

September 30, 2011

**AD HOC COMMITTEE ON HEALTHCARE  
MEETING # 4**

**MOE WORK GROUP REPORT  
(IBC Chapters 4, 10 & 11)**

1. Elevators –
  - EGRESS THROUGH ELEVATOR LOBBY
  - OCCUPANT EVACUATION VIA ELEVATORS
2. Corridors-
  - GENERAL EGRESS
    - WIDTH – 8' CORRIDOR VS 5' CLEAR;
    - COMMON PATH OF TRAVEL
    - TRAVEL DISTANCE
  - PATIENTS AS PART OF OCCUPANT LOAD CALCULATION/REFUGE AREAS
  - WAITING SPACES OPEN TO CORRIDOR
3. Security and locking arrangements –
  - SPECIAL LOCKING DEVICES
    - DELAYED EGRESS
    - LATCHES ON SMOKE BARRIER DOORS
    - STAFF CONTROL IN PSYCH WARDS
    - INFANT CONTROL
    - SLIDING DOORS
4. Suites
  - SUITE SIZE AND SUPERVISION
  - MEANS OF EGRESS SUITE
5. Accessibility -
  - ACCESSIBILITY - Coordination with 2010 ADA
  - MAXIMUM 18" CLEAR ON THE SIDE OF TOILET FOR CARE-GIVER ACCESS
6. Other
  - Definition for 24 hour care

**Following are the code change proposals for each topic:**

**Issue #1:**

1. Elevators –
  - EGRESS THROUGH ELEVATOR LOBBY
  - OCCUPANT EVACUATION VIA ELEVATORS

**Conclusion #1:**

**#MOE1 -**

**Delete 'hidden' lobby requirement and just reference 713.14.1:**

**IBC 407.5.3 Horizontal assemblies.** Horizontal assemblies supporting smoke barriers required by this section shall be designed to resist the movement of smoke and shall comply with Sections 711.9.

**IBC 711.9 Smoke barrier.** Where *horizontal assemblies* are required to resist the movement of smoke by other sections of this code in accordance with the definition of *smoke barrier*, penetrations and joints in such *horizontal assemblies* shall be protected as required for *smoke barriers* in accordance with Sections 714.5 and 715.6. ~~Regardless of the number of stories connected by elevator shaft enclosures,~~ doors located in elevator shaft enclosures that penetrate the *horizontal assembly* shall be protected in accordance ~~by enclosed elevator lobbies complying with Section 713.14.1.~~ Openings through *horizontal assemblies* shall be protected by shaft enclosures complying with Section 713. *Horizontal assemblies* shall not be allowed to have unprotected vertical openings.

**Reason:**

This code change addresses text new in the 2009 IBC. The new text would require an elevator lobby at every elevator in a Group I-2 occupancy, “regardless of number of stories.” The proponent did not provide any substantiation for why this current code creates a life safety threat. The original code change proposal that added this information was turned down by the Fire Safety committee, but was approved at the final action hearing. The only justification provided was that this would coordinate existing language.

**#MOE2 –**

**IBC 713.14.1 Elevator lobby.** An enclosed elevator lobby shall be provided at each floor where an elevator shaft enclosure connects more than three *stories*. The lobby enclosure shall separate the elevator shaft enclosure doors from each floor by *fire partitions*. In addition to the requirements in Section 708 for *fire partitions*, doors protecting openings in the elevator lobby enclosure walls shall also comply with Section 716.5.3 as required for *corridor* walls and penetrations of the elevator lobby enclosure by ducts and air transfer openings shall be protected as required for *corridors* in

accordance with Section 717.5.4.1. Elevator lobbies shall have at least one *means of egress* complying with Chapter 10 and other provisions within this code.

### **Exceptions:**

*Exceptions 1-3 (no change)*

4. Enclosed elevator lobbies are not required where the building is protected by an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2. This exception shall not apply to the following:

- 4.1 ~~Group I-2 occupancies~~
- 4.2 Group I-3 occupancies; and
- 4.3 Elevators serving floor levels over 75 feet above the lowest level of fire department vehicle access in high-rise buildings.

