of the wall.

3. The marking stripe shall continue in front of all door openings swinging into the exit enclosure. However, the marking stripe shall not be applied in front of all door openings discharging from the exit enclosure.

4. The dimensions and placement of the perimeter demarcation marking stripe shall be uniform and consistent throughout the exit enclosure.
Surface-applied marking stripes using adhesive-backed tapes shall not be used.

Perimeter floor demarcation lines shall comply with all of the following:

1. Be placed within 4 in. (102 mm) of the wall and extend to within 2 in. (51 mm) of the markings on the leading edge of landings.
2. Continue across the floor in front of all doors.
3. Not extend in front of exit doors that lead out of an exit enclosure and through which occupants must travel to complete the egress path.

Perimeter wall demarcation lines shall comply with all of the following:

1. Be placed on the wall with the bottom edge of the stripe not more than 4 in. (102 mm) above the finished floor.
2. At the top or bottom of the stairs, drop vertically to the floor within 2 in. (51 mm) of the step or landing edge.
3. Transition vertically to the floor and then extend across the floor where a line on the floor is the only practical method of outlining the path.
4. Where the wall line is broken by a door, continue across the face of the door or transition to the floor and extend across the floor in front of such door.
5. Not extend in front of doors that lead out of an exit enclosure and through which occupants must travel to complete the egress path.
6. Where a wall-mounted demarcation line transitions to a floor-mounted demarcation line or vice versa, the wall-mounted demarcation line drops vertically to the floor to meet a complementary extension of the floor-mounted demarcation line thus forming a continuous marking.

Committee Statement: The Committee Meeting Action does what the submitter requested except for permitting adhesive-backed strips on walking surfaces. See the Committee statement for Rejection of Proposal 101-109. Additionally, the "in principle" portion of the committee action relates to reworking the submitter's text editorially to insert the UL standard title, change "inches" to "in.", and letter the multiple subparts rather than having multiple sentences buried within a numbered paragraph as directed by the NFPA style manual.

Number Eligible to Vote: 28
Ballot Results: Affirmative: 26 Negative: 1
Ballot Not Returned: 1 McMahon, C.
Explanation of Negative:
FRABLE, D.: I cannot support the Technical Committee's actions. I believe the subject revised text will lead to enforcement issues as well other concerns. For example, the performance criterion for UL 1994 and the ASTM Standard are completely different and could lead to a varying degree of materials being installed having different performance results within the same stair enclosure. In addition, the placement of a demarcation line on walls 4 inches above the finished floor, particularly on landings may leave one to perceive the bottom step in a flight of steps is the landing; thus causing a tripping hazard and the ability to use the stairs efficiently in conditions of an emergency.
The door hardware for the doors serving the exit enclosure that swing out from the enclosure in the direction of egress travel shall be provided with a marking stripe. The marking stripe shall also meet the following requirements:

1. The door hardware necessary to release the latch shall be outlined with an approved marking stripe having a minimum horizontal width of 1 in. (25 mm) marked with no less than 16 square inches (406 mm$^2$) of luminous material. This marking shall be located behind, immediately adjacent to, or on the door handle and/or escutcheon.

2. Where panic hardware is installed, the following criteria shall be met:
   a. The marking stripe shall have a minimum horizontal width of 1 in. (25 mm) and be applied to the entire length of the actuating bar or touch pad.
   b. The placement of the marking stripe shall not interfere with viewing of any instructions on the actuating bar or touch pad.

Substantiation: As written, there may be difficulties for certain markings to make bends or turns without providing a gap. Section 1024 of the 2009 IBC contains provisions for allowing a gap of 4 inches or less when handrails or handrail extensions bend or turn corners. The minimum 1 inch width in (1) is not appropriate for perimeter demarcation markings listed in accordance with UL 1994 as that standard uses a performance based test instead of using prescriptive width dimensions. This will provide harmonization between the model codes.

Committee Meeting Action: Accept in Principle in Part

Revise text to read as follows:

7.2.2.5.5.7 Door Hardware Marking. The door hardware for the doors serving the exit enclosure that swing out from the enclosure in the direction of egress travel shall be provided with a marking stripe. The marking stripe shall also meet the following requirements:

1. The door hardware necessary to release the latch shall be outlined with an approved marking stripe having a minimum horizontal width of 1 in. (25 mm)

2. Where panic hardware is installed, the marking stripe for door hardware should be of sufficient size to adequately mark the door hardware. This marking could be located behind, immediately adjacent to, or on the door handle or escutcheon.

Committee Statement: The submittor provided no technical justification for the 16 sq in. criterion. The Committee action inserts the word "approved" to permit the AHJ to judge the adequacy of the installation. The new anex text provides guidance for the AHJ to help in making the determination. The requirement for "outlining" connotes more than a small fleck of material being present, so the wording is adequate for the ROP-stage. The action permits the submitter to readdress the issue via public comment.

Number Eligible to Vote: 28
Ballot Results: Affirmative: 26, Negative: 1
Ballot Not Returned: McMahon, C.

Explanation of Negative:

PERRY, R.: While I support the intent of this action, the requirement that marking for panic hardware requires the marking to be on the cross bar may create problems on some devices and it should be behind and adjacent like the other hardware. Also the definition of panic hardware does not include fire exit hardware.

Comment on Affirmative:

BONISCH, W.: Original proposal matches IBC. Committee failed to recognize nor address this use of "no technical justification" is conveniently used in this proposal whereas many proposals are accepted without justification.
An emergency exit symbol with a luminescent background shall be applied on all doors serving the exit enclosure that swing out from the enclosure in the direction of egress travel. The emergency exit symbol shall also meet the following requirements:

1. The emergency exit symbol shall meet the requirements of NFPA 170, *Standard for Fire Safety and Emergency Symbols*.

2. The emergency exit symbol applied on the door shall be a minimum of 4 inches (102 mm) in height and shall be mounted on the door, centered horizontally, with the top of the symbol not higher than 18 in. (455 mm) above the finished floor.

Substantiation: Requirement (2) does not specify the size of the emergency exit symbol nor does it specify the mounting location on the door nor where on the symbol to measure the 18 inches from the floor. This will clarify these issues and provide harmonization between the model codes.

Committee Meeting Action: Accept in Principle

Revise text to read as follows:

7.2.2.5.5.8 Emergency Exit Symbol. An emergency exit symbol with a luminescent background shall be applied on all doors serving the exit enclosure that swing out from the enclosure in the direction of egress travel. The emergency exit symbol shall also meet the following requirements:

1. The emergency exit symbol shall meet the requirements of NFPA 170, *Standard for Fire Safety and Emergency Symbols*.

2. The emergency exit symbol applied on the door shall be a minimum of 4 in. (102 mm) in height and shall be applied on the door, centered horizontally, with the top of the symbol not higher than 18 in. (455 mm) above the finished floor.

Committee Statement: The Committee Meeting Action does what the submitter requested but changes the word "mounted" to "applied" for sense and correctness, and reworks the text for style.
Exit stair path markings shall be made of any material, including paint, provided that an electrical charge is not required to maintain the required luminescence. Such materials shall include, but shall not be limited to, self luminous materials and photoluminescent materials. Materials shall comply with one of the following:

1. ASTM E 2073, Standard Test Method for Photopic Luminance of Specification for Photoluminescent (Phosphorescent) Safety Markings, except that the charging source shall be 1 ft-candle (10.8 lux) of fluorescent illumination for 60 minutes, and the minimum luminance shall be 5 milli-candelas per square meter after 90 minutes.


(3) An alternate standard deemed equivalent and approved by the authority having jurisdiction.

The Committee Meeting Action does what the submitter requested with respect to the choice of ASTM standard, but does not delete current item (3) which permits an alternate standard. The submitter did not justify the removal of the item.
Exit enclosures where photoluminescent materials are installed shall be continuously illuminated for at least 60 minutes prior to periods when the building is occupied. Lighting control devices that automatically turn exit enclosure lighting on and off, based on occupancy, shall not be installed unless it is used to turn on illumination for photoluminescent materials for at least 60 minutes prior to periods when the building is occupied and then off when the building is unoccupied. Lighting used to charge photoluminescent materials shall not be controlled by motion sensors.

As written, the use of lighting control devices that automatically turn exit enclosure lighting on at least 60 minutes prior to periods when the building is occupied and off when the building is unoccupied is prohibited. This will clarify that such devices are allowed when used for these reasons. Additionally, there is no mention regarding the use of motion sensors that typically turn on lights when motion is detected and then turn off the lights after a predetermined amount of time. Motion sensors should not be used to control lighting that is used to charge photoluminescent materials as this may interfere with the charging of the material.

Committee Meeting Action: Accept in Principle

Create annex material for 7.2.2.5.5.11 as follows:

A.7.2.2.5.5.1 Motion sensing controls should not be used to manage the illumination of photoluminescent materials. Timers that provide for a minimum 60 minutes of illumination prior to building occupancy are acceptable.

Committee Statement: The annex note is comparable to that of A.7.10.7.3 for photoluminescent exit signs. The existing Code text is sufficient with this explanatory material.

Number Eligible to Vote: 28
Ballot Results: Affirmative: 27
Ballot Not Returned: 1 McMahon, C.
Add asterisk: 7.2.2.6.3.1*

Add new annex note: A.7.2.2.6.3.1 When an outside stair(s) is permitted to be non-separated from interior portions of the building in accordance with items (1) through (4), such stair(s) are still considered exits and not exit access.

Add a new section: 7.6.3 Where non-separated outside stairs are permitted as required exits, the travel distance shall be measured from the most remote point subject to occupancy to the leading nosing of the landing at the floor level under consideration.

Renumber existing 7.6.3 to 7.6.4.
Renumber existing 7.6.4 to 7.6.5.
Renumber existing 7.6.5 to 7.6.6.
Renumber existing 7.6.6 to 7.6.7.

Amend A.3.3.75 by adding (See A.7.2.2.6.3.1) to the end of Paragraph 1. [Separately submitted]

Substantiation: Clarifies that outside egress stairs permitted to be non-separated are still considered exits and not exit access. Accordingly, 7.6.3 describes how to measure travel distance in this case and the annex note for the definition of an exit is amended.

Committee Meeting Action: Accept in Principle
Add asterisk: 7.2.2.6.3.1*

Add new annex text as follows:
A.7.2.2.6.3.1 Where outside stairs are permitted to be non-separated from interior portions of the building in accordance with items (1) through (5) of 7.2.2.6.3.1, such stairs are considered exits and not exit access.

Add new text as follows:
7.6.2 Where non-separated outside stairs are permitted as required exits, the travel distance shall be measured from the most remote point subject to occupancy to the leading nosing of the stair landing at the floor level under consideration.

Renumber existing 7.6.2 to 7.6.3.
Renumber existing 7.6.3 to 7.6.4.
Renumber existing 7.6.4 to 7.6.5.
Renumber existing 7.6.5 to 7.6.6.
Renumber existing 7.6.6 to 7.6.7.

Amend A.3.3.75 Exit definition by adding to the end of Paragraph 1: (See also 7.2.2.6.3.1)

Committee Statement: The Committee Meeting Action does what the submitter requested but positions the new material as 7.6.2 rather than 7.6.3 for clarity, and references 7.2.2.6.3.1 in the definition of Exit rather than A.7.2.2.6.3.1 as required by the NFPA style manual.

Number Eligible to Vote: 28
Ballot Results: Affirmative: 27
Ballot Not Returned: 1 McMahon, C.
Technical Correlating Committee on Safety to Life,

Revisit the subject of smoke control for smokeproof enclosures as raised in Proposal 101-117a and Comment 101-75 from the 2008 Annual Revision Cycle. The proposal recommended the following:

1) Revise 7.2.3.4 to read as follows:

**Vestibule.** Where a vestibule is provided, the doorway from the floor into the vestibule shall be protected with an approved fire door assembly having a 1½-hour fire protection rating, and the fire door assembly from the vestibule to the smokeproof enclosure shall have not less than a 20-minute fire protection rating. Doors shall be designed to minimize air leakage and shall be self-closing or shall be automatic-closing by actuation of a smoke detector within 10 ft (3050 mm) of the vestibule door. New doors shall be installed in accordance with NFPA 105, *Standard for the Installation of Smoke Door Assemblies.*

2) Revise 7.2.3.8.2 as follows:

The vestibule shall be provided with not less than one air change per minute and the exhaust shall be 150 percent of the supply. Supply air shall enter and exhaust air shall discharge from the vestibule through separate tightly constructed ducts used only for such purposes. Supply air shall enter the vestibule within 6 in. (150 mm) of the floor level. The top of the exhaust register shall be located not more than 6 in. (150 mm) below the top of the trap and shall be entirely within the smoke trap area. Doors, when in the open position, shall not obstruct duct openings. Controlling dampers shall be permitted in duct openings if needed to meet the design requirements. Pressurization shall be permitted to a minimum of 0.05 in. w.g. (12.5 Pa) positive relative to the fire floor and the stair enclosure pressurized to a minimum of 0.05 in. w.g. (12.5 Pa) positive relative to the vestibule.

3) Delete 7.2.3.8.3 in its entirety and renumber existing sections accordingly.

4) Revise 7.2.3.10.1 as follows:

For both mechanical ventilation and pressurized stair enclosure systems, the activation of the systems shall be initiated by a smoke detector installed in an approved location within 40 ft (12190 mm) of the entrance to the smokeproof enclosure, or by flow indication from an approved sprinkler system complying with NFPA 13, or from any approved automatic fire detection and alarm system complying with NFPA 72.

Substantiation: The proposed text was rejected at the ROP stage in the processing of the 2009 edition and the rejection was upheld in the ROC. The MEA committee noted that the text provided no allowance for existing installations that do not meet the new proposed criteria. Further, the TCC noted that MEA planned to address the subject for the 2012 edition revision cycle. The TCC directed that the subject be retained on the MEA agenda for the next revision cycle.

Committee Meeting Action: Reject

Committee Statement: The proposed text has no exemptions for existing installations and lacks technical substantiation. The action of Reject will allow for public comment and potential revision at the ROC-stage.

Number Eligible to Vote: 28

Ballot Results: Affirmative: 27

Ballot Not Returned: 1 McMahon, C.
A smokeproof enclosure shall be continuously enclosed by barriers having 2-hour fire resistance ratings from the highest point to the level of exit discharge except as otherwise permitted in 7.2.3.3.3 lowest point by barriers having 2 hour fire resistance ratings.

7.2.3.4 A smokeproof enclosure which serves floors below the level of exit discharge shall not be required to comply with this Section where the portion of the stairway below is separated from the stairway enclosure at the level of exit discharge with a 1 hour fire barrier.

Substantiation: This code change clarifies where a smokeproof exit enclosure is required. It isn’t clear what a required level exit stairway is intended to be. The proposed change clarifies the Section does not apply to levels below the point of exit discharge if enclosed with a 1 Hr. fire barrier.

Committee Meeting Action: Accept in Principle

Revise text to read as follows:
7.2.3.3 Enclosure.

7.2.3.3.1 A smokeproof enclosure shall be continuously enclosed by barriers having 2-hour fire resistance ratings from the highest point to the level of exit discharge except as otherwise permitted in 7.2.3.3.3 lowest point by barriers having 2 hour fire resistance ratings.

7.2.3.3.2 Where a vestibule is used, it shall be within the 2-hour-rated enclosure and shall be considered part of the smokeproof enclosure.

7.2.3.3.3 A smokeproof enclosure comprised of an enclosed stair and serving floors below the level of exit discharge shall not be required to comply with 7.2.3.3.1 where the portion of the stairway below is separated from the stairway enclosure at the level of exit discharge by barriers with 1 hour fire resistance ratings.

Committee Statement: The Committee Meeting Action does what the submitter requested but reworks the text for compliance with the NFPA style manual. The action also adds the phrase "comprised of an enclosed stair" as not all smokeproof enclosures are stairs. The submitter’s proposed exemption applies only to stairs.

Number Eligible to Vote: 28
Ballot Results: Affirmative: 27
Ballot Not Returned: 1 McMahon, C.
Add the following paragraph as Section 7.2.3.5.2 and create a heading “Discharge” as Section 7.2.3.5. Renumber the existing Section 7.2.3.5 as 7.2.3.5.1:

The smokeproof enclosure shall be permitted to discharge through areas on the level of exit discharge provided that all the following criteria are met:

1. The building shall be protected throughout by an approved, automatic sprinkler system in accordance with Section 9.7.
2. The discharge from the smokeproof enclosure shall lead to a free and unobstructed way to an exterior exit, and such way shall be readily visible and identifiable from the point of discharge from the smokeproof enclosure.
3. Not more than 50 percent of the required number and capacity of exits shall discharge through areas on the level of exit discharge.

Substantiation: Smokeproof enclosures are only required under the Life Safety Code in very unique situations. They are not required for high rise buildings unless utilized to allow a single exit in an existing residential building. The problem, with the current language is that voluntary smokeproof enclosures or those required by other codes (in a multiple code application scenario) often are interpreted to meet the overly restrictive requirements of the LSC.

Currently, the Life Safety Code allows exits to discharge through areas on the level of exit discharge provided that the requirements of Section 7.7.2 are met, but there is no clear justification as to why smokeproof enclosures are not allowed the same provision. In many new buildings, it is impractical and costly for the smokeproof enclosures to discharge directly to the outside or through an exit passageway. The proposed change will allow smokeproof enclosures in new, fully sprinkler protected buildings to discharge through lobbies and similar areas, while providing the same degree of safety that is required for an exit discharge. This retains the intent of providing a protected means of egress from smokeproof enclosures, while incorporating the same allowances that already exist for exits.

The allowance for smokeproof enclosures to discharge thru the level of exit discharge is commonly done under other model codes. In high rise building, the smokeproof enclosure that discharges thru the lobby can provide access to upper floors for the fire service form the lobby which is protected from falling debris. This can provide a positive feature for emergency operations in a building.

Committee Meeting Action: Accept in Principle
Revise text to read as follows:

7.2.3.5 Discharge.

7.2.3.5.1 Every smokeproof enclosure shall discharge into a public way, into a yard or court having direct access to a public way, or into an exit passageway. Such exit passageways shall be without openings, other than the entrance to the smokeproof enclosure and the door opening to the outside yard, court, or public way. The exit passageway shall be separated from the remainder of the building by a 2-hour fire resistance rating.

7.2.3.5.2 The smokeproof enclosure shall be permitted to discharge through areas on the level of exit discharge, provided that all the following criteria are met:

1. The building shall be protected throughout by an approved, supervised automatic sprinkler system in accordance with Section 9.7.
2. The discharge from the smokeproof enclosure shall lead to a free and unobstructed way to an exterior exit, and such way shall be readily visible and identifiable from the point of discharge from the smokeproof enclosure.
3. Not more than 50 percent of the required number and capacity of exits shall discharge through areas on the level of exit discharge.

Committee Statement: The Committee Meeting Action does what the submitter requested but adds the word "supervised" to the sprinkler system requirement. The committee believes that the sprinkler system needs to be supervised in order to permit the exemption.

Number Eligible to Vote: 28
Ballot Results: Affirmative: 27
Ballot Not Returned: 1 McMahon, C.
Every smoke proof enclosure shall discharge into a public way, into a yard or court having direct access to a public way, or into an exit passageway. Such exit passageways shall be without openings, other than the entrance to the smoke proof enclosure and the door opening to the outside yard, court or public way. The exit passageway shall be separated from the remainder of the building by a 2-hour fire resistance rating.

Substantiation: Currently Paragraph 7.2.3.5 prohibits exit stair enclosures that are smoke proof enclosures (which also includes pressurized exit stair enclosures) from discharging through the level of exit discharge. The intent of this code change proposal is to delete Paragraph 7.2.3.5 in its entirety. We are unaware of any associated risks associated with exit stair enclosures that are smoke proof enclosures that would prohibit the subject exit enclosure from discharging through the level of exit discharge which is otherwise permitted by exit stair enclosures that are not smoke proof enclosures. Also, the existing text does not permit (interior) exit discharge passageways serving rooms that are separated from the passageway even by 90 minute doors - a recognized legal exit discharge configuration. In addition, NFPA 5000 requires all high-rise building's vertical exit enclosures to be smoke proof enclosures. Therefore, per NFPA 5000 all exit stair enclosures are not permitted to discharge through the level of exit discharge.

Committee Meeting Action: Accept in Principle

See Committee Meeting Action on Proposal 101-119.

Committee Statement: The Committee Meeting Action on the referenced proposal should meet the submitter's intent.

Number Eligible to Vote: 28

Ballot Results: Affirmative: 27

Ballot Not Returned: 1 McMahon, C.

7.2.3.9.1.x A self resetting damper that opens momentarily by activation of the fire exit hardware may be provided to momentarily relieve stairway pressurization forces to permit the door opening forces to set the door in motion to be achieved.

Provides an alternative for HVAC engineers who have trouble pressurizing stairwells and getting doors to open within the force requirements.

Committee Meeting Action: Reject

Committee Statement: The submitter's recommended text does not state that the damper must relieve to the outside. If not, then the requirement needs to state that the damper be fire- and smoke-rated. Good initial design obviates the need for the requested change.