*Exceptions 5-7 (no change)*

**Reason:** Previous to the 2009 version, the IBC did not require hospitals, nursing homes and boarding homes to provide elevator lobbies if the building was provided with fire sprinklers. Elevator lobbies serve no purpose on floors of facilities that “defend in place”. It is a long standing practice in healthcare to evacuate patients to the adjacent smoke compartment instead of evacuating them out of the building. Group I-2 provides smoke compartmentation for an added level of protection against the spread of smoke through the building. Floors are separated into at least two smoke compartments by rated construction and provide passive protection in addition to the active protection of a sprinkler system. These compartments in effect serve the same purpose as an elevator lobby.

The addition of elevator lobbies in these facilities could complicate the movement of patients to the adjacent smoke compartment by adding doors that bedridden patients must be transferred through. While alternatives to elevator lobbies exist, all increase construction cost for facility type who have a good fire record.

### **Issues #2:**

2. Corridors-

- GENERAL EGRESS
  - WIDTH – 8' CORRIDOR VS 5' CLEAR;
  - COMMON PATH OF TRAVEL
  - TRAVEL DISTANCE
- PATIENTS AS PART OF OCCUPANT LOAD CALCULATION/REFUGE AREAS
- WAITING SPACES OPEN TO CORRIDOR

## Conclusions #2 (Corridors):

### #MOE3

#### IBC SECTION 1017 AISLES

**IBC 1017.5 Aisles in other than assembly spaces and Groups B and M.** In other than rooms or spaces used for assembly purposes and Group B and M occupancies, the minimum clear *aisle* width shall be determined by Section 1005.1 for the *occupant load* served, but shall not be less than ~~36 inches (914 mm)~~. that required for corridors by Section 1018.2.

**Reason:** The change for aisles in IBC Section 1017.5 is for coordination with the new corridor width Table 1018.2 and the language for ramp width in Section 1010.6.1. Also, aisles, corridors and ramps are all using the same capacity numbers in Section 1005.3.2. Aisle used for movement of patient beds should also meet 96”.

### #MOE4

#### IFC SECTION 1030 MAINTENANCE OF THE MEANS OF EGRESS

**IFC 1030.1 General.** The *means of egress* for buildings or portions thereof shall be maintained in accordance with this section.

**IFC 1030.2 Reliability.** Required *exit accesses*, *exits* and *exit discharges* shall be continuously maintained free from obstructions or impediments to full instant use in the case of fire or other emergency when the building area served by the *means of egress* is occupied. An *exit* or *exit passageway* shall not be used for any purpose that interferes with a *means of egress*.

**IFC 1030.2.1 Security devices and egress locks.** Security devices affecting *means of egress* shall be subject to approval of the *fire code official*. Special locking arrangements including, but not limited to access-controlled egress doors, security grills, locks and latches, and delayed egress locks shall be installed and maintained as required by this chapter.

**IFC 1030.3 Obstructions.** A *means of egress* shall be free from obstructions that would prevent its use, including the accumulation of snow and ice.

**IFC 1030.3.1 Group I-2.** In Group I-2, the required clear width for aisles, corridors and ramps that are part of the required means of egress shall comply with Section 1018.2.

The facility shall have a defend in place management plan to maintain the required clear width during emergency situations.

**Exception:** In areas required for bed movement, projections into the required width shall be permitted where all the following provisions are met:

1. The equipment that reduced the required width are low hazard and wheeled.
2. The wheeled equipment does not reduce the effective clear width for the means of egress to less than 5 feet (1525 mm).
3. The wheeled equipment is limited to:
  - 3.1. equipment and carts in use;
  - 3.2. medical emergency equipment;
  - 3.3. infection control carts; and
  - 3.4. patient lift and transportation equipment.
4. Medical emergency equipment and patient lift and transportation equipment, when not in use, is required to be located on one side of the corridor.
5. The wheeled equipment is limited in number to a maximum of one per patient sleeping room or patient care room within each smoke compartment.

**Reason:** The new language in Section 1030.3.1 is to be placed in the International Fire Code as a procedural requirement. It is recognized that the 8'-0" wide corridor in an institutional occupancy where beds are moved is to remain at 8'-0" in width. The language recognizes and identifies the fact that certain movable pieces of equipment will be present in the corridor during normal operations of the patient care units and seeks to restrict the types and number of such pieces of equipment and the restrictions the equipment may impose on the means of egress.