Number Eligible to Vote: 28

Ballot Results: Affirmative: 27

Ballot Not Returned: 1 McMahon, C.
7.2.4.4.4 Where the bridge serves as a horizontal exit in one direction, the horizontal door leaf shall be required to swing only in the direction of egress travel, unless the door leaf complies with the swing requirements for the following:

1. Existing health care occupancies in Chapter 19
2. Existing detention and correctional occupancies in Chapter 23

7.2.4.4.4.1 Bridges shall not be prohibited from providing access to enter a building.

Substantiation: If the bridge may be used as an exit it should be permitted to be an entrance as well.

Committee Meeting Action: Reject

Committee Statement: The requested permissive item is not needed as ingress is not addressed in the Code.

Number Eligible to Vote: 28
Ballot Results: Affirmative: 27
Ballot Not Returned: 1 McMahon, C.

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7.2.5.3.1 The surface of ramps shall be of slip-resistant materials that are securely attached, solid and without perforations.

Substantiation: Consistent with Building Code requirement.

This is not original material; its reference/source is as follows:

Committee Meeting Action: Reject

Committee Statement: The material is already covered elsewhere in the Code. A ramp is a walking surface and slip resistance of walking surfaces in addressed in 7.1.6.4. The ramp provisions of 7.2.5.3.1 already require ramp floors and landings to be solid without perforations.

Number Eligible to Vote: 28
Ballot Results: Affirmative: 27
Ballot Not Returned: 1 McMahon, C.
2.6.2 Enclosure. An exit passageway shall be separated from other parts of the building as specified in 7.1.3.2, and the following alternatives shall be permitted:

1. Fire windows in accordance with 8.3.3 shall be permitted to be installed in the separation in a building protected throughout by an approved, supervised automatic sprinkler system in accordance with Section 9.7.

2. Existing fixed wired glass panels in steel sash shall be permitted to be continued in use in the separation in buildings protected throughout by an approved, supervised automatic sprinkler system in accordance with Section 9.7.

8.6.7* Atriums. Unless prohibited by Chapters 11 through 43, an atrium shall be permitted, provided that the following conditions are met:

1. The atrium is separated from the adjacent spaces by fire barriers with not less than a 1-hour fire resistance rating with opening protectives for corridor walls, unless one of the following is met:
   a. The requirement of 8.6.7(1) shall not apply to existing, previously approved atriums.
   b. Any number of levels of the building shall be permitted to open directly to the atrium without enclosure based on the results of the engineering analysis required in 8.6.7(5).
   c. Glass walls and inoperable windows shall be permitted in lieu of the fire barriers where all the following are met:
      i. Automatic sprinklers are spaced along both sides of the glass wall and the inoperable windows at intervals not to exceed 6 ft (1830 mm).
      ii. The automatic sprinklers specified in 8.6.7(1)(c)(i) are located at a distance from the glass wall not to exceed 12 in. (305 mm) and arranged so that the entire surface of the glass is wet upon operation of the sprinklers.
      iii. The glass wall is of tempered, wired, or laminated glass held in place by a gasket system that allows the glass framing system to deflect without breaking (loading) the glass before the sprinklers operate.

13.3.1 Protection of Vertical Openings. Any vertical opening shall be enclosed or protected in accordance with Section 8.6, unless otherwise permitted by the following:

1. Stairs or ramps shall be permitted to be unenclosed between balconies or mezzanines and main assembly areas located below, provided that the balcony or mezzanine is open to the main assembly area.
2. Exit access stairs from lighting and access catwalks, galleries, and gridirons shall not be required to be enclosed.
3. Assembly occupancies protected by an approved, supervised automatic sprinkler system in accordance with Section 9.7 shall be permitted to have unprotected vertical openings in accordance with 8.6.8.2.
4. Use of the following alternative materials shall be permitted where assemblies constructed of such materials are in good repair and free of any condition that would diminish their original fire resistance characteristics:
   a. Existing wood lath and plaster
   b. Existing ½ in. (13 mm) gypsum wallboard
   c. Existing installations of ¾ in. (6.3 mm) thick wired glass that are, or are rendered, inoperative and fixed in the closed position
   d. Other existing materials having similar fire resistance capabilities

18.3.7.9* Vision panels consisting of fire-rated glazing or wired glass panels in approved frames shall be provided in each cross-corridor swinging door and at each cross-corridor horizontal-sliding door in a smoke barrier.

18.3.7.10 Vision panels in doors in smoke barriers, if provided, shall be of fire-rated glazing or wired glass in approved frames.

19.3.7.6 Openings in smoke barriers shall be protected using one of the following methods:
1. Fire-rated glazing
2. Wired glass panels in steel frames
3. Doors, such as 1¾ in. (44 mm) thick, solid-bonded wood core doors
4. Construction that resists fire for a minimum of 20 minutes.

20.3.7.11 A vision panel consisting of fire-rated glazing or wired glass panels in approved frames shall be provided in each cross-corridor swinging door and at each cross-corridor horizontal-sliding door in a smoke barrier.

20.3.7.12 Vision panels in doors in smoke barriers, if provided, shall be of fire-rated glazing or wired glass in approved frames.

Table 23.3.8 Subdivision of Resident Housing Spaces
Notes:
(1) Doors in openings in partitions required to be fire rated (FR) in accordance with Table 23.3.8, in other than required enclosures of exits or hazardous areas, are required to be substantial doors of construction that resists fire for a minimum of 20 minutes. Vision panels with wired glass or glass with not less than 45-minute fire-rated glazing are permitted. Latches and door closers are not required on cell doors.

32.2.3.6.1 Corridor walls, other than those meeting the provisions of 32.2.3.6.2, shall meet the following requirements:

(1) The walls separating sleeping rooms shall have a minimum ½-hour fire resistance rating. The minimum ½-hour fire resistance rating shall be considered to be achieved if the partitioning is finished on both sides with lath and plaster or materials providing a 15-minute thermal barrier.

(2) Sleeping room doors shall be substantial doors, such as those of 1½ in. (44 mm) thick, solid-bonded wood-core construction or of other construction of equal or greater stability and fire integrity.

(3) Any vision panels shall be fixed fire window assemblies in accordance with 8.3.4 or shall be wired glass not exceeding 9 ft² (0.84 m²) each in area and installed in approved frames.

32.3.3.7.18* Vision panels consisting of fire-rated glazing or wired glass panels in approved frames shall be provided in each cross-corridor swinging door and in each cross-corridor horizontal-sliding door in a smoke barrier.

32.2.3.6.1 Unless otherwise indicated in 33.2.3.6.1.1 through 33.2.3.6.1.4, corridor walls shall meet all of the following requirements:

(1) Walls separating sleeping rooms shall have a minimum ½-hour fire resistance rating. The minimum ½-hour fire resistance rating shall be considered to be achieved if the partitioning is finished on both sides with lath and plaster or materials providing a 15-minute thermal barrier.

(2) Sleeping room doors shall be substantial doors, such as those of 1½ in. (44 mm) thick, solid-bonded wood-core construction or of other construction of equal or greater stability and fire integrity.

(3) Any vision panels shall be fixed fire window assemblies in accordance with 8.3.4 or shall be wired glass not exceeding 9 ft² (0.84 m²) each in area and installed in approved frames.

43.10.5.4 Transoms. In corridor walls required to be fire rated by this Code, existing transoms shall be permitted to remain in use, provided that the transoms are fixed in the closed position and one of the following criteria is met:

(1) An automatic sprinkler shall be installed on each side of the transom.

(2) Fixed wired glass set in a steel frame or other approved glazing shall be installed on one side of the transom.

Substantiation: There is no reason to call out wired glass specifically, as NFPA 80 has been revised to delete reference to wired glass specifically, as it is just one of many fire rated glazing products on the market. This change will not have a cost impact.

Committee Meeting Action: Reject

Committee Statement: Note that the rejection by the SAF-MEA committee relates only to the portion of the submitter’s recommendation that addresses 7.2.6.2. Other technical committees with responsibility for the other sections addressed will take action on those items.

The provision of 7.2.6.2(2) needs to be retained as it applies to existing installations. The submitter has not justified why existing installations should be made to upgrade or be classified as deficient.

Number Eligible to Vote: 28

Ballot Results: Affirmative: 27

Ballot Not Returned: 1 McMahon, C.
Structural elements shall meet the requirements of 7.2.7.2.1 through 7.2.7.2.3.  
7.2.7.2.1 Structural elements, floors, and bearing walls shall have a fire resistance rating not less than the fire resistance rating required for the structural element, bearing or nonbearing wall, floor, or roof they support.

7.2.7.2.2 Structural elements, floors, and bearing walls shall be required to have only the fire resistance rating required for the construction classification of the building, provided that both of the following criteria are met:

(1) The structural elements support nonbearing wall or partition assemblies having a required fire resistance rating of 1 hour or less.

(2) The structural elements do not serve as exit enclosures, protection for vertical openings, or occupancy separations.

7.2.7.2.3 Structural elements, such as girders, beams, trusses, and spandrels, that have direct connections to columns carrying gravity loads, and that are essential to the stability of the building as a whole, shall have a fire resistance rating not less than that of the columns to which they are connected.

7.2.7.3 Structural elements required to have a fire resistance rating and that support more than two floors, one floor and roof, a bearing wall, or a nonbearing wall more than two stories high shall be individually protected on all sides for their full length with materials providing the required fire resistance rating.

7.2.7.4 Structural elements, other than those specified in 7.2.7.3, required to have a fire resistance rating shall be protected by individual encasement, or by membrane or ceiling protection in accordance with Section 8.6, or by a combination of both.

7.2.7.5 In addition to the requirements of 7.2.7.3 and 7.2.7.4, columns shall meet the following requirements:

(1) Where columns require a fire resistance rating, the entire column, including its connections to beams or girders, shall be individually protected.

(2) Where the column extends through a ceiling, the fire-resistant protection provided for the column shall be continuous from the top of the floor through the ceiling space to the top of the column.

7.2.7.6 Structural elements complying with 7.2.5 or 8.2.3.2.2 shall not be required to comply with 7.2.7.2 or 7.2.7.5.

RENUMBER SUBSEQUENT SECTIONS.

Substantiation: Some enforcers have mistakenly believed that elements of heavy timber construction must have individual encasement of these members complying with 7.2.7.2 and its subsections. This is unnecessary. Heavy timber does not have a fire resistance rating assigned to it. Rather, the fire resistive qualities of the timber resulting from the size of the members (the char layer which forms over the timber and provides insulation qualities to the interior of the timber) provide the anticipated performance under fire conditions. As addressed in various codes over the years heavy timber has never been required to meet the conditions of fire resistance rated construction. This proposal is intended to merely reinforce that idea to those who mistakenly insist that it should. Where a designer chooses to use exposed heavy timber to meet a fire resistance rating, calculation methods to do so exist in AF&PA’s NDS or ANSI/SFPE 29 Standard Calculation Methods for Structural Fire Protection, and are referenced elsewhere in this code. It was never the intent of 7.2 to require the designer to treat heavy timber as if it had been elevated to the status of fire resistance rated material simply by virtue of its having endurance in a fire exposure.

Committee Meeting Action: Reject

Committee Statement: The extensive text that the submitter shows and to which he wants to add an exemption for certain structural elements is not text from NFPA 101 - the text is in NFPA 5000.

Number Eligible to Vote: 28

Ballot Results: Affirmative: 27

Ballot Not Returned: 1 McMahon, C.
Move 7.2.12.2.2.3(2) to a new section 7.2.12.2.4* and make the provision for stair descent devices mandatory as follows:

7.2.12.2.3* Where the exit providing egress from an area of refuge to a public way that is in accordance with 7.2.12.2.2 includes stairs, the clear width of landings and stair flights, measured between handrails and at all points below handrail height, shall be not less than 48 in. (1220 mm), unless otherwise permitted by the following:

1) The minimum 48 in. (1220 mm) clear width shall not be required where the area of refuge is separated from the remainder of the story by a horizontal exit meeting the requirements of 7.2.4. (See also 7.2.12.3.4.)

2) For stairs where egress is in the descending direction, a clear width of not less than 37 in. (940 mm), measured at and below handrail height, shall be permitted where all of the following are met:
   a) An Approved stair descent device is provided on each floor served by the stair.
   b) Additional approved stair descent devices are provided on floors with an occupant load exceeding 200 at the ratio of one device per 200 occupants.
   c) The required approved stair descent devices are provided in an approved location on the floor.

Existing stairs and landings that provide a clear width of not less than 37 in. (940 mm), measured at and below handrail height, shall be permitted.

Insert a new section 7.2.12.2.4* to read as follows and renumber the sections that follow:

7.2.12.2.4* For stairs where egress is in the descending direction:

a) An approved stair descent device shall be provided on each floor served by the stair.

b) Additional approved stair descent devices shall be provided on floors with an occupant load exceeding 200 at the ratio of one device per 200 occupants.

c) The required approved stair descent devices shall be provided in an approved location on the floor.

Substantiation: This public comment was prepared by the NFPA Disability Access Review and Advisory Committee (DARAC) which I chair. The DARAC members are:

Patricia Barbosa, Barbosa Group (CA)
Rocky Burks, City of Sacramento, Dept. of Transportation Engineering Services Div. (CA)
HolLynn D’Lil, Self (CA)
Marilyn Golden, Disability Rights Education and Defense Fund (DREDF) (CA)
Todd Gritch, HKS, Inc (TX)
Marsha Mazz, The Access Board (DC)
Kevin McGuire, McGuire Associates, Inc. (MA)
Toby Olson, Governor’s Committee on Disability Issues and Employment (WA)
Bill Scott, Abilities Unlimited (AZ)
Richard Skaff, Designing Accessible Communities (CA)

DARAC is an advisory committee established by the NFPA President to advise the association, including the association’s technical committees, on all issues related to the needs of the disability community. DARAC’s initial meetings and assignments included a review of portions of the NIST World Trade Center report to the NFPA 101 and NFPA 5000 technical committees as well as proposals that have the potential to impact the disability community in other areas. DARAC met via conference call in August, 2007 to review the ROP actions. This public comment is in reaction to the action taken in the ROP.

With respect to the recommended change:

The committee does not agree with the concept of reducing the stair with below a 48” dimension and notes that this is in direct conflict with ADA provisions for certain stairs. We fully realize that the original proposal was not specifically addressing the allowance for the 37 inch clear width, which has been in the Code for some time, but the stair geometry and dimensions are an important factor when it comes to use of the stair descent equipment. Expanding the use of this equipment to more situations in more buildings will also go a long way in addressing the content of NIST NCSTAR 1, Recommendation 17 concerning evacuation for all building occupants. The committee notes that stair width reduction is generally not desirable in that as much, if not more width, may be needed to properly maneuver these devices particularly during an evacuation. The committee strongly believes
that such devices should be available in all multistory buildings.

Following the conference call at which DARAC prepared this public comment, it was letter balloted by DARAC.

DARAC ballot results for this comment:

- Agree- 8
- Agree with comment- 1
- Disagree- 0
- Abstain- 0
- Not Returned- 1 (Gritch)
- Total- 10

Comment #3: Mazz

Aff w/Comment: Delete the word “certain” and insert the words “associated with an area of refuge”.

Substantiation: The committee does not agree with the concept of reducing the stair width below a 48” dimension and notes that this is in direct conflict with ADA provisions for certain stairs associated with an area of refuge. We fully realize that the original proposal was not specifically addressing the allowance for the 37 inch clear width, which has been in the Code for some time, but the stair geometry and dimensions are an important factor when it comes to use of the stair descent equipment. Expanding the use of this equipment to more situations in more buildings will also go a long way in addressing the content of NIST NCSTAR 1.

Recommendation 17 concerning evacuation for all building occupants. The committee notes that stair width reduction is generally not desirable in that as much, if not more width, may be needed to properly maneuver these devices particularly during an evacuation. The committee strongly believes that such devices should be available in all multistory buildings.

**Committee Meeting Action: Accept in Principle in Part**

Delete 7.2.12.2.3(2) as follows:

7.2.12.2.3* Where the exit providing egress from an area of refuge to a public way that is in accordance with 7.2.12.2.2 includes stairs, the clear width of landings and stair flights, measured between handrails and at all points below handrail height, shall be not less than 48 in. (1220 mm), unless otherwise permitted by the following:

(1) The minimum 48 in. (1220 mm) clear width shall not be required where the area of refuge is separated from the remainder of the story by a horizontal exit meeting the requirements of 7.2.4. (See also 7.2.12.3.4.)

(2)* For stairs where egress is in the descending direction, a clear width of not less than 37 in. (940 mm), measured at and below handrail height, shall be permitted where all of the following are met:
   - (a) An approved stair descent device is provided on each floor served by the stair.
   - (b) Additional approved stair descent devices are provided on floors with an occupant load exceeding 200 at the ratio of one device per 200 occupants.
   - (c) The required approved stair descent devices are provided in an approved location on the floor.

(2) Existing stairs and landings that provide a clear width of not less than 37 in. (940 mm), measured at and below handrail height, shall be permitted.

Move the current annex text A.7.2.12.2.3(2) to follow the two paragraphs of text in A.7.2.12.2.3.

Do not create a new 7.2.12.2.4.

**Committee Statement:** The Committee Action rejects the submitter's recommendation to mandate the use of stair descent devices as the submitter did not provide adequate technical justification to show that the current requirements are inadequate, especially in view that the stair width will no longer be permitted to be reduced. The minimum 48-in. width between handrails is sufficient to permit a three-person carry of an occupant in a wheelchair.

The Committee Action deletes the option of using a narrower stair if stair descent device are provided. The deletion has no negative effect on existing installations as current 7.2.1.2.2.3(3) [which is being renumbered as (2)] permits existing stairs to be 37 in. wide.

The extensive annex text on stair descent devices is being retained as there are no product standards for these devices. The annex text is needed.

**Number Eligible to Vote:** 28

**Ballot Results:**
- Affirmative: 27
- Ballot Not Returned: 1 McMahon, C.
The intent of this code change proposal is to revise the current maximum floor area allowance per occupant in Table 7.3.1.2 for business occupancies from 100 ft²/person (gross) to 150 ft²/person (gross) for determining the means of egress requirements in business 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 business 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 150 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 7.3.1.2 for determining the means of egress requirements in business occupancies to 150 ft²/person (gross).


Committee Meeting Action: Accept in Principle

The SAF-MEA committee takes no action and defers to that of the SAF-MER committee.

Committee Statement: When the occupant load factors were moved from the 1.7 subsection of each occupancy chapter to Chapter 7 for inclusion on Table 7.3.1.2 based on "Use," the Technical Correlating Committee directed that technical responsibility for the occupant load factors would remain with the occupancy chapter committees.

Number Eligible to Vote: 28

Ballot Results: Affirmative: 27

Ballot Not Returned: 1 McMahon, C.

Comment on Affirmative:

PEACOCK, R.: For those interested in the details of the reference included by the submitter, the referenced NIST report is available on the NIST website at:
http://fire.nist.gov/bfrlpubs/fire96/PDF/f96013.pdf
Submitter: Technical Committee on Means of Egress, Revise 7.3.1.5 as follows:

7.3.1.5 Capacity from a Point of Convergence. Where means of egress from a story above and a story below converge at an intermediate story, the capacity of the means of egress from the point of convergence shall be not less than the sum of the required capacity of the two means of egress.

Substantiation: The term "required capacity" is correctly used in 7.3.1.4 but is missing from 7.3.1.5. The intent is that only the required capacity is needed to be added together. A stair with a minimum width of 44 in. has capacity for 147 persons. In a two-story building with basement, if the stair from the basement level has a required capacity of 80 persons but is 44 in. wide, and the stair from the second floor has a required capacity of 120 persons but is 44 in. wide, the egress path from the point of convergence needs to be wide enough to accommodate 200 persons (that is, 80 + 120 =200) and not 294 (that is, 147 + 147 =294).

Committee Meeting Action: Accept
Number Eligible to Vote: 28
Ballot Results: Affirmative: 27
Ballot Not Returned: 1 McMahon, C.

Submitter: Eddie Phillips, Southern Regional Fire Code Development Committee

Recommendation: Revise the titles of various X.2.4 subsections from “NUMBER OF EXITS”, to “NUMBER OF MEANS OF EGRESS”. The subsections involved are: 12.2.4; 13.2.4; 14.2.4; 15.2.4; 16.2.4; 17.2.4; 18.2.4; 19.2.4; 20.2.4; 21.2.4; 22.2.4; 23.2.4; 28.2.4; 29.2.4; 30.2.4; 31.2.4; 32.2.4; 33.2.4; 36.2.4; 37.2.4; 38.2.4; and 39.2.4.

Substantiation: From time to time a question arises as to why some subsections are titled “NUMBER OF EXITS” and others are titled “NUMBER OF MEANS OF EGRESS” and most all subsections noted reference to 7.2.4 “NUMBER OF MEANS OF EGRESS”. It is understood from NFPA staff that there is no reason for this difference and that “NUMBER OF MEANS OF EGRESS” is the preferred title. This proposal is intended to eliminate confusion over the title differences and to provide some additional uniformity in the Code.

Committee Meeting Action: Accept in Principle

Do what the submitter requests and revise the titles of various X.2.4 subsections from “NUMBER OF EXITS”, to “NUMBER OF MEANS OF EGRESS”. The subsections involved are: 12.2.4; 13.2.4; 14.2.4; 15.2.4; 16.2.4; 17.2.4; 18.2.4; 19.2.4; 20.2.4; 21.2.4; 22.2.4; 23.2.4; 28.2.4; 29.2.4; 30.2.4; 31.2.4; 32.2.4; 33.2.4; 36.2.4; 37.2.4; 38.2.4; and 39.2.4.