The language also recognizes that during emergencies facilities must have an emergency management plan that address the steps that must be taken by the facility and responding staff to ensure that the required 8'-0" wide corridor is kept clear of movable obstructions.

The terminology is consistent with NFPA 101.

### **Issue #3**

3. Security and locking arrangements –
  - SPECIAL LOCKING DEVICES
    - DELAYED EGRESS
    - LATCHES ON SMOKE BARRIER DOORS
    - STAFF CONTROL IN PSYCH WARDS
    - INFANT CONTROL
    - SLIDING DOORS

### **Conclusion #3:**

## #MOE5

**IBC 1008.1.9.7 Delayed egress locks.** ~~Approved, listed~~, delayed egress locks locking system, listed in accordance with UL 294, shall be permitted to be installed on doors serving any occupancy except Group A, E, and H occupancies in buildings that are equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1 or an *approved* automatic smoke or heat detection system installed in accordance with Section 907, provided that the doors ~~unlock~~ allow immediate free egress in accordance with Items 1 through 6 below. ~~A building occupant shall not be required to pass through more than one door equipped with a delayed egress lock before entering an exit.~~

1. The delay electronics shall deactivate ~~doors unlock~~ upon actuation of the *automatic sprinkler system* or automatic fire detection system, allowing immediate, free egress.
2. The ~~doors unlock~~ delay electronics shall deactivate upon loss of power controlling the lock or lock mechanism, allowing immediate free egress.
3. The ~~door locks~~ delay electronics shall have the capability of being unlocked deactivated at the fire command center and other approved locations.
4. An attempt to egress shall initiate an irreversible process which ~~will shall~~ allow such egress ~~latch~~ in not more than 15 seconds when a ~~force of not more than 15 pounds (67 N)~~ physical effort to exit is applied to the egress side door hardware for not more than 3 second seconds to the release device. The effort to open the door shall not require a force greater than 15 pounds (67N). Initiation of the irreversible process shall activate an audible signal in the vicinity of the door. Once the delay electronics ~~door lock~~ has have been released ~~deactivated, by the application of force to the releasing device, relocking~~ rearming the delay electronics shall be by manual means only.

**Exception:** Where approved, a delay of not more than 30 seconds is permitted on a delayed egress door.

5. A sign shall be provided on the door located above and within 12 inches (305mm) of the ~~release device~~ door exit hardware reading: PUSH UNTIL ALARM SOUNDS. DOOR CAN BE OPENED IN 15 (30) SECONDS. The text on the sign shall be at least 1 inch in height and a contrasting color to the background.

**Exception:** Where approved, the installation of a sign is not required when it interferes with the safety of the patients in health care facilities classified as Group I-2 or I-3 occupancies.

6. Emergency lighting shall be provided at on the egress side of the door.

**Reason:** The intent of this proposal is to clarify the delayed egress locking system requirements. The intent is for both proposals for Section 1008.1.9.7 to work together. Two changes are submitted in order to keep the discussions separate.

The term “delayed egress lock” is proposed to be changed to “delayed egress locking system.” Delayed egress always requires a system of electronic devices that work together to perform the delayed egress task. Sometimes they are contained within an electromagnetic lock or a bar and sometimes they are separate components, but they are never just a lock.

The term ‘unlock” is proposed to change to “allow immediate free egress.” Immediate free egress can be accomplished without unlocking the door. Merchants, offices and health care facilities are hesitant to use delayed egress because an “after hours” egress event will leave their building unlocked. Addressing the “delay” as a separate issue from “locked”, this modification will allow the door to relock FROM THE OUTSIDE after a delayed egress event, but change the operation of the door to free egress until the system is manually reset. The intent of the code is not to keep people out. Instead, it is to let them out.

In Item 4 it is proposed to change the delay from one second to three seconds. One second is not enough time for a fully cognizant person to recognize that their action is what is causing the alarm and decide to abort the exit attempt. Dementia patients tend to wander toward doors when not otherwise engaged. Since staffing cannot be 1:1, it means that the nurses are attending other issues. Reducing these “nuisance” alarm issues can greatly reduce the need to drop everything and go check and reset the door.