Additionally, get the occupancy chapter technical committees to review all x.2.4 subsections and revise them as needed to correlate with the name change addressed above.

Committee Statement: The Committee Meeting Action does what the submitter requested but correct the references for Chapter 32 and 33. Additionally, the action asks the occupancy chapter technical committees to further revise the affected x.2.4 subsections for correlation with the title change.

Number Eligible to Vote: 28
Ballot Results: Affirmative: 27
Ballot Not Returned: 1 McMahon, C.
Recommendation: Adopt a modified explanatory text on page 251 of the 2009 LIFE SAFETY CODE HANDBOOK following 7.4.1.2, as the annex note for 7.4. The action will result in the following: **A.7.4.** Chapter 7.4 requires a minimum number of means of egress, unless otherwise specified by the occupancy chapters in subsections X.2.4. dealing with the “number of means of egress.” Several **occupancy chapters** establish not only the minimum number of means of egress but also the minimum number of actual exits that must be provided on each floor. For example, for new educational occupancies, 14.2.4 requires access to two exits and further requires that both of the exits be provided on the floor. In contrast, for industrial occupancies, 40.2.4.1.1 requires access to two exits and further requires that at least one of the exits be located on the floor. Access to the other exit can involve traveling to another floor via an egress component such as an open stair, provided that such open stair is permitted by the other Code provisions for the protection of vertical openings.

In most **occupancy chapters**, meeting the requirements for egress capacities and travel distances means the required minimum number of means of egress will automatically be met. However, in occupancies characterized by high occupant loads, such as assembly and mercantile occupancies, compliance with requirements for more than two exits per floor might require specific attention.”

**Substantiation:** This annex note will be very helpful to the user of the Code. It is a very important note in explaining why there are specific references to “exits” in some X.2.4 Code subsections rather than just number of “means of egress.” It is felt that this proposed annex note needs to be in the Code. That will automatically place it in the **Life Safety Code Handbook**.

**Committee Meeting Action:** Accept in Principle

Add annex material to accompany Section 7.4 as follows:

7.4* **Number of Means of Egress.**

A.7.4. Section 7.4 requires a minimum number of means of egress, unless otherwise specified by an occupancy chapter in its 2.4 subsection addressing number of means of egress. Several occupancy chapters establish not only the minimum number of means of egress but also the minimum number of actual exits that must be provided on each floor. For example, for new educational occupancies, 14.2.4 requires access to two exits and further requires that both of the exits be provided on the floor. In contrast, for industrial occupancies, 40.2.4.1.1 requires access to two exits and further requires that at least one of the exits be located on the floor. Access to the other exit can involve traveling to another floor via an egress component such as an open stair, provided that such open stair is permitted by the occupancy chapter’s provisions for the protection of vertical openings.

In most occupancy chapters, meeting the requirements for egress capacities and travel distances means the required minimum number of means of egress will automatically be met. However, in occupancies characterized by high occupant loads, such as assembly and mercantile occupancies, compliance with requirements for more than two exits per floor might require specific attention.

**Committee Statement:** The Committee Meeting Action does what the submitter requested but presents the final text without strikethroughs as the source material is the Handbook, and not the Code.

**Number Eligible to Vote:** 28

**Ballot Results:** Affirmative: 27

**Ballot Not Returned:** 1 McMahon, C.
101-137     Log #339  SAF-MEA
(7.4.1.6.4 (New) ) Final Action: Reject

Submitter: Ignatius Kapalczynski, CT Office of State Fire Marshal
Recommendation: New text to read as follows:
7.4.1.6.4 Elevator lobbies constructed as Areas of Refuge in accordance with 7.2.12.
Substantiation: Areas of Refuge without access to an exit but only an elevator are permitted and thus should be as safe as locked elevator lobbies.
Committee Meeting Action: Reject
Committee Statement: As written, the recommendation appears to be an exception to this section; it is not a complete sentence so the committee is uncertain what the submitter intends. The submitter's recommended text might conflict with the Committee Action on Proposal 101-418. It would no longer require lobbies to be accessible to an exit.
Number Eligible to Vote: 28
Ballot Results: Affirmative: 27
Ballot Not Returned: 1 McMahon, C.

101-138     Log #254  SAF-MEA
(7.4.1.7 ) Final Action: Reject

Recommendation: Add new text to read as follows:
7.4.1.7 Atrium.
7.4.1.7.1 Up to 50 percent of the exits required by this section shall be permitted to be located within an atrium without enclosures where the stair discharges to the floor of the atrium, and where the floor of the atrium is at the level of exit discharge and conforms with Section 8.6.7.
7.4.1.7.2 The footprint of the stairway when measured horizontally within the perimeter of the atrium floor opening, shall not equal more than 25 percent of the area of the atrium on a per floor basis.
Substantiation: The atrium enclosure provides adequate protection for occupants of the building by providing fire suppression, smoke removal systems and provides additional features that a stair enclosure lacks; the ability to observe the environment in which the stair is located. It would be a simple matter to glance down into the atrium prior to mounting the stairs to see if there are problems associated with the environment, making the decision to use the atrium stair much simpler than a stair whose environment is unknown beyond the one visible flight of stairs.
Committee Meeting Action: Reject
Committee Statement: The SAF-MEA committee is sympathetic to the concept being advanced by the submitter. But, there are too many problems with the proposed text. The text would be in conflict with other Code sections in that an unenclosed stair is not an exit. Where occupancy chapters, like business, require that two exits be ON the floor, the stair must be enclosed. Also, the committee is unsure of what the submitter intends with respect to floors other than those that are 1 above and 1 below the level of exit discharge. The committee welcomes public comments on the subject.
Number Eligible to Vote: 28
Ballot Results: Affirmative: 27
Ballot Not Returned: 1 McMahon, C.
Comment on Affirmative:
ORLOWSKI, S.: See Comment for proposal 101-106 Log # 225
7.5.2.1  "rooms, elevator lobbies or..."
Since the code permits elevator lobbies to be locked, they need to be listed in this section along with all other spaces subject to locking.
Committee Meeting Action:  Reject
Committee Statement:  The recommended change is not needed. The text already says "other spaces subject to locking."
Number Eligible to Vote:  28
Ballot Results:  Affirmative: 27
Ballot Not Returned:  1 McMahon, C.

7.7.1.1  Yards, courts, open spaces, or other portions of the exit discharge shall be of the required width and size and adequately protected to provide all occupants with a safe access to a public way.
Size is not the only issue in providing safe access to a public way. This appears to be a major missing subject in 7.7. It is recognized that "adequately protected" may need further work or an annex note. The intent is to use this as a starting point for committee discussion. The committee chair will be appointing a task group to work on this.
Committee Meeting Action:  Reject
Committee Statement:  The term "adequately protected" is not defined.
Number Eligible to Vote:  28
Ballot Results:  Affirmative: 27
Ballot Not Returned:  1 McMahon, C.
Submitters: Chad E. Beebe, Washington State Department of Health

Recommendation: Add new text as follows:

7.7.1.2 The requirement of 7.7.1 shall not apply to exterior exit discharge as otherwise provided in 7.7.7.

7.7.7 Safe Dispersal Area. Where approved by the authority having jurisdiction, exits shall be permitted to discharge to safe dispersal areas provided:

1) The safe dispersal area shall be large enough to accommodate 50 square feet per person

2) The safe dispersal area shall be protected from other hazards such as traffic and severe flooding.

Substantiation: It is not practical to require exits to extend all the way to a public way. In some rural instances or private campuses the public way could be a ½ or even a mile away. The intent of the section should be to get occupants to a safe area.

Committee Meeting Action: Reject

Committee Statement: The dispersal area recommended by the submitter could be a courtyard with no way out. Exit discharge must be arranged so occupants can continue moving along the egress path. The submitter provided no substantiation for the choice of 50 sq ft. The AHJ has the authority to permit the exit discharge to end prior to reaching a public way as might be done on a large, private industrial site.

Number Eligible to Vote: 28
Ballot Results: Affirmative: 27
Ballot Not Returned: 1 McMahon, C.

Submitters: Peter Leszczak, US Department of Veterans Affairs

Recommendation: Revise text to read as follows:

7.7.1.5 Means of egress shall be permitted to terminate at a 2-hour fire resistance rated horizontal exit that complies with Section 7.2.4.

Substantiation: Currently horizontal exits are permitted to be substituted for other type of exits. However stairs cannot discharge to a horizontal exit. In reality, if you exit into a stair and traverse one or more floors away from the fire which terminates at a horizontal exit, you are actually safer then simply going through a horizontal exit.

Committee Meeting Action: Reject

Committee Statement: The committee is uncertain what the submitter is requesting. It asks that the submitter define the problem. The submitter's substantiation relates to stairs and seems not related to the recommended change.

Number Eligible to Vote: 28
Ballot Results: Affirmative: 27
Ballot Not Returned: 1 McMahon, C.
The requirement of 7.7.2.4 shall not apply where the discharge area is a vestibule or foyer that meets all of the following criteria:

1. The depth from the exterior of the building shall be not more than 10 ft (3050 mm), and the length shall be not more than 30 ft (9140 mm).

2. The foyer shall be separated from the remainder of the level of discharge by construction providing protection not less than the equivalent of wired glass in steel frames or 45 minutes of fire-resistive construction.

3. The foyer shall serve only as means of egress and shall include an exit directly to the outside.

Substantiation: Foyers can be constructed with a variety of materials. It is not uncommon to have the two opposing sides constructed with gypsum covered structural members or other material and the front and rear constructed entirely of glazing. Since “wired glass” has been typically recognized as providing 45 minutes of fire-rated protection it is clearer to simply spell out the 45 minute protection requirement to apply to whatever material is utilized.

There also is no reason to call out wired glass specifically, as NFPA 80 has been revised to delete reference to wired glass as it is one of many fire rated glazing products on the market. While providing correlation with NFPA 80 this change will not have a cost impact.

Committee Meeting Action: Accept in Principle in Part

Committee Statement: There is inadequate substantiation to delete the reference to wired glass, especially as it is needed for existing installations. However, the Committee Action adds the 45-minute fire resistive construction option requested by the submitter.

Number Eligible to Vote: 28

Ballot Results: Affirmative: 27

Ballot Not Returned: 1 McMahon, C.
Stairs that continue more than one-half story beyond the level of exit discharge shall be interrupted at the level of exit discharge, by partitions, doors or other effective means. Where the interruption provided at the level of exit discharge will obstruct the path of egress of other occupants using the stair, the interruption is permitted to be located no more than one-half story below the level of exit discharge.

Substantiation: In specific but common stair arrangements, providing interruption at the level of exit discharge obstructs that path of egress for other occupants using the stair. The revision will provide interruption no more than one-half story beyond the level of exit discharge and will eliminate this obstruction.

Committee Meeting Action: Accept in Principle in Part

Committee Statement: The Committee Meeting Action on the referenced proposal should meet much of the submitter's intent. The submitter's proposed text related to positioning the interruption one-half floor level below the LED is too prescriptive given the changes being made by the referenced proposal.

The concept of not obstructing others' egress, as raised by the submitter, has been added to the annex text created by the Committee Meeting Action on Proposal 101-145.

Number Eligible to Vote: 28
Ballot Results: Affirmative: 27
Ballot Not Returned: 1 McMahon, C.
7.7.3.2 Stairs that continue more than one-half story beyond the level of exit discharge shall be provided with an approved means to prevent occupants from traveling past the level of exit discharge during emergency building evacuation interrupted at the level of exit discharge by partitions, doors or other effective means.

Add an annex note to 7.7.3.2 as follows:
A.7.7.3.2 Examples include partitions, doors and/or signage.

Substantiation: Lists of examples should not be provided in the base requirement. New text removes list material and places into the annex, and substitutes more generic language. Signage has been added to the list as it can be just as effective as physical barriers.

Committee Meeting Action: Accept in Principle

Revise text to read as follows:
7.7.3.2 Stairs that continue more than one-half story beyond the level of exit discharge shall be provided with an approved means to prevent occupants from traveling past the level of exit discharge during emergency building evacuation interrupted at the level of exit discharge by partitions, doors or other effective means.

Add an annex note to 7.7.3.2 as follows:
A.7.7.3.2 Examples include partitions and gates. The design should not obstruct the normal flow of occupants to the exit discharge.

Committee Statement: The Committee Meeting Action does what the submitter requested but reworks the text for clarity. The annex text was revised so as not to recognize signage as there is no assurance that signage will interrupt the flow of occupants past the level of exit discharge. The annex text also draws from the concept advanced by the submitter of Proposal 101-144.

Number Eligible to Vote: 28
Ballot Results: Affirmative: 26 Negative: 1
Ballot Not Returned: 1 McMahon, C.

Explanation of Negative:
VERSTEEG, J.: The use of signage, graphics, and pictograms has been a viable alternative in those instances where a physical barrier is not practical or would be an impediment. The committee statement that there is no assurance that signage will interrupt the flow of occupants is subjective and not based on factual findings.
Submitter: Thomas W. Jaeger, Jaeger and Associates, LLC
Recommendation: New and deleted text to read as follows:

Section 7.8.1.1.1 Illumination provided outside the building shall be to either a public way or a distance away from the building that is considered safe; whichever is closest to the building being evacuated.

Delete Section A 7.8.1.1 Illumination provided outside the building should be to either a public way or a distance away from the building that is considered safe, whichever is closest to the building being evacuated.

Substantiation: The nursing home industry has many facilities that are in rural areas and long distances to a public way as defined in this Code. Because Section 7.8.1.1 states that the illumination shall be provided to a public way, the majority of surveyors either ignore the annex note or state that the annex note is advisory and therefore not enforceable. Basically the guidance given in the annex is of little value and needs to be put in the requirements of the Code. We fully agree that the illumination does not need to extend to a public way if the public way is a long distance from the building being evacuated. The Code needs to tell the AHJ that in the Code and not in the annex.

Because all 17,000 existing nursing homes are required to comply with the Life Safety Code and are surveyed every year for compliance with the LSC, the industry has unnecessarily spent millions of dollars extending illumination to public ways without measurably increasing the level of safety to the occupants.

Committee Meeting Action: Reject
Committee Statement: The submitter has chosen to address only illumination (and emergency lighting in Proposal 101-150) which will create inconsistencies with other requirements that are meant to apply within the exit discharge. It might be better to redefine the term "public way" so all egress-related items will be treated consistently. The submitter's text is too open-ended with respect to something that is "considered safe." By whom? The text might be suitable as annex material.

Number Eligible to Vote: 28
Ballot Results: Affirmative: 27
Ballot Not Returned: 1 McMahon, C.
Comment on Affirmative:

ORLOWSKI, S.: NAHB encourages the proponent to comeback during the comment stages to address the concerns raised by the committee and to look into the committees suggestion of revising the definition for the term "public way".

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Submitter: Technical Committee on Means of Egress,
Recommendation: Revise text to read as follows:

7.8.1.2.2 Unless prohibited by Chapters 11 through 43, automatic motion sensor–type lighting switches shall be permitted within the means of egress, provided that the switch controllers comply with all of the following:

1. The switch controllers are listed
2. The switch controllers are equipped for fail-safe operation and evaluated for this purpose.
3. The illumination timers are set for a minimum 15-minute duration; and
4. The motion sensor is activated by any occupant movement in the area served by the lighting units.
5. The switch controller is activated by activation of the building fire alarm system, if provided.

Substantiation: The committee was made aware of current concern that motion sensor-type lighting activators might not illuminate the required lighting if smoke obscures the occupant movement from being detected. The revision helps to assure that the system will function properly under expected conditions.

Committee Meeting Action: Accept
Number Eligible to Vote: 28
Ballot Results: Affirmative: 27
Ballot Not Returned: 1 McMahon, C.
Technical Committee on Means of Egress,

Add new text to read as follows:

7.8.1.2.3* Energy saving sensors, switches, timers or controllers shall be approved and shall not compromise the continuity of illumination of the means of egress required by 7.8.1.2.

A.7.8.1.2.3 A consideration for the approval of automatic, motion-sensor type lighting switches, controls, timers or controllers is whether the equipment is listed as a fail-safe device for use in the means of egress.

Substantiation: Prior to the last couple of code revision cycles, there were no energy conservation codes and there was less attention given to the use of motion sensors, switches, timers, and dimmers. Currently, there is intense interest in these devices and there is minimal guidance for the use of these devices in the means of egress. There are three lighting conditions in the means of egress which must not be compromised to insure occupant safety - normal lighting, emergency lighting and no lighting (complete failure of normal and emergency lighting). The proposed revisions are the committee's initial attempt to address the subject.

Committee Meeting Action: Accept

Number Eligible to Vote: 28

Ballot Results: Affirmative: 27

Ballot Not Returned: 1 McMahon, C.
Note: This proposal appeared as Comment 101-98 (Log #75) which was held from the Annual 2008 ROC.
Submitter: Edward J. Peznowski,
Recommendation: I propose that the following language be integrated.
7.9.2.2.1 Any required emergency lighting shall be designed and installed so that the failure of any individual lighting element, such as the burning out of a light bulb, shall not leave in total darkness any space that requires emergency lighting.
Substantiation: The problem is, when emergency lighting is required and being installed, the owners of the facilities are installing one emergency lighting fixture with a single bulb at the exit discharge. Nowhere in the Life Safety Code past or present does it state the above new text, however, NFPA 70 National Electric Code (2005 edition), Article 700, Emergency Systems, Section 700-16, clearly states this:
Emergency illumination shall include all required means of egress lighting, illuminated exit signs, and all other lights specified as necessary to provide required illumination.
Emergency lighting systems shall be designed and installed so that the failure of an individual lighting element, such as the burning out of a light bulb, cannot leave in total darkness any space that requires emergency illumination.
Where high-intensity discharge lighting such as high- and low-pressure sodium, mercury vapor, and metal halide is used as the sole source of normal illumination, the emergency lighting system shall be required to operate until normal illumination has been restored.
Exception: Alternative means that ensure emergency lighting illumination level is maintained shall be permitted. Illumination of Means of Egress clearly states this.
7.8.1.4* Required illumination shall be arranged to that the failure of any single lighting unit does not result in an illumination level of less than 0.2 ft-candle (2 lux) in any designated area.
A.7.8.1.4 An example of the failure of any single lighting unit is the burning out of an light bulb.
This is not original material; its reference/source is as follows:
NFPA 70, Article 700, Section 700-16
Committee Meeting Action: Reject
Committee Statement: The submitter's recommended text would require redundancy of existing and new systems without substantiation that such change is needed. Emergency lighting is tested per 7.9.3 for availability. The use of the phrase "in total darkness" is not practical for enforcement; it is simply a matter of the precision of the measurement instrument.
Number Eligible to Vote: 28
Ballot Results: Affirmative: 27
Ballot Not Returned: 1 McMahon, C.
The ingress path into the building electric service room and the area around all interior service panels in non-dwelling unit occupancies 200 amperes and above shall be automatically illuminated upon loss of power.

Illumination level shall be 1-footcandle on the ingress path from the switchgear and 3-footcandles on the vertical surfaces of the service equipment.

A delay of not more than 10 seconds upon starting and a duration of not less than 90-minutes shall be required.

Substantiation: This proposal originated in a proposal 1-218, Log #2401 of the 2005 National Electric Code cycle by David Williams, Chief Electrical Inspector of Delta Township, Michigan. The concept of emergency lighting for electricians in electrical equipment rooms was rejected 11-1 in that cycle and, in intervening ROP's and ROC's became a broadening discussion.

In the 2011 ROP, CMP-1 rejected it again, explaining that a requirement of this nature belongs in the Life Safety Code.

Note: Supporting material is available for review at NFPA Headquarters.

Committee Meeting Action: Reject

Committee Statement: The purpose of the Code is to facilitate evacuation from the facility, not to facilitate repairs during a power outage. Service personnel can carry portable luminaires (flashlights), if needed.

Number Eligible to Vote: 28
Ballot Results: Affirmative: 27
Ballot Not Returned: 1 McMahon, C.

Submitter: Ignatius Kapalczynski, CT Office of State Fire Marshal
Recommendation: New text to read as follows:

7.9.1.1 (7) Doors equipped with delayed-egress locks in accordance with 7.2.1.6.1.

Substantiation: Assures that the required sign can be seen and read and for consistency with 5000 11.2.1.6.1.7

Committee Meeting Action: Reject

Committee Statement: The requested item is already in the Code as 7.9.1.1(4).

Number Eligible to Vote: 28
Ballot Results: Affirmative: 27
Ballot Not Returned: 1 McMahon, C.
Emergency lighting outside the building shall provide illumination to either a public way or a distance away from the building that is considered safe; whichever is closest to the building being evacuated.

Delete Section A 7.9.1.1

Emergency lighting outside the building should provide illumination to either a public way or a distance away from the building that is considered safe; whichever is closest to the building being evacuated.

Substantiation: The nursing home industry has many facilities that are in rural areas and long distances to a public way as defined in this Code. Because Section 7.9.1.2 states that the illumination shall be provided to a public way, the majority of surveyors either ignore the annex note or state that the annex note is advisory and therefore not enforceable. Basically the guidance given in the annex is of little value and needs to be put in the requirements of the Code. We fully agree that emergency lighting does not need to extend to a public way if the public way is a long distance from the building being evacuated. The Code needs to tell the AHJ that in the Code and not in the annex.

Because all 17,000 existing nursing homes are required to comply with the Life Safety Code and are surveyed every year for compliance with the LSC, the industry has unnecessarily spent many, many dollars extending emergency lighting to public ways without measurably increasing the level of safety to the occupants.

Committee Meeting Action: Reject

Committee Statement: The submitter has chosen to address only emergency lighting (and illumination in Proposal 101-146) which will create inconsistencies with other requirements that are meant to apply within the exit discharge. It might be better to redefine the term "public way" so all egress-related items will be treated consistently. The submitter's text is too open-ended with respect to something that is "considered safe." By whom? The text might be suitable as annex material.

Number Eligible to Vote: 28
Ballot Results: Affirmative: 27
Ballot Not Returned: 1 McMahon, C.
Comment on Affirmative:

ORLOWSKI, S.: See NAHB comment submitted on proposal 101-146 Log#242

7.9.2.2 New emergency power systems for emergency lighting shall be at least Type 10, Class 1.5, Level I, in accordance with NFPA 110, Standard for Emergency and Standby Power Systems.

7.9.2.3 The new emergency power systems described in 7.9.2.2 shall be capable of illuminating the egress path within 10 seconds (Type), for a period of at least 1.5 hours (Class) failure of the equipment to perform could result in loss of human life or serious injuries (Level).

Substantiation: Users of the Life Safety Code should not have to refer to another code (NFPA 110) to obtain the basic performance requirements for illuminating the egress path.

Committee Meeting Action: Reject

Committee Statement: It is not important for the AHJ or user to understand the basis of the NFPA 110 ratings, but simply to determine that the generator is so rated. The proposal is at best explanatory, but is not necessary. There is ample precedence elsewhere of referencing minimum ratings from other standards. The minimum performance requirements (changeover time and duration) for emergency lighting are already covered in 7.9.1.3 and 7.9.2.1. The submitter's text might make for useful advisory annex material but doesn't belong as a supplemental requirement.

Number Eligible to Vote: 28
Ballot Results: Affirmative: 27
Ballot Not Returned: 1 McMahon, C.
The emergency lighting system shall be arranged to provide the required illumination automatically in the event of any interruption of normal lighting due to any of the following:

1. Failure of the public utility or other outside electrical power supply
2. Opening of a circuit breaker or fuse
3. In new facilities, manual act(s), including accidental opening of a switch controlling normal lighting facilities.

The third criterion requires additional monitoring of electrical systems, greater than what is required under the first two. It is also something that is not now, nor has been in any of the other model codes used in the country. In many locations the Life safety Code is not applicable during construction but is applicable as a maintenance code for existing facilities. This disconnects between requirements for new and existing construction causes problems in both installation and enforcement.

If the owner/architect is not aware of this consideration, significant additional costs are borne to retrofit this requirement which has not been addressed by the reviewing agency. While this is as much a logistic issue as a cost/function issue, the fact remains that this burden presents itself on a regular basis for those jurisdictions where another building code is adopted and the Life safety Code is used for existing facilities.

As an enforcement issue this has created real problems due to a lack of consistency. In some instances, this is enforced and the resulting costs incurred. In some jurisdictions, this is overlooked and not being necessary. And in other jurisdictions, this requirement is not even known by the enforcing agency for existing buildings. The result is ambiguity and potential liability for those jurisdictions in the latter two categories.

By making this requirement applicable to only new construction it assures the intent that it be installed as necessary for initiation emergency illumination power. But it also removes the potential conflicts and inappropriate enforcement that is presently occurring.

Committee Meeting Action: Reject
Committee Statement: The proposal would exempt all existing facilities from complying with emergency lighting activation when normal lighting is disrupted by a manual act. The provision was added to the Code in 1967 and from that very first edition, the subject paragraph has applied to both new and existing installations. The Code should not provide a waiver because an owner/architect may have not been aware of the existing emergency lighting provisions.

Number Eligible to Vote: 28
Ballot Results: Affirmative: 27
Ballot Not Returned: 1 McMahon, C.

7.9.2.3 (x) Required illumination shall be arranged so that the failure of any single lamp does not result in an illumination level of less than 0.2 foot-candle at the floor level.

Consistent with Building Code requirement

The submitter's recommended change would require redundancy of existing and new systems without substantiation that it is needed. Emergency lighting is tested per 7.9.3 for availability.

Number Eligible to Vote: 28
Ballot Results: Affirmative: 27
Ballot Not Returned: 1 McMahon, C.
New Level 2 emergency power systems for emergency lighting shall be at least Type 20 in accordance with NFPA 110.

For a class of facilities where emergency lighting is less critical to life safety this requirement will permit a longer time delay for the backup source to energize. It will permit backup (static, utility) sources to stabilize and will permit longer generator start times; for example. This could add significant flexibility in the planning of normal and backup power systems.

If Level 2 performance is required by some other provision of the Code, that requirement will also specify the Type.

Submitter: Michael A. Anthony, University of Michigan

Recommendation: Revise text to read as follows:

7.9.2.+ New Level 2 emergency power systems for emergency lighting shall be at least Type 20 in accordance with NFPA 110, Standard for Emergency and Standby Power Systems.

Substantiation: For a class of facilities where emergency lighting is less critical to life safety this requirement will permit a longer time delay for the backup source to energize. It will permit backup (static, utility) sources to stabilize and will permit longer generator start times; for example. This could add significant flexibility in the planning of normal and backup power systems.

Committee Meeting Action: Reject

Committee Statement: If Level 2 performance is required by some other provision of the Code, that requirement will also specify the Type.

Number Eligible to Vote: 28

Ballot Results: Affirmative: 27

Ballot Not Returned: 1 McMahon, C.

Submitter: Maxwell F. Takaki, IAP World Services

Recommendation: Add requirements that (1) battery voltage test to assure 87.5% of rated battery voltage after 90 minutes annual test be performed by a NRTPTL (nationally recognized third party testing laboratory) with a 10-year old battery in the emergency/exit; (2) digital battery voltage level be displayed on the luminaire enclosure at all times for easy viewing by a facility maintenance personnel; (3) manufacturer of emergency/exit lights shall provide a certified test result to their prospective customers upon request; (4) provide addressable emergency/exit light control system for remote monitoring of battery voltage level and automatic transfer switch position, and that the monthly and annual testing be controlled from remote locations. The additional requirements for emergency/exit lights in this proposal also cover the emergency battery packs for installation in the fluorescent luminaires.

Substantiation: It is a nationally recognized problem that a monthly and annual testing of the emergency lights, illuminated exit signs, and emergency battery packs are not performed to the level where safe evacuations of building occupants are assured. A part of the problem lies in the weak requirements in paragraph 7.9 of NFPA 101 to make the manufacturers of these luminaires voluntarily add the proposed features in their products. It is generally believed that the technology is now available for manufacturers to make proposed improvements to these luminaires to assure safe evacuations of the building occupants. We had an incident recently in which back-up batteries in these lights failed to provide 90 minutes of emergency illuminations during planned electrical power outage, although these same lights were tested OK by pressing test buttons in our scheduled preventive maintenance. UL indicated to me that they do not test the batteries for 90 minutes. There are no other industry standards available for manufacturers to test their product performance to.

This is not original material; its reference/source is as follows:

No copyright is filed with this proposal.

Committee Meeting Action: Reject

Committee Statement: The submitter has not recommended any specific language. The submitter is asking for equipment upgrades that are not substantiated by demonstrated need or evidence.

Number Eligible to Vote: 28

Ballot Results: Affirmative: 27

Ballot Not Returned: 1 McMahon, C.
7.9.3.1 Required emergency lighting systems for all existing occupancies shall be tested in accordance with one of the three options offered by 7.9.3.1.1, 7.9.3.1.2, or 7.9.3.1.3.

This proposal is submitted in conjunction with proposed new text 7.9.3.2. Compliance with periodic testing requirements for emergency lighting systems is vital to ensuring the proper operation of the equipment. This equipment is necessary to minimize danger to life from the effects of fire, but is also called upon during periods of power outage to help ensure the safety of occupants. The goal of compliance is to ensure that the emergency lighting equipment operates properly and maximizes occupant safety. The local authority having jurisdiction is typically tasked with an increasing workload, making periodic examination of visual inspection and test records ever more burdensome. Ideally, testing compliance should be an integrated part of the emergency lighting systems and would not need to be "inspected in" by the local authority nor would it depend on whether the owner has actually performed and kept records of visual inspection and tests.

On 1/25/08, in a local Georgia survey performed by trained personnel, emergency lighting equipment in seven randomly selected mid-range hotels was functionally tested for 30 seconds. Out of 169 fixtures tested, 46 or 27% of the total amount did not pass the functional test. One of the hotels had 17 fixtures tested and 100% of that total did not pass the test. While this local sample may not be replicated throughout the country, these results indicate that compliance can be spotty when manual testing is employed.

Testing options using self-testing and self-diagnostic equipment make compliance more likely. Testing options using computer-based self-testing and self-diagnostic equipment not only make compliance more likely, but they ensure notification of equipment failures with complete, standardized records of corrective actions and tests.

For new occupancies where the installation of emergency lighting systems is not hampered by existing construction, manual testing of the equipment should be abandoned in favor of standalone or computer-based self-testing and self-diagnostic equipment. This is a very small burden on the owner, but increases compliance to testing requirements. By shifting some of the inspection workload from local authorities, it allows them to focus more completely on other responsibilities that cannot be easily automated. Ultimately, all of this ensures that occupants are safer.

For existing occupancies with currently installed manually-tested equipment, changing to standalone or computer-based self-testing and self-diagnostic equipment would be burdensome and difficult to administer. However, manually-tested equipment should be limited to existing occupancies.

Committee Meeting Action: Reject

Companion Proposal 101-157 was rejected, making the change recommended in this proposal not germane.

Number Eligible to Vote: 28
Ballot Results: Affirmative: 27
Ballot Not Returned: 1 McMahon, C.
7.9.3.2 Required emergency lighting systems for all new occupancies shall be tested in accordance with one of the two options offered by 7.9.3.2.1 or 7.9.3.2.2.

7.9.3.2.1 Testing of required emergency lighting systems shall be permitted to be conducted as follows:

1. Self-testing/self-diagnostic battery-operated emergency lighting equipment shall be provided.
2. Self-testing/self-diagnostic battery-operated emergency lighting equipment shall automatically perform not less than once every 30 days a test for not less than 30 seconds and a diagnostic routine.
3. Self-testing/self-diagnostic battery-operated emergency lighting equipment shall indicate failures by a status indicator.
4. A visual inspection shall be performed at intervals not exceeding 30 days.
5. Functional testing shall be conducted annually for not less than \( \frac{1}{2} \) hour.
6. Self-testing/self-diagnostic battery-operated emergency lighting equipment shall be fully operational for the duration of the \( \frac{1}{2} \) hour test.
7. Written records of visual inspections and tests shall be kept by the owner for inspection by the authority having jurisdiction.

7.9.3.2.2 Testing of required emergency lighting systems shall be permitted to be conducted as follows:

1. Computer-based, self-testing/self-diagnostic battery-operated emergency lighting equipment shall be provided.
2. The emergency lighting equipment shall automatically perform not less than once every 30 days a test for not less than 30 seconds and a diagnostic routine.
3. The emergency lighting equipment shall automatically perform annually a test for not less than \( \frac{1}{2} \) hour.
4. The emergency lighting equipment shall be fully operational for the duration of the tests required by 7.9.3.2(2) and 7.9.3.2(3).
5. The computer-based system shall be capable of providing a report of the history of tests and failures at all times.

Substantiation: This proposal is submitted in conjunction with proposed revised text 7.9.3.1.

Compliance with periodic testing requirements for emergency lighting systems is vital to ensuring the proper operation of the equipment. This equipment is necessary to minimize danger to life from the effects of fire, but is also called upon during periods of power outage to help ensure the safety of occupants. The goal of compliance is to ensure that the emergency lighting equipment operates properly and maximizes occupant safety. The local authority having jurisdiction is typically tasked with an increasing workload, making periodic examination of visual inspection and test records even more burdensome. Ideally, testing compliance should be an integrated part of the emergency lighting systems and would not need to be "inspected in" by the local authority nor would it depend on whether the owner has actually performed and kept records of visual inspection and tests.

On 1/25/08, in a local Georgia survey performed by trained personnel, emergency lighting equipment in seven randomly selected mid-range hotels was functionally tested for 30 seconds. Out of 169 fixtures tested, 46 or 27% of the total amount did not pass the functional test. One of the hotels had 17 fixtures tested and 100% of that total did not pass the test. While this local sample may not be replicated throughout the country, these results indicate that compliance can be spotty when manual testing is employed.

Testing options using self-testing and self-diagnostic equipment make compliance more likely. Testing options using computer-based self-testing and self-diagnostic equipment not only make compliance more likely, but they ensure notification of equipment failures with complete, standardized records of corrective actions and tests.

For new occupancies where the installation of emergency lighting systems is not hampered by existing construction, manual testing of the equipment should be abandoned in favor of standalone or computer-based self-testing and self-diagnostic equipment. This is a very small burden on the owner, but increases compliance to testing requirements. By shifting some of the inspection workload from local authorities, it allows them to focus more completely on other responsibilities that cannot be easily automated. Ultimately, all of this ensures that occupants are safer.

Committee Meeting Action: Reject

Committee Statement: The submitter has not provided substantiation as to why any of the three testing options should be denied to new or existing installations. Not all listed emergency lighting is required to have self-diagnostics. The submitter’s proposed change would not increase reliability as a person must get out to the equipment to deal with things like burned out bulbs.

Number Eligible to Vote: 28
Access to exits within rooms or suites need not be marked in occupancies where staff is completely responsible for relocating or evacuating occupants or where there is no visiting public.

Recommendation: Renumber existing 7.10.1.5.2 as 7.10.1.5.3.

Substantiation: Requiring every single exit access door to be marked when routing is plainly obvious is clearly unnecessary. This is apparent in health care, ambulatory health care, day care and in some business occupancies where staff is responsible for occupants (health care, ambulatory health care, day care) or staff is responsible for themselves (business) and in all cases, where staff is appropriately trained (i.e., there are provisions in the x.7 section for occupancy emergency plans and fire drills in those occupancy chapters). GSA has a number of business occupancies that do not serve the visiting public where all staff is sufficiently trained on emergency procedures. Hence, exit signage has no value other than to provide a superfluous means for wayfinding in everyday situations. Inserting this provision in Chapter 7 as a place holder will enable other occupancies to write in specific exceptions for installing exit access signs if deemed unnecessary. By limiting this exception to rooms and suites, exit access signs will still be required in exit access corridors.

Committee Meeting Action: Reject

Committee Statement: The word "suite" is not defined for other than health care occupancies. The proposed terminology is undefined and confusing in its use of the words "completely responsible..." Paragraph 7.10.1.5.1 already offers the relief the submitter requests.
Recommendation: Relocate Annex C to Section 7.13, as follows:

Annex C 7.13 Supplemental Evacuation Equipment
Delete "C" throughout the text and replace it with "7.13", such that C.1 becomes 7.13.1, etc.
Where Annex C contains a "Note", add an asterisk after the number of the section it modifies and place the text of the note in Annex A in the respective location.

Substantiation: As the text currently exists, it is not mandatory unless specifically adopted by a jurisdiction. Consequently, in a jurisdiction that adopts NFPA 101, but does not specifically adopt Annex C, there is not mechanism for enforcement of the provisions regarding supplemental evacuation equipment. If this is not a current issue with a particular jurisdiction, there may be no recognition of the value added by adoption of the Annex. Moving the text, which is written in mandatory language already, into the body of the Code will make this enforcement tool available when the need arises.

Despite a general slowing of the economies of much of the world, there continue to be new escape devices coming onto the market, potentially without adequate screening mechanisms to encourage those that have a demonstrated level of performance in accordance with the referenced standards within this text and prevent the installation of those that do not meet those minimum criteria. Incorporating Annex C text into the body of the Code will provide a suitable screening mechanism.

Committee Meeting Action: Reject
Committee Statement: Before the technical committee would be receptive to moving the subject provisions into the body of the Code, it would need evidence that such devices are in use and have been utilized successfully. Only then can such devices earn a space side-by-side with traditional, proven egress components.

Number Eligible to Vote: 28
Ballot Results: Affirmative: 25 Negative: 2
Ballot Not Returned: 1 McMahon, C.
Explanation of Negative:
ALLES, R.: "The Supplemental Evacuation Community has made great strides in the 8 years following 9/11. Several technologies have achieved "Designation as a Qualified Anti-Terrorism Technology" by DHS and won Homeland Security Awards. ASTM has also successfully completed two separate standards over 3 years ago. It is up to each NFPA member to research the advancements independently so that we can protect against loss of life in future emergencies by placing this into the main body of the code for enforcement by the AHJ's.

DE VRIES, D.: It is precisely to be expected that there would be limited experience with escape devices and systems. A fire is a rare event in any one person's life, and even rarer still when the means of egress are all compromised to the point of where none can be used and an escape device is the only alternative. Despite this, a committee member did cite an example where controlled descent devices were used to evacuate an embassy facility that had been attacked in a terrorist event. As specified now, the Life Safety Code provides no limitations on the use of such equipment, except when Annex C is adopted. This remains an issue and if incorporated into Chapter 7, will provide the enforcement tools needed by AHJ's in the body of the Code.
Add a new Section to Chapter 7 to address normally unoccupied building service equipment support areas as follows:

7.13 Normally Unoccupied Building Service Equipment Support Areas.

7.13.1* Hazard of Contents. Unless prohibited by Chapters 11 through 43, the provisions of Section 7.13 shall apply in lieu of the provisions of Section 7.1 through Section 7.12 to normally unoccupied building service equipment support areas where such areas do not contain high hazard contents or operations.

A.7.13.1 The OSHA regulations describes the aspects of normally unoccupied areas. For example, hazardous atmosphere criteria are presented and asphyxiation risk due to an entrance becoming engulfed are addressed. The areas described by 29 CFR 1910.146 would be considered hazardous if located within a building or structure regulated by NFPA 101.

7.13.2 Egress Doors.

7.13.2.1* Egress shall be provided by doors complying with 7.2.1 where the normally unoccupied building service equipment support area exceeds 45,000 ft² (4180 m²) in buildings not protected throughout by an approved, supervised automatic sprinkler system in accordance with 9.7.1.1(1).

A.7.13.2.1 Egress from normally unoccupied building service equipment support areas not exceeding 45,000 ft² (4180 m²) is permitted to be by access panels or other hardware not complying with the door requirements of 7.2.1.

7.13.2.2 Egress shall be provided by doors complying with 7.2.1 where the normally unoccupied building service equipment support area exceeds 90,000 ft² (8370 m²) in buildings protected throughout by an approved, supervised automatic sprinkler system in accordance with 9.7.1.1(1).

7.13.2.3 The absence of sprinklers in the normally unoccupied building service equipment support area as permitted by an exemption of NFPA 13, Standard for the Installation of Sprinkler Systems, shall not affect judgment of compliance with the criterion of 7.13.2.2 that the building be protected throughout by automatic sprinklers.

7.13.3 Means of Egress Path.

7.13.3.1 A designated means of egress path shall be provided within the normally unoccupied building service equipment support area where the normally unoccupied area exceeds 45,000 ft² (4180 m²) in buildings not protected throughout by an approved, supervised automatic sprinkler system in accordance with 9.7.1.1(1).

7.13.3.2 A designated means of egress path shall be provided within the normally unoccupied building service equipment support area where the normally unoccupied area exceeds 90,000 ft² (8370 m²) in buildings protected throughout by an approved, supervised automatic sprinkler system in accordance with 9.7.1.1(1).

7.13.3.3 The absence of sprinklers in the normally unoccupied building service equipment support area as permitted by an exemption of NFPA 13, Standard for the Installation of Sprinkler Systems, shall not affect judgment of compliance with the criterion of 7.13.3.2 that the building be protected throughout by automatic sprinklers.

7.13.3.4 Where a means of egress path is required, the path shall be a minimum of 28 in. (810 mm) clear width.

7.13.3.5 Where a means of egress path is required, minimum headroom shall be 6 ft 8 in. (2030 mm) along the entire designated means of egress path.

7.13.3.6 Exit signage shall not be required along the means of egress path within normally unoccupied building service equipment support areas.

7.13.3.7 Where two means of egress are required, the means of egress path shall connect the two required means of egress.

7.13.3.8 The designated means of egress path shall be within 25 ft of any portion of the space where the only available access requires crossing over or under obstructions, unless the space is completely inaccessible.

7.13.4 Illumination.

7.13.4.1 The minimum illumination of means of egress along the required means of egress path shall be 0.2 ft candles (2.2 lux), except as otherwise provided in 7.13.3.4.2.

7.13.4.2 Illumination of means of egress shall not be required in normally unoccupied building service equipment support areas where illumination of means of egress is not required by the applicable occupancy chapter for the remainder of the building.

7.13.5 Number of Means of Egress.

7.13.5.1 Two remotely located means of egress shall be provided within the normally unoccupied building service equipment support area where the normally unoccupied area exceeds 45,000 ft² (4180 m²) in buildings not protected throughout by an approved, supervised automatic sprinkler system in accordance with 9.7.1.1(1).
7.13.5.2 Two remotely located means of egress shall be provided within the normally unoccupied building service equipment support area where the normally unoccupied area exceeds 90,000 ft\(^2\) (8370 m\(^2\)) in buildings protected throughout by an approved, supervised automatic sprinkler system in accordance with 9.7.1.1(1).