In Item 4 it is proposed to remove the force requirement. There are three ways to initiate a delay sequence that are in common use, today. The code has never been changed to accommodate two of these. The original one, an electromagnetic lock with delay electronics and a switch built into the case, is not addressed. It allows the use of existing door hardware and should be used with exit only applications. Otherwise, it can be triggered from both sides. The second means of delay initiation includes switches in cylindrical and mortise locks that begin the sequence when the inside lever is turned. This method has become possible with the ADA changes made to these locks to accommodate levers. The third method is the one the code seems to reference. It uses a switch bar (aka active dummy with switch), a panic bar with a switch, or fire-exit hardware with a switch. Depending on the manufacturer and the model number, the switch may either signal an external delay timer that controls an electromagnetic lock or signal a self-contained delayed egress system that controls a latch.

In Item 5 it is proposed to require a contrasting color for signage. Manufacturers typically supply the sign with their product, but often the sign blends in with the color of the door.

The new exception to Item 5 - Providing escape instructions to first stage Alzheimer’s disease patients who often still can read is unwise. Staff is there to assist in a fire.

## **#MOE6**

**IBC 1008.1.9.7 Delayed egress locks.** *Approved, listed, delayed egress locks locking system,* shall be permitted to be installed on doors serving any occupancy except Group A, E, and H occupancies in buildings that are equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1 or an *approved* automatic smoke or heat detection system installed in accordance with Section 907, provided that the doors unlock in accordance with Items 1 through 6 below. A building occupant shall not be required to pass through more than one door equipped with a delayed egress lock before entering an *exit*.

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

**Exception:** Where approved, a delay of not more than 30 seconds is permitted on a delayed egress door.

5. In other than health care facilities classified as Group I-2 or I-3 occupancies, the egress path from any point shall pass through no more than one delayed egress door. In health care facilities classified as Group I-2 or I-3 occupancies, the egress path from any point in the building shall pass through no more than two delayed egress doors provided the combined delay does not exceed 30 seconds.
6. A sign shall be provided on the door located above and within 12 inches (305mm) of the release device reading: PUSH UNTIL ALARM SOUNDS. DOOR CAN BE OPENED IN 15 (30) SECONDS.
7. Emergency lighting shall be provided at the door.

**Reason:** The intent is for both proposals for Section 1008.1.9.7 to work together. Two changes are submitted in order to keep the discussions separate.

Since delayed egress was developed in two separate theaters for two separate reasons, pilfering was a reason that is perfect for *one* 15 second delay. Back then, sprinkler requirements were not like they are today. On the other hand, delayed egress for health care in a fully sprinklered facility should be recognized as being different. A delay of thirty seconds is appropriate for this situation and so should two 15 second delays when used for good purpose, as they delay the person for no more time and often for less time. Following are two good purposes:

1. Property, especially in cities, is at a premium in both price and availability. For this reason, we see more and more two and three story ambulatory health care facilities as a result of needing to build up instead of out. This comes with a need to keep



Alzheimer's disease and Head Injury patients on the floor **and** in the building. Currently, the facility is tasked with having to make a dangerous and unnecessary choice.

2. Most large (60+) single story dementia facilities have a perimeter fence surrounding the back and sides of the building. All exits except the front door are into a protected yard. The front door controls entry into the office/lobby area and reception. It is a small area requiring only the front door as an exit. A second door leading from the front office area into the core of the facility keeps the residents from eloping and strangers from entering. Originally, this door was not an exit and the facility side of the door was disguised as a wall so residents (patients) would not try to get out. Since it was not an exit, a delayed egress system was placed on that door and another one on the front door. Keypads were on both sides and both systems would unlock upon activation of the fire alarm. It was a mantrap designed so that if the lobby to core door went into alarm, the front door would instantly become delayed egress. Pursuant to the "discovery" and subsequent enforcement of the idea that if people exit the way they entered, the lobby to core door was an exit, should not be disguised and the front door could no longer be delayed. Without exceptions for those with health issues, the patients were now less safe than before. Allowing two 15 second delays would return them to a safe environment. This reasoning could also be applied toward doors leading into a common lobby with a stair tower door. The stair tower door would be free egress unless someone had triggered the ward delay in an attempt to elope from the ward. This would set off the alarm and arm the stair tower door's delayed egress system.

## #MOE7

**IBC 1008.1.9.8 Access-controlled Motion sensor release of electromagnetically locked egress doors.** Electromagnetically locked ~~The entrance doors located~~ in a means of egress in buildings with an occupancy in Groups A, B, E, I-2, M, R-1 or R-2 and entrance doors to tenant spaces in occupancies in groups A, B, E, I-2, M, R-1 or R-2 are permitted to be ~~equipped with an approved entrance and egress access control system, listed in accordance with UL 294, which shall be~~ where installed in accordance with all of the following criteria:

1. A motion sensor shall be provided on the egress side arranged to detect an occupant approaching the doors. The doors shall be arranged to unlock by a signal from or loss of power to the sensor.
2. Loss of power to ~~that the~~ lock ~~part of the access control system which locks the doors~~ shall automatically unlock the doors.
3. The doors shall be arranged to unlock from a manual unlocking device located 40 inches to 48 inches (1016mm to 1219mm) vertically above the floor and within 5 feet (1524mm) of the secured doors. Ready access shall be provided to the manual unlocking device and the device shall be clearly identified by a sign that reads "PUSH TO EXIT." When operated, the manual unlocking device shall result in direct interruption of power to the lock—~~independent of the access~~

~~control system~~ other electronics—and the doors shall remain unlocked for a minimum of 30 seconds.

4. Activation of the building fire alarm system, if provided, shall automatically unlock the doors, and the doors shall remain unlocked until the fire alarm system has been reset.
5. Activation of the building automatic sprinkler or fire detection system, if provided, shall automatically unlock the doors. The doors shall remain unlocked until the fire alarm system has been reset.
6. Entrance doors in buildings with an occupancy in Group A, B, E, or M shall ~~not be secured from the~~ always allow immediate free egress side during periods that the building is open to the general public.

**Reason:** This code was originally proposed to NFPA, UBC/UFC, and BOCA as an **alternative** way to release electromagnetic locks. It came from Washington, D.C. security contractors in the early 1980s when faced with installing electromagnetic locks on hundreds of all glass doors on defense contractors' facilities. There was no way to install bars with switches and no way to conceal the wiring. The title, Access Controlled Egress Doors, **meant** that access to free egress was controlled. It had nothing to do with the (then) new *electronic access control systems*. NFPA always recognized that a switch in a bar met the intent of the code.

The code addressed fire safety by taking aspects of devices not allowed and making them safer when used together. Buttons, once special knowledge, were given specific placement parameters and requirements to break the power to the lock, directly; the somewhat unreliable motion sensor was backed up by the button; the 30 second re-triggerable and independent timer attached to the button protected against CPU failure and allowed 30 seconds before relocking so the disabled could get through the door; and the connection to the fire system meant that the door would unlock upon alarm. It was an **alternate** code, designed to be used sparingly and in certain situations.

Door hardware with switches were never put in the code because they met the intent of the code and did not need to be addressed. When the legacy codes became IBC, the committee took a different tact and even formal interpretations suddenly disallowed switches in bars. The title of this code was now being interpreted as being about *electronic access control systems* and electric strikes and electro-mechanical locks and panic bars were interpreted to require to buttons, timers, and motion detectors. Free egress electric locks, panic bars and strikes of all kinds were being triggered each time someone exited or even walked by the door, for no good reason. Hardware specified around a door's duty cycle for years of operation would wear out in weeks!

Traditionally, when a security contractor specifies this alternate method of egress, they would weigh it against the enormous loss of security it would cause. The motion detector takes the control of the door away from the user. By answering a door or talking to someone outside the door, or even walking by the door, the user automatically unlocks the door from the outside. Personal safety also takes a hit when locks are connected to the fire alarm system as a pull station can open up many other doors.

With a code specifically addressing switches in hardware, it is time to clean up this code by eliminating confusing references to *access control systems*, directly or implied. Access has never been an issue for the codes, except in high-rise stair towers.