7.13.5.3 The absence of sprinklers in the unoccupied area as permitted by an exemption of NFPA 13, *Standard for the Installation of Sprinkler Systems*, shall not affect judgment of compliance with the criterion of 7.13.5.2 that the building be protected throughout by automatic sprinklers.

Substantiation: There are many configurations of building and structures which have areas that will have an occasional person or persons to maintain, adjust, monitor, replace or repair equipment or the structure. This new section is intended to provide guidance for the application of special requirements for normally unoccupied building service equipment support areas. These areas are intended to include crawl spaces, attics, utility tunnels, service vaults, interstitial spaces and similar locations in structures. Where the area of the unoccupied building service equipment support area exceeds the threshold areas (see, for example, 7.13.2.1 and 7.13.2.2), the special requirements detailed in this new proposed Section 7.13 should apply. Unoccupied building service equipment support areas smaller than the threshold areas should not have to meet any specific Code requirements.

This action was approved by the committee in the 2008 ROP 101-165a but overturned in the 2008 ROC 101-107. This action is needed to exclude various portions of a building from the specific egress requirements of Chapter 7. The code, as currently written, mandates all portions of the building meet the egress requirements for all occupancies except industrial and storage. The actual threshold values in 7.13.2.1 and 7.13.2.2, for example, were the main point of contention and the submitter is willing to accept whatever threshold values are agreed to by the committee. If this action is rejected in whole, it means that the AHJ must enforce all means of egress provisions of Chapter 7 on spaces rarely visited and not intended for normal use, simply because there is no exception provided for that portion of the building. This will impose significant costs for new buildings and will prove impossible for existing buildings to comply.

This is not original material; its reference/source is as follows:

Committee Meeting Action: Accept in Principle

Add text to read as follows:

7.13 Normally Unoccupied Building Service Equipment Support Areas

7.13.1* Hazard of Contents.

7.13.1.1 Unless prohibited by Chapters 11 through 43, the provisions of Section 7.13 shall apply in lieu of the provisions of Section 7.1 to 7.12 to normally unoccupied building service equipment support areas where such areas do not contain high hazard contents or operations.

A.7.13.1.2 29 CFR 1910.146 of the OSHA regulations describes the aspects of normally unoccupied areas. For example, hazardous atmosphere criteria are presented and asphyxiation risk due to an entrance becoming engulfed are addressed. The areas described by 29 CFR 1910.146 would be considered hazardous if located within a building or structure regulated by NFPA 101.

7.13.1.2 Building service equipment support areas shall not contain fuel-fired equipment or be used for the storage of combustibles.

7.13.2 Egress Doors.

7.13.2.1* Egress from normally unoccupied building service equipment support areas shall be provided by doors complying with 7.2.1 where the normally unoccupied building service equipment support area exceeds 45,000 ft\(^2\) (4180 m\(^2\)) in buildings not protected throughout by an approved, supervised automatic sprinkler system in accordance with 9.7.1.1(1).

A.7.13.2.1 Egress from normally unoccupied building service equipment support areas not exceeding 45,000 ft\(^2\) (4180 m\(^2\)) is permitted to be by access panels or other hardware not complying with the door requirements of 7.2.1.

7.13.2.2 Egress from normally unoccupied building service equipment support areas shall be provided by doors complying with 7.2.1 where the normally unoccupied building service equipment support area exceeds 90,000 ft\(^2\) (8370 m\(^2\)) in buildings protected throughout by an approved, supervised automatic sprinkler system in accordance with 9.7.1.1(1).

7.13.3 The absence of sprinklers in the normally unoccupied building service equipment support area as permitted by an exemption of NFPA 13, *Standard for the Installation of Sprinkler Systems*, shall not cause a building to be classified as nonsprinklered for purposes of applying the provisions of 7.13.2.2.

7.13.3 Means of Egress Path.

7.13.3.1 A designated means of egress path shall be provided within the normally unoccupied building service equipment support area where the normally unoccupied area exceeds 45,000 ft\(^2\) (4180 m\(^2\)) in buildings not protected throughout by an approved, supervised automatic sprinkler system in accordance with 9.7.1.1(1).

7.13.3.2 A designated means of egress path shall be provided within the normally unoccupied building service equipment support area where the normally unoccupied area exceeds 90,000 ft\(^2\) (8370 m\(^2\)) in buildings protected throughout by automatic sprinklers.
7.13.3.3 The absence of sprinklers in the normally unoccupied building service equipment support area as permitted by an exemption of NFPA 13, *Standard for the Installation of Sprinkler Systems*, shall not cause a building to be classified as nonsprinklered for purposes of applying the provisions of 7.13.3.2.

7.13.3.4 Where a means of egress path is required, the path shall be a minimum of 28 in. (810 mm) clear width.

7.13.3.5 Where a means of egress path is required, minimum headroom shall be 6 ft 8 in. (2030 mm) along the entire designated means of egress path.

7.13.3.6 Exit signage shall not be required along the means of egress path within normally unoccupied building service equipment support areas.

7.13.3.7 Where two means of egress are required, the means of egress path shall connect the two required means of egress.

7.13.3.8 The designated means of egress path shall be within 25 ft (7.6 m) of any portion of the space where the only available access requires crossing over or under obstructions, unless the space is completely inaccessible.

7.13.4 Illumination.

7.13.4.1 The minimum illumination of means of egress along the required means of egress path shall be 0.2 ft-candle (2.2 lux), except as otherwise provided in 7.13.4.2.

7.13.4.2 Illumination of means of egress shall not be required in normally unoccupied building service equipment support areas where illumination of means of egress is not required by the applicable occupancy chapter for the remainder of the building.

7.13.5 Number of Means of Egress.

7.13.5.1 Two remotely located means of egress shall be provided within the normally unoccupied building service equipment support area where the normally unoccupied area exceeds 45,000 ft² (4180 m²) in buildings not protected throughout by an approved, supervised automatic sprinkler system in accordance with 9.7.1.1(1).

7.13.5.2 Two remotely located means of egress shall be provided within the normally unoccupied building service equipment support area where the normally unoccupied area exceeds 90,000 ft² (8370 m²) in buildings protected throughout by an approved, supervised automatic sprinkler system in accordance with 9.7.1.1(1).

7.13.5.3 The absence of sprinklers in the normally unoccupied building service equipment support area as permitted by an exemption of NFPA 13, *Standard for the Installation of Sprinkler Systems*, shall not cause a building to be classified as nonsprinklered for purposes of applying the provisions of 7.13.5.2.

Committee Statement: The Committee Meeting Action does what the submitter requested but additionally adds a 7.13.1.2 to prohibit the space from containing fuel-fired equipment or from being used for the storage of combustibles. The relaxation of the egress criteria can be justified only of those additional conditions are met. Other changes made to the text are editorial for clarity.

Number Eligible to Vote: 28

Ballot Results:  Affirmative: 25  Negative: 2

Ballot Not Returned:  1  McMahon, C.

Explanation of Negative:

BONISCH, W.: Such areas should be left to the local AHJ to evaluate/decide what if any protection is required. Also, use of the areas (from Health Care, 45k, 90k) are not necessarily appropriate for all occupancies.

LATHROP, J.: This concept still needs a LOT of work. It leaves the spaces with areas less than 45,000 or 90,000 with no requirements at all. In those spaces above the limits it is not at all clear what is required. What is a "means of egress path" if we have exempted the space from Chapter 7 and we are now putting "stuff" back in - what is brought back in with a "means of egress path?" Also this still prohibits some of the very common problems of having crawl over or under ductwork or pipes. This proposal is not much different from the proposal last code cycle that was rejected for the same reasons.
Add a new section to Chapter 7 to address normally unoccupied areas as follows:

7.13 Normally Unoccupied Building Service Equipment Support Areas

7.13.1* Hazard of Contents. The provisions of Section 7.13 shall apply in lieu of the provisions of Section 7.1 through Section 7.12 to normally unoccupied areas where such areas do not contain high hazard contents or operations.

A.7.13.1* 29 CFR 1910.146 of the OSHA regulations describes the aspects of confined spaces. Normally unoccupied areas in buildings often fall within OSHA's confined space definition. However, certain confined spaces with hazardous contents or operations (hazardous atmosphere, asphyxiation potential, engulfment or entrapment hazards) are considered by OSHA's 1910.146 to be "Permit-Required Confined Spaces". These hazardous spaces are excluded from coverage by NFPA 101, so as not to overlap with the OSHA requirements for Permit-Required Confined Spaces.

7.13.2 Egress Doors.

7.13.2.1* Egress shall be provided by doors complying with 7.2.1 where the normally unoccupied area exceeds 45,000 ft² (4180 m²) in buildings not protected throughout by an approved, supervised automatic sprinkler system in accordance with 9.7.1.1(1).

A.7.13.2.1 Egress from normally unoccupied areas not exceeding 45,000 ft² (4180 m²) is permitted to be by access panels or other hardware not complying with the door requirements of 7.2.1.

7.13.2.2 Egress shall be provided by doors complying with 7.2.1 where the normally unoccupied area exceeds 90,000 ft² (8370 m²) in buildings protected throughout by an approved, supervised automatic sprinkler system in accordance with 9.7.1.1(1).

7.13.2.3 The absence of sprinklers in the normally unoccupied area as permitted by an exemption of NFPA 13, Standard for the Installation of Sprinkler Systems, shall not affect judgment of compliance with the criterion of 7.13.2.2 that the building be protected throughout by automatic sprinklers.

7.13.3 Means of Egress Path.

7.13.3.1 A means of egress path shall be provided within the normally unoccupied area where the normally unoccupied area exceeds 45,000 ft² (4180 m²) in buildings not protected throughout by an approved, supervised automatic sprinkler system in accordance with 9.7.1.1(1). The means of egress path shall be a minimum of 32 in. clear width.

7.13.3.2 A means of egress path shall be provided within the normally unoccupied area where the normally unoccupied area exceeds 90,000 ft² (8370 m²) in buildings protected throughout by an approved, supervised automatic sprinkler system in accordance with 9.7.1.1(1). The means of egress path shall be a minimum of 32 in. clear width.

7.13.3.3 The absence of sprinklers in the normally unoccupied area as permitted by an exemption of NFPA 13, Standard for the Installation of Sprinkler Systems, shall not affect judgment of compliance with the criterion of 7.13.3.2 that the building be protected throughout by automatic sprinklers.

7.13.3.4 Where a means of egress path is required, minimum headroom shall be 6 ft 8 in. (2030 mm) along the entire means of egress path.

7.13.3.5 Exit signage shall not be required along the means of egress path within normally unoccupied areas.

7.13.4 Illumination.

7.13.4.1 The minimum illumination of means of egress along the required means of egress path shall be 0.2 ft candles (2.2 lux), except as otherwise provided in 7.13.4.2.

7.13.4.2 Illumination of means of egress shall not be required in normally unoccupied areas where illumination of means of egress is not required by the applicable occupancy chapter for the remainder of the building.

7.13.5 Number of Means of Egress.

7.13.5.1 Two means of egress shall be provided within the normally unoccupied area where the normally unoccupied area exceeds 45,000 ft² (4180 m²) in buildings not protected throughout by an approved, supervised automatic sprinkler system in accordance with 9.7.1.1(1).

7.13.5.2 Two means of egress shall be provided within the normally unoccupied area where the normally unoccupied area exceeds 90,000 ft² (8370 m²) in buildings protected throughout by an approved, supervised automatic sprinkler system in accordance with 9.7.1.1(1).

7.13.5.3 The absence of sprinklers in the unoccupied area as permitted by an exemption of NFPA 13, Standard for the Installation of Sprinkler Systems, shall not affect judgment of compliance with the criterion of 7.13.5.2 that the building be protected throughout by automatic sprinklers.

Substantiation: There are many configurations of building and structures which have areas that will have an occasional person or persons to maintain, adjust, monitor, replace or repair equipment or the structure. These new
sections are intended to provide guidance for the application of special requirements for normally unoccupied areas. These areas are intended to include crawl spaces, attics, utility tunnels, service vaults, interstitial spaces and similar location in structures. When these functions exceed the areas in the sections the special requirements of 7.13 apply. Functions less than the areas listed in the proposal have no specific requirements.

The threshold areas are based upon the maximum allowable size for smoke compartments located in health care occupancies (no more than two smoke compartments or 45,000 sq ft in non-sprinklered occupancies and no more than four smoke compartments or 90,000 sq ft in sprinklered occupancies); anything less would make the creation of interstitial spaces in health care occupancies impractical.

Committee Meeting Action: Accept in Principle

Committee Statement: The Committee Meeting Action on the referenced proposal should meet the submitter's intent.
Number Eligible to Vote: 28
Ballot Results: Affirmative: 25 Negative: 2
Ballot Not Returned: 1 McMahon, C.

Explanations of Negative:
BONISCH, W.: See my reason/comment on 101-160 (Log#174).

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101-402 Log #263 SAF-MEA (A.3.3.75) Final Action: Accept

Submitter: Joseph H. Versteeg, Versteeg Associates
Recommendation: Amend A.3.3.75 by adding (See A.7.2.2.6.3.1) to the end of Paragraph 1.
Substantiation: Based on the proposed annex note: A.7.2.2.6.3.1 When an outside stair(s) are permitted to be non-separated from interior portions of the building in accordance with items (1) through (3), such stair(s) are still considered exits and not exit access. [Submitted separately]
Committee Meeting Action: Accept
Number Eligible to Vote: 28
Ballot Results: Affirmative: 27
Ballot Not Returned: 1 McMahon, C.
A proper means of egress allows unobstructed travel at all times. Any type of barrier including, but not limited to, the accumulations of snow and ice in those climates subject to such accumulations is an impediment to free movement in the means of egress.

Substantiation: Fire Marshals are erroneously applying this section based on the information provided in the appendix. They are using the statement regarding snow and ice and citing everywhere there is a potential even for 1 day of inclement weather. The overall statement in this appendix section doesn’t add much more than the text found in the document. The appendix should be eliminated.

Committee Meeting Action: Reject

Committee Statement: In earlier editions of the Code, outside stairs were required to be protected by roofs. The more recent editions do not require a roof but require maintenance as explained in the annex. This is a subject that needs to be retained. The submitter has not justified its removal.

Number Eligible to Vote: 28
Ballot Results: Affirmative: 27
Ballot Not Returned: 1 McMahon, C.

Comment on Affirmative:
PEACOCK, R.: Committee statement should point out that while the submitter asked to delete Section A.7.1.10.1 that led to an appropriate rejection by the committee, the submitter’s intent was met with the acceptance of Proposal 101-408.
Joseph H. Versteeg, Versteeg Associates

Recommendation: Revise existing section A.7.1.10.1: A proper means of egress allows unobstructed travel at all times. Any type of barrier including, but not limited to, the accumulations of snow and ice in those climates subject to such accumulations is an impediment to free movement in the means of egress. It is however, recognized that obstructions occur on a temporary short duration basis, such as packages placed on the floor during loading or unloading operations or the stacking of shelves; forklift operations; or other conditions during a fabrication processes. In these instances, facility management should provide awareness training for employees to ensure that blockages are kept to a minimum and establish procedures for the control and monitoring of the area affected.

Substantiation: Section A.7.1.10.1 is an informational annex note in the Code to help explain the requirement that "...means of egress be continuously maintained free of all obstruction or impediments to full instant use...". Unfortunately the current annex note reinforces without exception can never be blocked and does not recognize that such blockages are often necessary and do in fact occur. The proposed wording offers guidance for those necessary temporary blockages or conditions that hinder egress.

Committee Meeting Action: Accept in Principle

Revise text to read as follows:

A proper means of egress allows unobstructed travel at all times. Any type of barrier including, but not limited to, the accumulations of snow and ice in those climates subject to such accumulations is an impediment to free movement in the means of egress. It is, however, recognized that obstructions occur on a short duration basis. In these instances, awareness training should be provided to ensure that blockages are kept to a minimum and procedures are established for the control and monitoring of the area affected.

Committee Statement: The Committee Meeting Action does what the submitter requested but reworks the text for clarity. The committee action text avoids lists that cannot be complete.

Number Eligible to Vote: 28
Ballot Results: Affirmative: 27
Ballot Not Returned: 1 McMahon, C.

Comment on Affirmative:
LATHROP, J.: Although I am not voting negatively I am concerned that the committee may have expanded this too far by deleting the examples provided by the submitter. The submitter's intent is very clear, the committee rewording is not. Someone could argue that snow blocking the exit for two days is a short duration compared to a whole year. The submitter's examples are clearly those that obstruct for a few minutes not hours or days.


Recommendation: Modify Table A.7.6 as follows:

Health Care (New) Common Path Limit (sprinklered) NR 100 ft 30 m

Substantiation: The 2009 edition added a common path of travel limit of 100 ft (See section 18.2.5.3) This will correct the table in the Annex.

Committee Meeting Action: Accept

Number Eligible to Vote: 28
Ballot Results: Affirmative: 27
Ballot Not Returned: 1 McMahon, C.
Where passenger elevators for general public use are required in Chapters 11 through 43, Elevators that are installed in new buildings in compliance with the provisions of Annex E shall be permitted to be used for occupant-controlled evacuation prior to Phase I Emergency Recall Operation mandated by the Firefighters' Emergency Operation provisions of ASME A17.1/CSA B44, such elevators shall also comply with this section.

The Phase I Emergency Recall Operation mandated by the Firefighters' Emergency Operation provisions of ASME A17.1/CSA B 44, recalls elevators upon detection of smoke by smoke detectors installed in the following locations:

1. At each floor served by the elevator in the lobby (landing) adjacent to the hoistway doors
2. In the associated elevator machine room
3. In the elevator hoistway where sprinklers are located in the hoistway

Where smoke from a fire remote from the elevator lobby, elevator machine room, and elevator hoistway can be kept from reaching the elevator lobby (landing), elevator machine room, and elevator hoistway, the associated elevators can continue to operate in a fire emergency. The provisions of Annex B7.13.13 address the features that need to be provided to make such elevator operation safe for evacuation.

Occupant evacuation elevators shall be marked with signage indicating the elevators are suitable for use by building occupants for evacuation during fires.

Conditions necessary for the continued safe operation of the occupant evacuation elevators and the associated elevator lobbies and elevator machine rooms shall be continuously monitored and displayed at the building emergency command center by a standard emergency service interface system meeting the requirements of NFPA 72, National Fire Alarm Code, and NEMA SB 30, Fire Service Annunciator and Interface.

**B 7.13.2.5** Occupant evacuation elevator lobbies shall be equipped with a status indicator arranged to display the following:

1. Illuminated green light and the message “Elevators available for occupant evacuation” while the elevators are operating under emergency conditions but before Phase I Emergency Recall Operation in accordance with the Fire Fighters’ Emergency Operation requirements of ASME A17.1/CSA B44, *Safety Code for Elevators and Escalators*
2. Illuminated red light and the message “Elevators out of service, use exit stairs” once the elevators are under Phase I Emergency Recall Operation
3. No illuminated light but the message “Elevators are operating normally” while the elevators are operating under nonemergency conditions

**B 7.13.3 Fire Detection, Alarm, and Communication.**

**B 7.13.3.1** The building shall be protected throughout by an approved fire alarm system in accordance with Section 9.6.

**B 7.13.3.2 Smoke Detectors.**

**B 7.13.3.2.1** Smoke detectors shall be installed in all occupiable areas within the building in accordance with the requirements of NFPA 72, *National Fire Alarm Code*, except as otherwise provided in **B 7.13.3.2.2**.

**Note A 7.13.3.2.1:** The occupant evacuation elevator will function only until Phase I Emergency Recall Operation. The required smoke detection system in occupiable areas is intended to provide building occupants with the early warning needed to permit elevator use early in the fire.

**B 7.13.3.2.2** Smoke detectors shall not be required to be installed in all occupiable areas where all of the following conditions are met:
1. The building is protected throughout by an approved, supervised automatic sprinkler system in accordance with **B 7.13.4.6.4**.
2. The sprinkler system is provided with a sprinkler control valve and waterflow device on each floor.
3. The sprinkler control valves and waterflow devices required by **B 7.13.3.2.2(2)** are monitored by the building fire alarm system.

**Note A 7.13.3.2.2:** The exemption permitted by **B 7.13.3.2.2** eliminates the need to install smoke detectors in all occupied areas of the building where the elevator evacuation protocol can be initiated by the sprinkler system that is arranged to indicate the floor of fire origin when a sprinkler flows water.

**B 7.13.3.3** The fire alarm system shall include an emergency voice/alarm communication system in accordance with NFPA 72, *National Fire Alarm Code*, with the ability to provide voice directions on a selective basis to any building floor.

**Note A 7.13.3.3:** The emergency voice/alarm communication system with the ability to provide voice directions on a selective basis to any building floor might be used to instruct occupants of the fire floor who are able to use stairs to relocate to a floor level below. The selective voice notification feature might be used to provide occupants of a given elevator lobby with a status report or supplemental instructions.

**B 7.13.3.4** The emergency voice/alarm communication system shall be arranged so that intelligible voice instructions are audible in the elevator lobbies under conditions where the elevator lobby doors are in the closed position.

**Note A 7.13.3.4:** An audible notification appliance will need to be positioned in the elevator lobby in order to meet the requirement of **B 7.13.3.4**. The continued use of the occupant evacuation elevator system is predicated on elevator lobby doors that are closed to keep smoke from reaching the elevator lobby smoke detector that is arranged to initiate the Phase I Emergency Recall Operation.

**B 7.13.4 Sprinklers.**

**B 7.13.4.1** The building shall be protected throughout by an approved, supervised automatic sprinkler system in accordance with 9.7.1.1(1), except as otherwise specified in **B 7.13.4.2**.

**B 7.13.4.2** Sprinklers shall not be installed in elevator machine rooms serving occupant evacuation elevators, and such prohibition shall not cause an otherwise fully sprinklered building to be classified as nonsprinklered.

**Note A 7.13.4.2:** The presence of sprinklers in the elevator machine room would necessitate the installation of a shunt trip for automatically disconnecting the main line power for compliance with ASME A17.1/CSA B44, *Safety Code for Elevators and Escalators*, as it is unsafe to operate elevators while sprinkler water is being discharged in the elevator machine room. The presence of a shunt trip conflicts with the needs of the occupant evacuation elevator, as it disconnects the power without ensuring that the elevator is first returned to a safe floor so as to prevent trapping occupants. The provision of **B 7.13.4.2**, prohibiting the sprinklering of elevator machine rooms, deviates from the requirements of NFPA 13, *Standard for the Installation of Sprinkler Systems*, which permits no such exemption. However, NFPA 13 permits a similar exemption for electrical equipment rooms where the room is dedicated to electrical equipment only; the equipment is installed in a 2-hour fire-rated enclosure, including protection for penetrations; and no combustible storage is stored in the room. Similar safeguards are imposed on the occupant evacuation elevator by **B 7.13.6.1** and **B 7.13.6.2**.
Where a hoistway serves occupant evacuation elevators, sprinklers shall not be installed at the top of the elevator hoistway or at other points in the hoistway more than 24 in. (610 mm) above the pit floor, and such prohibition shall not cause this building to be classified as nonsprinklered.

Note A 7.13.4.3: NFPA 13, Standard for the Installation of Sprinkler Systems, permits sprinklers to be omitted from the top of the elevator hoistway where the hoistway for passenger elevators is noncombustible and the car enclosure materials meet the requirements of ASME A17.1/CSA B44, Safety Code for Elevators and Escalators. The provision of B 7.13.5.3 restricts occupant evacuation elevators to passenger elevators that are in noncombustible hoistways and for which the car enclosure materials meet the requirements of ASME A17.1/CSA B 44. (See B 7.13.5.3.)

Elevator Installation.

B 7.13.5.1 Except as modified by B 7.13.5.2, occupant evacuation elevators shall be installed in accordance with ASME A17.1/CSA B44, Safety Code for Elevators and Escalators.

B 7.13.5.2* Elevator shunt breakers are intended to disconnect the electric power to an elevator prior to sprinkler system waterflow impairing the functioning of the elevator. The provision of B 7.13.4.2 prohibits the installation of sprinklers in the elevator machine room and at the top of the elevator hoistway, obviating the need for shunt breakers. The provision of B 7.13.5.2 is not actually an exemption to the provisions of ASME A17.1/CSA B44, Safety Code for Elevators and Escalators, as ASME A17.1/CSA B44 requires the automatic main line power disconnect (shunt trip) only where sprinklers are located in the elevator machine room or in the hoistway more than 24 in. (610 mm) above the pit floor. The provision of B 7.13.4.2 prohibits sprinklers in the elevator machine room. The provision of B 7.13.4.3 prohibits sprinklers at the top of the hoistway and at other points in the hoistway more than 24 in. (610 mm) above the pit floor in recognition of the limitations on combustibility established by B 7.13.5.3.

B 7.13.5.3 Occupant evacuation elevators shall be limited to passenger elevators that are in noncombustible hoistways and for which the car enclosure materials meet the requirements of ASME A17.1/CSA B44, Safety Code for Elevators and Escalators.

Elevator Machine Rooms.

B 7.13.6.1* Elevator machine rooms associated with occupant evacuation elevators shall be separated from all building areas, other than elevator hoistways, by minimum 2-hour fire resistance–rated construction.

Note A 7.13.6.1: The minimum 2-hour fire resistance–rated separation is based on the omission of sprinklers from the elevator machine room in accordance with B 7.13.4.2.

B 7.13.6.2* Elevator machine rooms associated with occupant evacuation elevators shall be used for no purpose other than as elevator machine rooms.

Note A 7.13.6.2: The requirement of B 7.13.6.2 is consistent with that in ASME A17.1/CSA B44, Safety Code for Elevators and Escalators, which permits only machinery and equipment used in conjunction with the function or use of the elevator to be in the elevator machine room. An inspection program should be implemented to ensure that the elevator machine room is kept free of storage.

B 7.13.7 Electrical Power and Control Wiring.

B 7.13.7.1 The following features associated with 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

B 7.13.7.2 Wiring for power of the elevators shall meet one of the following criteria:

(1) The wiring shall utilize type CI cable with a minimum 1-hour fire resistance rating.
(2) The wiring shall be enclosed in a minimum 1-hour fire resistance construction.

B 7.13.8 Occupant Evacuation Shaft System.

B 7.13.8.1 Occupant evacuation elevators shall be provided with an occupant evacuation shaft system consisting of all of the following:

(1) Elevator hoistway.
(2) Enclosed elevator lobby outside the bank or group of hoistway doors on each floor served by the elevators.

Exception: Elevator lobbies are not required to be enclosed when located either on the street floor or level of exit discharge.

(3) Enclosed exit stair with doors to all floors, at and above grade level, served by the elevators

B 7.13.8.2* Occupant evacuation elevator lobbies shall have minimum floor area as follows:

(1) The 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 elevator lobby floor area also shall accommodate one wheelchair space of 30 in. × 48 in. (760 mm × 1220 mm) for each 50 persons, or portion thereof, of the occupant load of the floor area served by the lobby.
Elevator lobbies provide a safe place for building occupants to await the elevators and extend the time available for such use by providing a barrier to smoke and heat that might threaten the elevator car or hoistway. Smoke detectors within the elevator lobbies are arranged to initiate a Phase I Emergency Recall Operation if the lobby is breached by smoke.

**7.13.8.3** Access to the exit stair required by **7.13.8.1(3)** shall be directly from the enclosed elevator lobby on each floor.

**7.13.8.4** The occupant evacuation shaft system shall be enclosed and separated from the remainder of the building by walls complying with the following:

1. The shaft system walls shall be smoke barriers in accordance with Section 8.5.
2. The shaft system walls separating the elevator lobby from the remainder of the building shall have a minimum 1-hour fire resistance rating and minimum 3/4-hour fire protection–rated opening protectives.
3. The shaft system walls separating the elevator hoistway from the remainder of the building shall have a minimum 2-hour fire resistance rating and minimum 11/2-hour fire protection–rated opening protectives.
4. The shaft system walls separating the enclosed exit stair from the remainder of the building shall have a minimum 2-hour fire resistance rating and minimum 11/2-hour fire protection–rated opening protectives.

**7.13.8.5** Occupant evacuation shaft system enclosures shall be constructed to provide a minimum of classification Level 2 in accordance with ASTM C 1629/C 1629M, *Standard Classification for Abuse-Resistant Nondecorated Interior Gypsum Panel Products and Fiber-Reinforced Cement Panels*.

**7.13.8.6** The occupant evacuation shaft system shall be protected from water infiltration by one of the following methods:

1. The shaft system perimeter walls and opening protectives, other than the elevator lobby doors, shall be constructed such that an accumulation of water to a depth of 2 in. (51 mm) on the side of the wall not within the occupant evacuation shaft system shall be prevented from entering the shaft system.
2. Drains shall be installed to manage the flow of two fire department hoses and three fire sprinklers concurrently discharging such that water does not enter the shaft system.

**7.13.8.7** Occupant evacuation shaft system elevator lobby doors shall have all of the following features:

1. The doors shall have a fire protection rating of not less than 3/4 hour.
2. The doors shall be smoke leakage–rated assemblies in accordance with NFPA 105, *Standard for the Installation of Smoke Door Assemblies and Other Opening Protectives*.
3. The doors shall have an automatic positioning bottom seal to resist the passage of water at floor level from outside the shaft system.

**Note A.7.13.8.7:** The elevator lobby doors addressed in **7.13.8.7** do not include the elevator hoistway doors. The elevator hoistway doors serving fire-rated hoistway enclosures in accordance with 8.6.5 must meet the criteria of Table 8.3.4.2.

**7.13.8.8** Occupant evacuation shaft system elevator lobby doors shall have the following features:

1. Each door shall be automatic-closing in accordance with 7.2.1.8.2, as modified by **7.13.8.8(2)**.
2. In addition to the automatic-closing means addressed by 7.2.1.8.2, the elevator lobby door on any floor shall also close in response to any alarm signal initiated on that floor.
3. Each door shall be provided with a vision panel arranged to allow people within the lobby to view conditions on the other side of the door.

**7.13.8.9** Each occupant evacuation shaft system exit stair enclosure door shall be provided with a vision panel arranged to allow people on either side of the door to view conditions on the other side of the door.

**7.13.8.10** Occupant evacuation shaft system exit stair enclosures shall be permitted to serve as occupant egress stairs.

**7.13.8.11** Occupant evacuation shaft system elevator lobbies shall be permitted to serve as areas of refuge.

**Substantiation:** The intent of the subject code change proposal is to delete Annex B and create a new Section 7.13. The subject material in Section 7.13 was extracted directly from Annex B to create this code change proposal. No technical changes were made to the original material in Annex B. The subject code change will permit each occupancy technical committee to decide where elevators for occupant-controlled evacuation shall be permitted to be installed.

This is not original material; its reference/source is as follows:

**NFPA 101 - Annex B**

**Committee Meeting Action:** Accept in Principle

Move and revise text as follows:

**7.14 Annex B Elevators for Occupant-Controlled Evacuation Prior to Phase I Emergency Recall Operations**

This annex is not a part of the requirements of this NFPA document but is included for informational purposes only. Information in this annex is intended to be adopted by the jurisdiction at the discretion of the adopting jurisdiction.

Additionally, information in this annex is intended to be incorporated on a voluntary basis by building owners and...
Elevators that are installed in new buildings in compliance with the provisions of Annex E shall be permitted where passenger elevators for general public use are permitted to be used for occupant-controlled evacuation prior to Phase I Emergency Recall Operation mandated by the Firefighters' Emergency Operation provisions of ASME A17.1/CSA B44, Safety Code for Elevators and Escalators, the elevator system shall also comply with this section. Where passenger elevators for general public use are permitted to be used for occupant-controlled evacuation prior to Phase I Emergency Recall Operation mandated by the Firefighters' Emergency Operation provisions of ASME A17.1/CSA B44, Safety Code for Elevators and Escalators, the elevator system shall also comply with this section.

The Phase I Emergency Recall Operation mandated by the Firefighters' Emergency Operation provisions of ASME A17.1/CSA B 44, Safety Code for Elevators and Escalators, recalls elevators upon detection of smoke by smoke detectors installed in the following locations:

1. At each floor served by the elevator in the lobby (landing) adjacent to the hoistway doors
2. In the associated elevator machine room
3. In the elevator hoistway where sprinklers are located in the hoistway

Where smoke from a fire remote from the elevator lobby (landing), elevator machine room, and elevator hoistway can be kept from reaching the elevator lobby (landing), elevator machine room, and elevator hoistway, the associated elevators can continue to operate in a fire emergency. The provisions of Annex B Section 7.14 address the features that need to be provided to make such elevator operation safe for evacuation.

Occupant evacuation elevators in accordance with Annex B Section 7.14 shall not be permitted to satisfy requirements of this Code applicable to the following:

1. Number of means of egress
2. Capacity of means of egress
3. Arrangement of means of egress

An evacuation plan approved by the authority having jurisdiction shall be implemented, specifically including the procedures for occupant evacuation using the exit stairs and the occupant evacuation elevators. Building occupants have traditionally been taught not to use elevators in fire or similar emergencies. The evacuation plan should include more than notification that the elevators can be used for emergency evacuation. The plan should include training to make occupants aware that the elevators will be available only for the period of time prior to elevator recall via smoke detection in the elevator lobby, machine room, or hoistway. Occupants should be prepared to use the exit stairs (which are required to be directly accessible from the elevator lobby by NFPA 72, National Fire Alarm Code, and NEMA SB 30, Fire Service Annunciator and Interface).

The building emergency command center specified in NFPA 72, National Fire Alarm Code, and NEMA SB 30, Fire Service Annunciator and Interface, the building emergency command center location specified in NFPA 72, National Fire Alarm Code, and NEMA SB 30, Fire Service Annunciator and Interface, shall be provided with a means to override normal elevator operation and to initiate manually a Phase I Emergency Recall Operation of the occupant-controlled elevators in accordance with ASME A17.1/CSA B44, Safety Code for Elevators and Escalators.

Occupant evacuation elevator lobbies shall be equipped with a status indicator arranged to display the following:

1. Illuminated green light and the message “Elevators available for occupant evacuation” while the elevators are operating under emergency conditions but before Phase I Emergency Recall Operation in accordance with NFPA 72, National Fire Alarm Code, and NEMA SB 30, Fire Service Annunciator and Interface.
2. Illuminated red light and the message “Elevators out of service, use exit stairs” once the elevators are under Phase I Emergency Recall Operation
3. No illuminated light but the message “Elevators are operating normally” while the elevators are operating under nonemergency conditions

The building shall be protected throughout by an approved fire alarm system in accordance with Section...
6.1 Smoke Detectors.

Smoke detectors shall be installed in all occupiable areas within the building in accordance with the requirements of NFPA 72, National Fire Alarm Code, except as otherwise provided in B.7.14.3.2.2.

Note A.7.14.3.2.1: The occupant evacuation elevator will function only until Phase I Emergency Recall Operation. The required smoke detection system in occupiable areas is intended to provide building occupants with the early warning needed to permit elevator use early in the fire.

Smoke detectors shall not be required to be installed in all occupiable areas where all of the following conditions are met:

1. The building is protected throughout by an approved, supervised automatic sprinkler system in accordance with 7.14.4, section 5.
2. The sprinkler system is provided with a sprinkler control valve and waterflow device on each floor.
3. The sprinkler control valves and waterflow devices required by B.7.14.3.2.2(2) are monitored by the building fire alarm system.

Note A.7.14.3.2.2: The exemption permitted by B.7.14.3.2.2 eliminates the need to install smoke detectors in all occupied areas of the building where the elevator evacuation protocol can be initiated by the sprinkler system that is arranged to indicate the floor of fire origin where a sprinkler flows water.

7.14.3.3* The fire alarm system shall include an emergency voice/alarm communication system in accordance with NFPA 72, National Fire Alarm Code, with the ability to provide voice directions on a selective basis to any building floor.

Note A.7.14.3.3: The emergency voice/alarm communication system with the ability to provide voice directions on a selective basis to any building floor might be used to instruct occupants of the fire floor who are able to use stairs to relocate to a floor level below. The selective voice notification feature might be used to provide occupants of a given elevator lobby with a status report or supplemental instructions.

Note A.7.14.3.4: The emergency voice/alarm communication system shall be arranged so that intelligible voice instructions are audible in the elevator lobbies under conditions where the elevator lobby doors are in the closed position.

Note: A.7.14.3.4 An audible notification appliance will need to be positioned in the elevator lobby in order to meet the requirement of B.3.3 and B.14.3.4. The continued use of the occupant evacuation elevator system is predicated on elevator lobby doors that are closed to keep smoke from reaching the elevator lobby smoke detector that is arranged to initiate the Phase I Emergency Recall Operation.

B.7.14.4 Sprinklers.

The building shall be protected throughout by an approved, supervised automatic sprinkler system in accordance with 9.7.1.1(1), except as otherwise specified in B.7.14.4.2.

Sprinklers shall not be installed in elevator machine rooms serving occupant evacuation elevators, and such prohibition shall not cause an otherwise fully sprinklered building to be classified as nonsprinklered.

Note: A.7.14.4.2 The presence of sprinklers in the elevator machine room would necessitate the installation of a shunt trip for automatically disconnecting the main line power for compliance with ASME A17.1/CSA B44, Safety Code for Elevators and Escalators, as it is unsafe to operate elevators while sprinkler water is being discharged in the elevator machine room. The presence of a shunt trip conflicts with the needs of the occupant evacuation elevator, as it disconnects the power without ensuring that the elevator is first returned to a safe floor so as to prevent trapping occupants.

However, NFPA 13 permits a similar exemption for electrical equipment rooms where the room is dedicated to electrical equipment only; the equipment is installed in a 2-hour fire-rated enclosure, including protection for penetrations; and no combustible storage is stored in the room. Similar safeguards are imposed on the occupant evacuation elevator by B.7.14.6.1 and B.7.14.6.2.

Where a hoistway serves occupant evacuation elevators, sprinklers shall not be installed at the top of the elevator hoistway or at other points in the hoistway more than 24 in. (610 mm) above the pit floor, and such prohibition shall not cause this building to be classified as nonsprinklered.

Note: A.7.14.4.3 NFPA 13, Standard for the Installation of Sprinkler Systems, permits sprinklers to be omitted from the top of the elevator hoistway where the hoistway for passenger elevators is noncombustible and the car enclosure materials meet the requirements of ASME A17.1/CSA B44, Safety Code for Elevators and Escalators. The provision of B.7.14.5.3 restricts occupant evacuation elevators to passenger elevators that are in noncombustible hoistways and for which the car enclosure materials meet the requirements of ASME A17.1/CSA B.44. (See B.7.14.5.3.)

B.7.14.5 Elevator Installation.
**NFPA 101**


**Note:** A7.14.5.2 Elevator shunt breakers are intended to disconnect the electric power to an elevator prior to sprinkler system waterflow impairing the functioning of the elevator. The provision of **7.14.4.2** prohibits the installation of sprinklers in the elevator machine room and at the top of the elevator hoistway, obviating the need for shunt breakers.

**7.14.5.2** Shunt breakers shall not be installed on elevator systems used for occupant evacuation.

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

Elevator shunt breakers are intended to disconnect the electric power to an elevator prior to sprinkler system waterflow impairing the functioning of the elevator. The provision of **7.14.4.2** prohibits the installation of sprinklers in the elevator machine room and at the top of the elevator hoistway, obviating the need for shunt breakers.

The provision of **7.14.5.2** is not actually an exemption to the provisions of ASME A17.1/CSA B44, *Safety Code for Elevators and Escalators*, as ASME A17.1/CSA B44 requires the automatic main line power disconnect (shunt trip) only where sprinklers are located in the elevator machine room or in the hoistway more than 24 in. (610 mm) above the pit floor. The provision of **7.14.4.2** prohibits sprinklers in the elevator machine room. The provision of **7.14.4.3** prohibits sprinklers at the top of the hoistway and at other points in the hoistway more than 24 in. (610 mm) above the pit floor in recognition of the limitations on combustibility established by **7.14.5.3**.

**7.14.5.3** Occupant evacuation elevators shall be limited to passenger elevators that are in noncombustible hoistways and for which the car enclosure materials meet the requirements of ASME A17.1/CSA B44, *Safety Code for Elevators and Escalators*.

**Elevator Machine Rooms.**

**7.14.6.1** Elevator machine rooms associated with occupant evacuation elevators shall be separated from all building areas, other than elevator hoistways, by minimum 2-hour fire resistance-rated construction.

**Note:** A7.14.6.1 The minimum 2-hour fire resistance-rated separation is based on the omission of sprinklers from the elevator machine room in accordance with **7.14.4.2**.

**7.14.6.2** Elevator machine rooms associated with occupant evacuation elevators shall be used for no purpose other than as elevator machine rooms.

**Note:** A7.14.6.2 The requirement of **7.14.6.2** is consistent with that in ASME A17.1/CSA B44, *Safety Code for Elevators and Escalators*, which permits only machinery and equipment used in conjunction with the function or use of the elevator to be in the elevator machine room. An inspection program should be implemented to ensure that the elevator machine room is kept free of storage.

**7.14.7 Electrical Power and Control Wiring.**

**7.14.7.1** The following features associated with 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

**7.14.7.2** Wiring for power of the elevators shall meet one of the following criteria:

1. The wiring shall utilize type CI cable with a minimum 1-hour fire resistance rating.
2. The wiring shall be enclosed in a minimum 1-hour fire resistance construction.

**7.14.8 Occupant Evacuation Shaft System.**

**7.14.8.1** Occupant evacuation elevators shall be provided with an occupant evacuation shaft system consisting of all of the following:

1. Elevator hoistway.
2. Enclosed elevator lobby outside the bank or group of hoistway doors on each floor served by the elevators, except that elevator lobbies shall not be required to be enclosed where located either on the street floor or level of exit discharge.

**Exception:** Elevator lobbies are not required to be enclosed when located either on the street floor or level of exit discharge.

3. Enclosed exit stair with doors to all floors, at and above grade level, served by the elevators

**7.14.8.2** Occupant evacuation elevator lobbies shall have minimum floor area as follows:

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

**Note:** A7.14.8.2 Elevator lobbies provide a safe place for building occupants to await the elevators and extend the time available for such use by providing a barrier to smoke and heat that might threaten the elevator car or hoistway. Smoke detectors within the elevator lobbies are arranged to initiate a Phase I Emergency Recall Operation if the lobby is breached by smoke.

**7.14.8.3** Access to the exit stair required by **7.14.8.1(3)** shall be directly from the enclosed elevator lobby on each floor.

**7.14.8.4** The occupant evacuation shaft system shall be enclosed and separated from the remainder of the building.
by walls complying with the following:

1. The shaft system walls shall be smoke barriers in accordance with Section 8.5.
2. The shaft system walls separating the elevator lobby from the remainder of the building shall have a minimum 1-hour fire resistance rating and minimum 3/4-hour fire protection–rated opening protectives.
3. The shaft system walls separating the elevator hoistway from the remainder of the building shall have a minimum 2-hour fire resistance rating and minimum 1 1/2-hour fire protection–rated opening protectives.
4. The shaft system walls separating the enclosed exit stair from the remainder of the building shall have a minimum 2-hour fire resistance rating and minimum 1 1/2-hour fire protection–rated opening protectives.

**7.14.8.5** Occupant evacuation shaft system enclosures shall be constructed to provide a minimum of classification Level 2 in accordance with ASTM C 1629/C 1629M, *Standard Classification for Abuse-Resistant Nondecorated Interior Gypsum Panel Products and Fiber-Reinforced Cement Panels*.

**7.14.8.6** The occupant evacuation shaft system shall be protected from water infiltration by one of the following methods:

1. The shaft system perimeter walls and opening protectives, other than the elevator lobby doors, shall be constructed such that an accumulation of water to a depth of 2 in. (51 mm) on the side of the wall not within the occupant evacuation shaft system shall be prevented from entering the shaft system.
2. Drains shall be installed to manage the flow of two fire department hoses and three fire sprinklers concurrently discharging such that water does not enter the shaft system.

**7.14.8.7** Occupant evacuation shaft system elevator lobby doors shall have all of the following features:

1. The doors shall have a fire protection rating of not less than 3/4 hour.
2. The doors shall be smoke leakage–rated assemblies in accordance with NFPA 105, *Standard for the Installation of Smoke Door Assemblies and Other Opening Protectives*.
3. The doors shall have an automatic positioning bottom seal to resist the passage of water at floor level from outside the shaft system.

Note: **A.7.14.8.7** The elevator lobby doors addressed in **7.14.8.7** do not include the elevator hoistway doors. The elevator hoistway doors serving fire-rated hoistway enclosures in accordance with 8.6.5 must meet the criteria of Table 8.3.4.2.

**7.14.8.8** Occupant evacuation shaft system elevator lobby doors shall have the following features:

1. Each door shall be automatic-closing in accordance with 7.2.1.8.2, as modified by **7.14.8.8(2)**.
2. In addition to the automatic-closing means addressed by 7.2.1.8.2, the elevator lobby door on any floor shall also close in response to any alarm signal initiated on that floor.
3. Each door shall be provided with a vision panel arranged to allow people within the lobby to view conditions on the other side of the door.

**7.14.8.9** Each occupant evacuation shaft system exit stair enclosure door shall be provided with a vision panel arranged to allow people on either side of the door to view conditions on the other side of the door.

**7.14.8.10** Occupant evacuation shaft system exit stair enclosures shall be permitted to serve as occupant egress stairs.

**7.14.8.11** Occupant evacuation shaft system elevator lobbies shall be permitted to serve as areas of refuge.

Committee Statement: The Committee Meeting Action does what the submitter requested but reworded the mandatory introduction of 7.14.1.1 for clarity. Although the submitter requested that the moved material become Section 7.13, it has been numbered as Section 7.14 because the Committee Action on Proposal 101-160 creates a new Section 7.13.

Number Eligible to Vote: 28
Ballot Results: Affirmative: 26 Negative: 1
Ballot Not Returned: 1 McMahon, C.

Explanation of Negative:

LATHROP, J.: It is incredible that we move this into the body of the code when the manufacturers of elevators say it is not ready for prime time. I don't think we have ever said that something is safe to use when the manufacturers say it is not. Why are we rushing into this. Let's have the research continue and then get it right and put it into the Code.
Technical Committee on Means of Egress,

Editorially combine the Committee Action on Proposals 101-418 through 101-427.

Proposals 101-418 through 101-427 address Annex B, but the Committee Action on Proposal 101-418 moves the material to a new Section 7.14. It will be difficult for reviewers to see the overall effect of the changes in the absence of a composite draft. This proposal makes no technical changes and simple combines all the related Committee Actions.

Committee Meeting Action: Accept in Principle

NOTE: See Committee Statement which advises reviewers NOT to submit public comments on this proposal, but rather on Proposal 101-418 through 101-427.

The combination of the Committee Action on Proposals 101-418 through 101-427 produces a new Section 7.14 that reads as follows:

7.14 Elevators for Occupant-Controlled Evacuation Prior to Phase I Emergency Recall Operations

This annex is not a part of the requirements of this NFPA document but is included for informational purposes only. Information in this annex is intended to be adopted by the jurisdiction at the discretion of the adopting jurisdiction. Additionally, information in this annex is intended to be incorporated on a voluntary basis by building owners and developers who might have a desire to include occupant evacuation elevators in their design projects.

Although this annex is written in mandatory language, it is not intended to be enforced or applied unless specifically adopted by the jurisdiction or, if it is being applied on a voluntary basis, by the building owner or developer.

The provisions of this annex are applicable where elevators are intended to be used for general building occupant evacuation during alarm conditions prior to Phase I Emergency Recall Operation:

1. General.
   7.14.1 Elevators that are installed in new buildings in compliance with the provisions of Annex E shall be permitted. Where passenger elevators for general public use are permitted to be used for occupant-controlled evacuation prior to Phase I Emergency Recall Operation mandated by the Firefighters’ Emergency Operation provisions of ASME A17.1/CSA B44, Safety Code for Elevators and Escalators, the elevator system shall also comply with this section.
   Note: A.7.14.1.1 The Phase I Emergency Recall Operation mandated by the Firefighters’ Emergency Operation provisions of ASME A17.1/CSA B44, Safety Code for Elevators and Escalators, recalls elevators upon detection of smoke by smoke detectors installed in the following locations:
   (1) At each floor served by the elevator in the lobby (landing) adjacent to the hoistway doors
   (2) In the associated elevator machine room
   (3) In the elevator hoistway where sprinklers are located in the hoistway
   Where smoke from a fire remote from the elevator lobby (landing), elevator machine room, and elevator hoistway can be kept from reaching the elevator lobby (landing), elevator machine room, and elevator hoistway, the associated elevators can continue to operate in a fire emergency. The provisions of Annex B Section 7.14 address the features that need to be provided to make such elevator operation safe for evacuation.

7.14.2 Occupant evacuation elevators in accordance with Annex B Section 7.14 shall not be permitted to satisfy requirements of this Code applicable to the following:
   (1) Number of means of egress
   (2) Capacity of means of egress
   (3) Arrangement of means of egress

7.14.2 Occupant Information Features.

7.14.2.1 An evacuation plan approved by the authority having jurisdiction shall be implemented, specifically including the procedures for occupant evacuation using the exit stairs and the occupant evacuation elevators.

Note: A.7.14.2.1 Building occupants have traditionally been taught not to use elevators in fire or similar emergencies. The evacuation plan should include more than notification that the elevators can be used for emergency evacuation. The plan should include training to make occupants aware that the elevators will be available only for the period of time prior to elevator recall via smoke detection in the elevator lobby, machine room, or hoistway. Occupants should be prepared to use the exit stairs (which are required to be directly accessible from the elevator lobby by B 7.14.8.3) where the elevator has been called out of service.
Occupant evacuation elevators shall be marked with signage indicating the elevators are suitable for use by building occupants for evacuation during fires.

Conditions for Safe Continued Operation

Conditions necessary for the continued safe operation of the occupant evacuation elevators and the associated elevator lobbies and elevator machine rooms shall be continuously monitored and displayed at the building emergency command center by a standard emergency service interface system meeting the requirements of NFPA 72, National Fire Alarm Code, and NEMA SB 30, Fire Service Annunciator and Interface.

The monitoring and display required by 7.14.2.3 shall include all of the following:

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 or emergency power system that provides backup 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 lobby, elevator machine room or machine space, or elevator hoistway

The building emergency command center location specified in B 7.14.2.3 shall be provided with a means to override normal elevator operation and to initiate manually a Phase I Emergency Recall Operation of the occupant-controlled elevators in accordance with ASME A17.1/CSA B44, Safety Code for Elevators and Escalators.

Occupant evacuation elevator lobbies shall be equipped with a status indicator arranged to display the following:

1. Illuminated green light and the message “Elevators available for occupant evacuation” while the elevators are operating under emergency conditions but before Phase I Emergency Recall Operation in accordance with the Fire Fighters’ Emergency Operation requirements of ASME A17.1/CSA B44, Safety Code for Elevators and Escalators
2. Illuminated red light and the message “Elevators out of service, use exit stairs” once the elevators are under Phase I Emergency Recall Operation
3. No illuminated light but the message “Elevators are operating normally” while the elevators are operating under nonemergency conditions

The building shall be protected throughout by an approved fire alarm system in accordance with Section 9.6.

Smoke Detectors

Smoke detectors shall be installed in all occupiable areas within the building in accordance with the requirements of NFPA 72, National Fire Alarm Code, except as otherwise provided in B.3.2.2:

Note: The occupant evacuation elevator will function only until Phase I Emergency Recall Operation. The required smoke detection system in occupiable areas is intended to provide building occupants with the early warning needed to permit elevator use early in the fire.

Smoke detectors shall not be required to be installed in all occupiable areas where all of the following conditions are met:

1. The building is protected throughout by an approved, supervised automatic sprinkler system in accordance with Section B.4.
2. The sprinkler system is provided with a sprinkler control valve and a waterflow device on each floor.
3. The sprinkler control valves and waterflow devices required by B.3.2.2(2) are monitored by the building fire alarm system.

Note: The exemption permitted by B.3.2.2 eliminates the need to install smoke detectors in all occupied areas of the building where the evacuation elevator protocol can be initiated by the sprinkler system that is arranged to indicate the floor of fire origin when a sprinkler flows water.

The fire alarm system shall include an emergency voice/alarm communication system in accordance with NFPA 72, National Fire Alarm Code, with the ability to provide voice directions on a selective basis to any building floor.

Note A.7.14.3.2: The emergency voice/alarm communication system with the ability to provide voice directions on a selective basis to any building floor might be used to instruct occupants of the fire floor who are able to use stairs to relocate to a floor level below. The selective voice notification feature might be used to provide occupants of a given elevator lobby with a status report or supplemental instructions.

The emergency voice/alarm communication system shall be arranged so that intelligible voice instructions are audible in the elevator lobbies under conditions where the elevator lobby doors are in the closed
position.

Note: A.7.14.3.3 An audible notification appliance will need to be positioned in the elevator lobby in order to meet the requirement of B.7.14.3.3. The continued use of the occupant evacuation elevator system is predicated on elevator lobby doors that are closed to keep smoke from reaching the elevator lobby smoke detector that is arranged to initiate the Phase I Emergency Recall Operation.

7.14.3.4 Two-way communication system. A two-way communication system shall be provided in each occupant evacuation elevator lobby for the purpose of initiating communication with the emergency command center or an alternative location approved by the fire department.

7.14.3.4.1 Design and installation. The two-way communication system shall include audible and visible signals and shall be designed and installed in accordance with the requirements of ICC/ANSI A117.1, American National Standard for Accessible and Usable Buildings and Facilities.

7.14.3.4.2 Instructions. Instructions for the use of the two-way communication system along with the location of the station shall be permanently located adjacent to each station. Signage shall comply with the ICC/ANSI A117.1 requirements for visual characters.

Dyn.7.14.4 Sprinklers.

Dyn.7.14.4.1 The building shall be protected throughout by an approved, supervised automatic sprinkler system in accordance with 9.7.1.1(1), except as otherwise specified in B 7.14.4.2.

Dyn.7.14.4.1.1 A sprinkler control valve and a waterflow device shall be provided for each floor.

7.14.4.1.2 The sprinkler control valves and waterflow devices required by 7.14.4.1.1 shall be monitored by the building fire alarm system.

Note: A.7.14.4.2 Sprinklers shall not be installed in elevator machine rooms serving occupant evacuation elevators, and such prohibition shall not cause an otherwise fully sprinklered building to be classified as nonsprinklered.

Note: A.7.14.4.3 NFPA 13, Standard for the Installation of Sprinkler Systems, permits sprinklers to be omitted from the top of the elevator hoistway where the hoistway for passenger elevators is noncombustible and the car enclosure materials meet the requirements of ASME A17.1/CSA B44, Safety Code for Elevators and Escalators. As it is unsafe to operate elevators while sprinkler water is being discharged in the elevator machine room. The presence of a shunt trip conflicts with the needs of the occupant evacuation elevator, as it disconnects the power without ensuring that the elevator is first returned to a safe floor so as to prevent trapping occupants. The provision of B-7.14.4.2, prohibiting the sprinklering of elevator machine rooms, deviates from the requirements of NFPA 13, Standard for the Installation of Sprinkler Systems, which permits no such exemption. However, NFPA 13 permits a similar exemption for electrical equipment rooms where the room is dedicated to electrical equipment only; the equipment is installed in a 2-hour fire-rated enclosure, including protection for penetrations; and no combustible storage is stored in the room. Similar safeguards are imposed on the occupant evacuation elevator by B-7.14.6.1 and B 7.14.6.2.

Dyn.7.14.4.3 Where a hoistway serves occupant evacuation elevators, sprinklers shall not be installed at the top of the elevator hoistway or at other points in the hoistway more than 24 in. (610 mm) above the pit floor, and such prohibition shall not cause this building to be classified as nonsprinklered.

Note: A.7.14.4.3 NFPA 13, Standard for the Installation of Sprinkler Systems, permits sprinklers to be omitted from the top of the elevator hoistway where the hoistway for passenger elevators is noncombustible and the car enclosure materials meet the requirements of ASME A17.1/CSA B44, Safety Code for Elevators and Escalators. The provision of B 7.14.5.3 restricts occupant evacuation elevators to passenger elevators that are in noncombustible hoistways and for which the car enclosure materials meet the requirements of ASME A17.1/CSA B44. (See B 7.14.5.3.)

Dyn.7.14.5 Elevator Installation.

Dyn.7.14.5.1 Except as modified by B-7.14.5.2, occupant evacuation elevators shall be installed in accordance with ASME A17.1/CSA B44, Safety Code for Elevators and Escalators.

Dyn.7.14.5.2* Shunt breakers shall not be installed on elevator systems used for occupant evacuation.

Note: A.7.14.5.2* Elevator shunt breakers are intended to disconnect the electric power to an elevator prior to sprinkler system waterflow impairing the functioning of the elevator. The provision of B-7.14.4.2 prohibits the installation of sprinklers in the elevator machine room and at the top of the elevator hoistway, obviating the need for shunt breakers. The provision of B 7.14.5.2 is not actually an exemption to the provisions of ASME A17.1/CSA B44, Safety Code for Elevators and Escalators, as ASME A17.1/CSA B44 requires the automatic main line power disconnect (shunt trip) only where sprinklers are located in the elevator machine room or in the hoistway more than 24 in. (610 mm) above the pit floor. The provision of B-7.14.4.2 prohibits sprinklers in the elevator machine room. The provision of B-7.14.4.3 prohibits sprinklers at the top of the hoistway and at other points in the hoistway more than 24 in. (610 mm) above the pit floor in recognition of the limitations on combustibility established by B 7.14.5.3.

Dyn.7.14.5.3 Occupant evacuation elevators shall be limited to passenger elevators that are in noncombustible hoistways and for which the car enclosure materials meet the requirements of ASME A17.1/CSA B44, Safety Code for Elevators and Escalators.
**NFPA 101**

**7.14.6** Elevator Machine Rooms.

**7.14.6.1** Elevator machine rooms associated with occupant evacuation elevators shall be separated from all building areas, other than elevator hoistways, by minimum 2-hour fire resistance–rated construction.

**Note:** The minimum 2-hour fire resistance–rated separation is based on the omission of sprinklers from the elevator machine room in accordance with **7.14.4.2**.

**7.14.6.2** Elevator machine rooms associated with occupant evacuation elevators shall be used for no purpose other than as elevator machine rooms.

**Note:** The requirement of **7.14.6.2** is consistent with that in ASME A17.1/CSA B44, *Safety Code for Elevators and Escalators*, which permits only machinery and equipment used in conjunction with the function or use of the elevator to be in the elevator machine room. An inspection program should be implemented to ensure that the elevator machine room is kept free of storage.

**7.14.7** Electrical Power and Control Wiring.

**7.14.7.1** The following features associated with 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

**7.14.7.2** Wiring for power of the elevators shall meet one of the following criteria:

1. The wiring shall utilize type CI cable with a minimum 1-hour fire resistance rating.
2. The wiring shall be enclosed in a minimum 1-hour fire resistance construction.

**Note:** Wiring or cables that provide control signals are exempt from the protection requirements of **7.2** provided such wiring or cables where exposed to fire will not disable Phase II Emergency In-Car Operation once such emergency operation has been activated.

**7.14.8** Occupant Evacuation Shaft System.

**7.14.8.1** Occupant evacuation elevators shall be provided with an occupant evacuation shaft system consisting of all of the following:

1. Elevator hoistway.
2. Enclosed elevator lobby outside the bank or group of hoistway doors on each floor served by the elevators, except that elevator lobbies shall not be required to be enclosed where located either on the street floor or level of exit discharge.

**Exception:** Elevator lobbies are not required to be enclosed when located either on the street floor or level of exit discharge.

3. Enclosed exit stair with doors to all floors, at and above grade level, served by the elevators

**7.14.8.2** Elevator Lobby Size.

**7.14.8.2.1** Occupant evacuation elevator lobbies shall have minimum floor area, except as otherwise provided in **7.14.8.2.2**, as follows:

1. The 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 elevator lobby floor area also shall accommodate one wheelchair space of 30 in. × 48 in. (760 mm × 1220 mm) for each 50 persons, or portion thereof, of the occupant load of the floor area served by the lobby.

**Note:** Elevator lobbies provide a safe place for building occupants to await the elevators and extend the time available for such use by providing a barrier to smoke and heat that might threaten the elevator car or hoistway. Smoke detectors within the elevator lobbies are arranged to initiate a Phase I Emergency Recall Operation if the lobby is breached by smoke.

**7.14.8.2.2** The size of lobbies serving multiple banks of elevators shall be exempt from the requirement of **7.14.8.2.1** provided the area of such lobbies is approved on an individual basis and is consistent with the building’s fire safety and evacuation plan.

**7.14.8.3** Access to the exit stair required by **7.14.8.1(3)** shall be directly from the enclosed elevator lobby on each floor.

**7.14.8.4** The occupant evacuation shaft system shall be enclosed and separated from the remainder of the building by walls complying with the following:

1. The shaft system walls shall be smoke barriers in accordance with Section 8.5.
2. The shaft system walls separating the elevator lobby from the remainder of the building shall have a minimum 1-hour fire resistance rating and minimum 3/4-hour fire protection–rated opening protectives.
3. The shaft system walls separating the elevator hoistway from the remainder of the building shall have a minimum 2-hour fire resistance rating and minimum 11/2-hour fire protection–rated opening protectives.
4. The shaft system walls separating the enclosed exit stair from the remainder of the building shall have a minimum
2-hour fire resistance rating and minimum 11/2-hour fire protection–rated opening protectives.

**B-7.14.8.5** Occupant evacuation shaft system enclosures shall be constructed to provide a minimum of classification Level 2 in accordance with ASTM C 1629/C 1629M, *Standard Classification for Abuse-Resistant Nondecorated Interior Gypsum Panel Products and Fiber-Reinforced Cement Panels*.

**B-7.14.8.6** The occupant evacuation shaft system shall be protected from water infiltration by one of the following methods:

1. The shaft system perimeter walls and opening protectives, other than the elevator lobby doors, shall be constructed such that an accumulation of water to a depth of 2 in. (51 mm) on the side of the wall not within the occupant evacuation shaft system shall be prevented from entering the shaft system.

2. Drains shall be installed to manage the flow of two fire department hoses and three fire sprinklers concurrently discharging such that water does not enter the shaft system.

**B-7.14.8.7** Occupant evacuation shaft system elevator lobby doors shall have all of the following features:

1. The doors shall have a fire protection rating of not less than 3/4 hour.

2. The doors shall be smoke leakage–rated assemblies in accordance with NFPA 105, *Standard for the Installation of Smoke Door Assemblies and Other Opening Protectives*.

3. The doors shall have an automatic positioning bottom seal to resist the passage of water at floor level from outside the shaft system.

**Note:** A-7.14.8.7 The elevator lobby doors addressed in B-7.14.8.7 do not include the elevator hoistway doors. The elevator hoistway doors serving fire-rated hoistway enclosures in accordance with 8.6.5 must meet the criteria of Table 8.3.4.2.

**B-7.14.8.8** Occupant evacuation shaft system elevator lobby doors shall have the following features:

1. Each door shall be automatic-closing in accordance with 7.2.1.8.2, as modified by B-7.14.8.8(2).

2. In addition to the automatic-closing means addressed by 7.2.1.8.2, the elevator lobby door on any floor shall also close in response to any alarm signal initiated on that floor.

3. Each door shall be provided with a vision panel arranged to allow people within the lobby to view conditions on the other side of the door.

**B-7.14.8.9** Each occupant evacuation shaft system exit stair enclosure door shall be provided with a vision panel arranged to allow people on either side of the door to view conditions on the other side of the door.

**B-8.10** Occupant evacuation shaft system exit stair enclosures shall be permitted to serve as occupant egress stairs.

**B-8.11** Occupant evacuation shaft system elevator lobbies shall be permitted to serve as areas of refuge.

**Committee Statement:** The Committee Action on this proposal is not intended to make any technical changes or direct that any technical changes be made. It is presented EDITORIALLY to assist the ROP reviewer. Public comments should NOT be made on this proposal. Reviewers are asked to submit public comments on Proposals 101-418 through 101-427.

**Number Eligible to Vote:** 28

**Ballot Results:** Affirmative: 26 Negative: 1

**Ballot Not Returned:** 1 McMahon, C.

**Explanation of Negative:**

NUSCHLER, G.: This action is premature: the committee should allow these requirements to remain in Annex B until the ASME A17 task groups complete their work in 2010. At that time, we should reconcile Annex B and the ASME requirements, and then move forward. I recommend this proposal be rejected.
B.2.3 Conditions necessary for the continued safe operation of the occupant evacuation elevators and the associated elevator lobbies and elevator machine rooms shall be continuously monitored and displayed at the building emergency command center by a standard emergency service interface system meeting the requirements of NFPA 72, National Fire Alarm Code, and NEMA SB 30, Fire Service Annunciator and Interface.

NOTE: The occupant evacuation elevators shall be continuously monitored at the emergency command center or a central control point approved by the fire department and arranged to display all of 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 or emergency power system that provides backup 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 lobby, elevator machine room or machine space, or elevator hoistway.

Substantiation: The intent of this code change proposal is to ensure certain specific conditions necessary for safe operation of occupant evacuation elevators are monitored at the emergency command center.

This is not original material; its reference/source is as follows:

International Building Code

Committee Meeting Action: Accept in Principle

Revise text to read as follows:

B.2.3 Conditions for Safe Continued Operation.

B.2.3.1 Conditions necessary for the continued safe operation of the occupant evacuation elevators and the associated elevator lobbies and elevator machine rooms shall be continuously monitored and displayed at the building emergency command center by a standard emergency service interface system meeting the requirements of NFPA 72, National Fire Alarm Code, and NEMA SB 30, Fire Service Annunciator and Interface.

B.2.3.2 The monitoring and display required by B.2.3.1 shall include all of the following:

(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 or emergency power system that provides backup 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 lobby, elevator machine room or machine space, or elevator hoistway

Committee Statement: The Committee Meeting Action does what the submitter requested but adds the material as mandatory text and not as an advisory note.

The SAF-MEA committee notes that if the Committee Action on Proposal 101-418, which moves the Annex B material to the body of the Code as a new Section 7.14, proceeds favorably through ROP letter balloting, the change made by this proposal will be integrated into the text of new Section 7.14.

Number Eligible to Vote: 28
Ballot Results: Affirmative: 27
Ballot Not Returned: 1 McMahon, C.
Smoke detectors shall be installed in all occupiable areas within the building in accordance with the requirements of NFPA 72: National Fire Alarm Code, except as otherwise provided in B.3.2.2.

Note: The occupant evacuation elevator will function only until Phase I Emergency Recall Operation. The required smoke detection system in occupiable areas is intended to provide building occupants with the early warning needed to permit elevator use early in the fire.

B.3.2.2: Smoke detectors shall not be required to be installed in all occupiable areas where all of the following conditions are met:

1. The building is protected throughout by an approved, supervised automatic sprinkler system in accordance with Section B.4.
2. The sprinkler system is provided with a sprinkler control valve and waterflow device on each floor.
3. The sprinkler control valves and waterflow devices required by B.3.2.2(2) are monitored by the building fire alarm system.

Note: The exemption permitted by B.3.2.2 eliminates the need to install smoke detectors in all occupied areas of the building where the elevator evacuation protocol can be initiated by the sprinkler system that is arranged to indicate the floor of fire origin when a sprinkler flows water.

Substantiation: The intent of this code change proposal is to delete the subject provisions regarding the installation of smoke detectors in all occupiable areas within a building. It should be noted that no technical substantiation was provided to the technical committee to justify these provisions. In addition, the subject provisions are moot since B.3.2.2 has an exception that permits elimination of the smoke detectors if the building is protected throughout by an automatic sprinkler system. Annex B.4 currently requires the building to be protected throughout by an automatic sprinkler system. See my correlating code change proposal to B.4.

Committee Meeting Action: Accept

Committee Statement: The SAF-MEA committee notes that if the Committee Action on Proposal 101-418, which moves the Annex B material to the body of the Code as a new Section 7.14, proceeds favorably through ROP letter balloting, the change made by this proposal will be integrated into the text of new Section 7.14.

Number Eligible to Vote: 28
Ballot Results: Affirmative: 27
Ballot Not Returned: 1 McMahon, C.
Add new text as follows:

**B.3.5 Two-way communication system.** A two-way communication system shall be provided in each occupant evacuation elevator lobby for the purpose of initiating communication with the emergency command center or an alternative location approved by the fire department.

**B.3.5.1 Design and installation.** The two-way communication system shall include audible and visible signals and shall be designed and installed in accordance with the requirements of ICC A117.1.

**B.3.5.2 Instructions.** Instructions for the use of the two-way communication system along with the location of the station shall be permanently located adjacent to each station. Signage shall comply with the ICC A117.1 requirements for visual characters.

**Substantiation:** The intent of this code change proposal is to ensure that a two-way communication system for the occupants is provided between each occupant evacuation elevator lobby and the emergency command center.

This is not original material; its reference/source is as follows:

International Building Code

Committee Meeting Action: Accept in Principle

Add new text as follows:

**B.3.5 Two-way communication system.** A two-way communication system shall be provided in each occupant evacuation elevator lobby for the purpose of initiating communication with the emergency command center or an alternative location approved by the fire department.

**B.3.5.1 Design and installation.** The two-way communication system shall include audible and visible signals and shall be designed and installed in accordance with the requirements of ICC/ANSI A117.1, _American National Standard for Accessible and Usable Buildings and Facilities_.

**B.3.5.2 Instructions.** Instructions for the use of the two-way communication system along with the location of the station shall be permanently located adjacent to each station. Signage shall comply with the ICC/ANSI A117.1 requirements for visual characters.

Committee Statement: The Committee Meeting Action does what the submitter requested but spells out the title of ICC/ANSI A117.1 in its first occurrence.

The SAF-MEA committee notes that if the Committee Action on Proposal 101-418, which moves the Annex B material to the body of the Code as a new Section 7.14, proceeds favorably through ROP letter balloting, the change made by this proposal will be integrated into the text of new Section 7.14.

Number Eligible to Vote: 28

Ballot Results: Affirmative: 27

Ballot Not Returned: 1 McMahon, C.
Submittor: Dave Frable, U.S. General Services Administration

Recommendation: Add new text as follows:

B.4 Sprinklers.

B.4.1 The building shall be protected throughout by an approved, supervised automatic sprinkler system in accordance with 9.7.1.1(1), except as otherwise specified in B.4.2.

B.4.1.1 The automatic sprinkler system shall be provided with a sprinkler control valve and waterflow device on each floor that is monitored by building fire alarm system.

Substantiation: The intent of this code change proposal is to ensure the required automatic sprinkler system sprinkler control valve and waterflow device on each floor is monitored by the fire alarm system to indicate the floor of fire origin when a sprinkler flows water.

Committee Meeting Action: Accept in Principle

Add new text as follows:

B.4 Sprinklers.

B.4.1 The building shall be protected throughout by an approved, supervised automatic sprinkler system in accordance with 9.7.1.1(1), except as otherwise specified in B.4.2.

B.4.1.1 A sprinkler control valve and a waterflow device shall be provided for each floor.

B.4.1.2 The sprinkler control valves and waterflow devices required by B.4.1.1 shall be monitored by the building fire alarm system.

Committee Statement: The Committee Meeting Action does what the submitter requested but editorially splits the new requirements into two numbered provisions.

The SAF-MEA committee notes that if the Committee Action on Proposal 101-418, which moves the Annex B material to the body of the Code as a new Section 7.14, proceeds favorably through ROP letter balloting, the change made by this proposal will be integrated into the text of new Section 7.14.

Number Eligible to Vote: 28

Ballot Results: Affirmative: 27

Ballot Not Returned: 1 McMahon, C.
(B.7)  

**Submitter:** Brian D. Black, BDBlack Codes, Inc. / Rep. National Elevator Industry, Inc.  

**Recommendation:** Revise text as follows:  

**B.7 Electrical Power and Control Wiring.**  

E.7.1 The following features associated with 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  

B.7.2 Wiring for power of the elevators shall meet one of the following:  

1. The wiring shall utilize type CI cable with a minimum 1-hour fire resistance rating.  
2. The wiring shall be enclosed in a minimum 1-hour fire resistance construction.  

B.7.3 Wiring or cables that provide control signals shall be exempt from the protection requirements of E.7.2 provided such wiring or cables where exposed to fire will not disable Phase II Emergency In-Car Operation once such emergency operation has been activated.  

**Substantiation:** The safety of building occupants evacuating a building is dependent upon the life safety support systems required by this section being maintained during the critical hours of evacuation. The 2-hour rating is consistent with the hoistway fire rating and fire pump feeder enclosure rating. The change has the support of the firefighting community as surveyed by members of the ASME task group. It is not unreasonable when it is considered that this small increase in time will allow for more time to ensure the full evacuation of a building.  

Elevator landing fixtures such as hall call buttons and hall lanterns do not need a fire resistance rating to ensure the viability of the system and protection of firefighters using the First Responders Use Elevators. The elevator industry generally does not submit fixtures fire-resistance rating testing.  

**Committee Meeting Action: Accept in Principle in Part**  

Do not change the wiring protection from 1 to 2 hours.  

Add an advisory Note to B.7.2 to read as follows:  

**Note:** Wiring or cables that provide control signals are exempt from the protection requirements of B.7.2 provided such wiring or cables where exposed to fire will not disable Phase II Emergency In-Car Operation once such emergency operation has been activated.  

**Committee Statement:** There is no justification for increasing the wiring protection from 1 to 2 hours for occupant evacuation elevators used prior to elevator recall. Existing 7.2.13.7, for power and control wiring for egress elevators in towers, requires only 1-hr protection.  

The SAF-MEA committee notes that if the Committee Action on Proposal 101-418, which moves the Annex B material to the body of the Code as a new Section 7.14, proceeds favorably through ROP letter balloting, the change made by this proposal will be integrated into the text of the annex that accompanies Section 7.14.  

**Number Eligible to Vote:** 28  

**Ballot Results:** Affirmative: 26 Negative: 1  

**Ballot Not Returned:** 1 McMahon, C.  

**Explanation of Negative:**  

NUSCHLER, G.: Protecting occupant evacuation elevators by requiring a 2 hour fire resistance rating for wiring used to power such elevators or by requiring that such wiring be enclosed with 2 hour fire resistance construction would provide a level of protection equivalent to that on other key components of a building’s life safety support systems. I recommend this proposal be accepted in principle.
Submitter: Dave Frable, U.S. General Services Administration

Recommendation: Revise text as follows:

B.8.2 Occupant evacuation elevator lobbies shall have minimum floor area as follows:
(1) The elevator lobby floor area shall accommodate, at 3 ft\(^2\) (0.28 m\(^2\)) per person, a minimum of 25 percent of the occupant load of the floor area served by the lobby.
(2) The elevator lobby floor area also shall accommodate one wheelchair space of 30 in. × 48 in. (760 mm × 1220 mm) for each 50 persons, or portion thereof, of the occupant load of the floor area served by the lobby.

Exception: The size of lobbies serving multiple banks of elevators shall have the minimum floor area approved on an individual basis and shall be consistent with the building’s fire safety and evacuation plan.

Note: Elevator lobbies provide a safe place for building occupants to await the elevators and extend the time available for such use by providing a barrier to smoke and heat that might threaten the elevator car or hoistway. Smoke detectors within the elevator lobbies are arranged to initiate a Phase I Emergency Recall Operation if the lobby is breached by smoke.

Substantiation: The intent of this code change proposal is to provide performance based language for determining the size of the occupant evacuation elevator lobbies serving multiple banks of elevators on the same or from multiple floors.

This is not original material; its reference/source is as follows:

International Building Code

Committee Meeting Action: Accept in Principle

Revise text to read as follows:

B.8.2 Elevator Lobby Size.

B.8.2.1 Occupant evacuation elevator lobbies shall have minimum floor area, except as otherwise provided in B.8.2.2, as follows:

(1) The elevator lobby floor area shall accommodate, at 3 ft\(^2\) (0.28 m\(^2\)) per person, a minimum of 25 percent of the occupant load of the floor area served by the lobby.

(2) The elevator lobby floor area also shall accommodate one wheelchair space of 30 in. × 48 in. (760 mm × 1220 mm) for each 50 persons, or portion thereof, of the occupant load of the floor area served by the lobby.

Note: Elevator lobbies provide a safe place for building occupants to await the elevators and extend the time available for such use by providing a barrier to smoke and heat that might threaten the elevator car or hoistway. Smoke detectors within the elevator lobbies are arranged to initiate a Phase I Emergency Recall Operation if the lobby is breached by smoke.

B.8.2.2 The size of lobbies serving multiple banks of elevators shall be exempt from the requirement of B.8.2.1(1), provided the area of such lobbies is approved on an individual basis and is consistent with the building’s fire safety and evacuation plan.

Committee Statement: The Committee Meeting Action does what the submitter requested but rewords the text for compliance with the NFPA style manual.

The SAF-MEA committee notes that if the Committee Action on Proposal 101-418, which moves the Annex B material to the body of the Code as a new Section 7.14, proceeds favorably through ROP letter balloting, the change made by this proposal will be integrated into the text of new Section 7.14.

Number Eligible to Vote: 28
Ballot Results: Affirmative: 27
Ballot Not Returned: 1 McMahon, C.
Revisit text as follows:

An approved method to prevent water from infiltrating into the hoistway enclosure from the operation of the automatic sprinkler system outside the enclosed occupant evacuation elevator lobby shall be provided. The occupant evacuation shaft system shall be protected from water infiltration by one of the following methods:

1. The shaft system perimeter walls and opening protectives, other than the elevator lobby doors, shall be constructed such that an accumulation of water to a depth of 2 in. (51 mm) on the side of the wall not within the occupant evacuation shaft system shall be prevented from entering the shaft system.

2. Drains shall be installed to manage the flow of two fire department hoses and three fire sprinklers concurrently discharging such that water does not enter the shaft system.

Note: This performance language will permit alternate design options to provide a means to prevent water from an operating sprinkler system from infiltrating into the hoistway enclosure. For example, such approved means could include: drains, sloping floor, etc.

Substantiation: The intent of this code change proposal is to provide performance language that will permit alternate design options to provide a means to prevent water from an operating sprinkler system from infiltrating into the hoistway enclosure. For example, such approved means could include: drains, sloping floor, etc. The subject proposed language is similar to the proposed language for the first responders use elevators.

Committee Meeting Action: Reject

Committee Statement: The current requirements are necessary for the majority of projects without the ability to do a performance-based analysis. Performance is already an option.

Number Eligible to Vote: 28

Ballot Results: Affirmative: 26 Negative: 1

Ballot Not Returned: 1 McMahon, C.

Explanation of Negative:

FRABLE, D.: I cannot support the Technical Committee actions. The current two prescriptive requirements have not been technically justified or shown that they are equivalent in attempting to achieve the same objective. For example, designing and installing perimeter drains to manage the flow of two fire department hoses and three fire sprinklers concurrently or designing an enclosure around the shaft system such that an accumulation of water to a depth of 2 inches does not enter the shaft system. What size fire hoses? Why 2 inches of water accumulation? I believe the proposed performance language addresses the main objective to prevent water from an operating sprinkler system from infiltrating into the shaft enclosure by permitting alternative design options.

Delete text as follows:

Occupant evacuation shaft system exit stair enclosures shall be permitted to serve as occupant egress stairs.

Substantiation: The intent of this code change proposal is to delete the subject text to eliminate any confusion for the user of the Code. Current Code provisions state that all required exits shall be arranged so that they are readily accessible at all times. B.8.10 implies that certain required exit stairs are not permitted to be accessible at all times by occupants.

Committee Meeting Action: Accept

Committee Statement: The SAF-MEA committee notes that if the Committee Action on Proposal 101-418, which moves the Annex B material to the body of the Code as a new Section 7.14, proceeds favorably through ROP letter balloting, the change made by this proposal will be integrated into the text of new Section 7.14.

Number Eligible to Vote: 28

Ballot Results: Affirmative: 27

Ballot Not Returned: 1 McMahon, C.

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(B.8.11)

Final Action: Accept

Submitter: Dave Frable, U.S. General Services Administration
Recommendation: Delete text as follows:

B.8.11 Occupant evacuation shaft system elevator lobbies shall be permitted to serve as areas of refuge.

Substantiation: The intent of this code change proposal is to delete the subject text to eliminate any confusion for the user of the Code. Current Code provisions state that an area of refuge used as part of the accessible means of egress is a story in a building protected throughout by an approved automatic sprinkler system. B.8.11 implies that the occupant evacuation shaft system not the entire story of the sprinklered building is considered the area of refuge.

Committee Meeting Action: Accept

Committee Statement: The SAF-MEA committee notes that if the Committee Action on Proposal 101-418, which moves the Annex B material to the body of the Code as a new Section 7.14, proceeds favorably through ROP letter balloting, the change made by this proposal will be integrated into the text of new Section 7.14.

Number Eligible to Vote: 28
Ballot Results: Affirmative: 27
Ballot Not Returned: 1 McMahon, C.

101-428 Log #126 SAF-MEA

(Annex C)

Final Action: Reject

Submitter: Eddie Phillips, Southern Regional Fire Code Development Committee
Recommendation: Delete Annex C.

Substantiation: Annex C should be deleted and if needed placed in the handbook. The text provides no guidance for the user as there are no specific requirements on its use or any occupancy that has accepted them. The inclusion of this annex in the code does not provide any benefit to the code and actually provides problems to the AHJ when those type of devices are brought to the AHJ.

Committee Meeting Action: Reject

Committee Statement: The submitter provided no details with respect to problems with the existing wording of Annex C. The SAF-MEA committee welcomes a public comment citing specific examples.

Number Eligible to Vote: 28
Ballot Results: Affirmative: 27
Ballot Not Returned: 1 McMahon, C.

Comment on Affirmative:

ALLES, R.: Evacuation that the NFPA feels has matured enough should any end-users wish to implement such. A detailed explanation of the background behind Annex C is provided in the 2009 Life Safety Code Handbook. Supplemental Evacuation will continue to mature & eventually be moved into the Code.

DE VRIES, D.: The Committee action to reject was appropriate. The submitter did not provide any examples or specific reasons as to why Annex C is a problem for AHJ’s. In fact, the main body of the Life Safety Code provides no limitations on the use or installation of escape devices and systems. If the submitter is looking for a mechanism to prohibit the installation of equipment that he deems inappropriate and unsafe, Annex C provides that mechanism through specific adoption. It is written in enforceable language and limits such equipment to that which has been demonstrated to meet the criteria of ASTM standards. Annex C provides criteria for the installation, use and maintenance of the equipment.

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(C.3(5))

Submitter: David A. de Vries, Firetech Engineering

Recommendation: Revise text to read as follows:

C.3 Platform Rescue Systems (no change to text of C.3 and bullet points (1) through (4) then revise text as follows)

(5) The platform access from within buildings shall be by ramps or stairs, and the following also shall apply:

(a) Portable ramps shall be permitted.
(b) The maximum slope of a ramp shall be as low as practical, but shall not be required to be less than 1 in 8.

Substantiation: The existing language could be interpreted to require a ramp for access to a platform rescue system to be substantially less steep than a ramp permitted by 7.2.5, if it were “practical” to do so. This was not the intent of the original proposal; conversely, the intent was to permit ramps that are steeper than those permitted by 7.2.5 provided that they are as low as practical given building limitations. This was done in recognition that it is expected that wheelchair users will have assistance in accessing these short ramps. Section 7.2.5 permits a ramp with a slope of 1 in 8 for existing installations and that slope is a reasonable limit for the required slope of a platform rescue system access ramp.

Committee Meeting Action: Accept

Number Eligible to Vote: 28

Ballot Results: Affirmative: 27

Ballot Not Returned: 1 McMahon, C.
D.1.2.6 ASTM Publications. ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959. www.astm.org


Substantiation: This proposal updates ASTM standards to the most recent editions.

Committee Meeting Action: Accept in Principle

Revise text to read as follows:

D.1.2.6 ASTM Publications. ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959. www.astm.org


The Committee Meeting Action does what the submitter requested and additionally corrects the title of ASTM E 2484.

Committee Statement: The Committee Meeting Action does what the submitter requested and additionally corrects the title of ASTM E 2484.

Number Eligible to Vote: 28
Ballot Results: Affirmative: 27
Ballot Not Returned: 1 McMahon, C.