## #MOE8

**IBC 1008.1.9.6 ~~Special Controlled egress locking arrangements in doors in Group I-2.~~ Approved, Listed electric special egress locks, including electro-mechanical locks and electromagnetic locks, shall be permitted to be locked in the means of egress in a Group I-2 occupancy where the clinical needs of persons receiving care require their containment. ~~such locking.~~ Special egress locks Controlled egress doors shall be permitted in such occupancies where the building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or an approved automatic-smoke or heat detection system installed in accordance with Section 907, provided that the doors are installed and operate in accordance with Items 1 through 7 below.**

1. The doors unlock upon actuation of the automatic sprinkler system or automatic fire detection system.
2. The doors unlock upon loss of power controlling the lock or lock mechanism.
3. The door locks shall have the capability of being unlocked by a switch that directly breaks power to the lock, located signal from at the fire command center, a nursing station or other approved location.
4. A building occupant shall not be required to pass through more than one door equipped with a special controlled egress lock before entering an exit.
5. The procedures for the ~~operation(s) of the~~ unlocking system of the doors shall be described and approved as part of the emergency planning and preparedness required by Chapter 4 of the International Fire Code.
6. All clinical staff shall have the keys, codes or other means necessary to operate the locking devices.
7. Emergency lighting shall be provided at the door.

### **Exception Exceptions:**

1. Items 1 through 4 shall not apply to doors to areas where persons which because of clinical needs require restraint or containment as part of the function of a psychiatric treatment area.
2. Items 1 through 4 shall not apply to doors to areas where a listed child abduction security system is utilized.

**Reason:** This section deals with the use of electric locks to enhance the capabilities of egress control. Egress control serves three primary purposes. These are to control the elopement of ambulatory patients not capable of self preservation; the containment of patients that, due to their mental condition, could do harm to others; the prevention of

the abduction of babies and children. Exceptions allow for the use of listed child abduction security systems and even mechanical locks (non-electric.)

## #Correlation with MOE 5, 6, 7 and 8

**IBC 1008.1.9.9 Electromagnetically locked egress doors.** Doors in the *means of egress* in buildings with an occupancy in Group A, B, E, I-2, M, R-1 or R-2 and doors to tenant spaces in Group A, B, E, I-2, M, R-1 or R-2 shall be permitted to be electromagnetically locked if equipped with listed hardware that incorporates a built-in switch and meet the requirements below:

1. The listed hardware that is affixed to the door leaf has an obvious method of operation that is readily operated under all lighting conditions.
2. The listed hardware is capable of being operated with one hand.
3. Operation of the listed hardware directly interrupts the power to the electromagnetic lock and unlocks the door immediately.
4. Loss of power to the listed hardware automatically unlocks the door.
5. Where panic or *fire exit hardware* is required by Section 1008.1.10, operation of the listed panic or *fire exit hardware* also releases the electromagnetic lock.

**IFC 1030.2.1 Security devices and egress locks.** Security devices and locks affecting *means of egress* shall be subject to approval of the *fire code official*. Special locking arrangements including, but not limited to ~~access-controlled egress doors~~, security grills, mechanical locks and latches and all electronic locks and systems that restrict, control or delay egress shall be installed and maintained as required by this chapter.

## Issue #4

4. Care Suites
  - SUITE SIZE AND SUPERVISION
    - MEANS OF EGRESS SUITE

Revisions to Section 407 in progress. No proposal at this time.

## Issue #5

5. Accessibility -
  - ACCESSIBILITY -
    - Coordination with 2010 ADA
    - MAXIMUM 18" CLEAR ON THE SIDE OF TOILET FOR CARE-GIVER ACCESS

## #MOE9

**1104.3 Connected spaces.** When a building or portion of a building is required to be *accessible*, an *accessible route* shall be provided to each portion of the building, to *accessible* building entrances connecting *accessible pedestrian walkways* and the *public way*.

**Exceptions:**

1. In a building, room or space used for assembly purposes with *fixed seating*, an *accessible route* shall not be required to serve levels where *wheelchair spaces* are not provided.
2. ~~In Group I-2 facilities, doors to *sleeping units* shall be exempted from the requirements for maneuvering clearance at the room side provided the door is a minimum of 44 inches (1118 mm) in width.~~

**1107.3 Accessible spaces.** Rooms and spaces available to the general public or available for use by residents and serving *Accessible units*, *Type A units* or *Type B units* shall be *accessible*. *Accessible* spaces shall include toilet and bathing rooms, kitchen, living and dining areas and any exterior spaces, including patios, terraces and balconies.

**Exceptions:**

1. Recreational facilities in accordance with Section 1109.15.
2. ~~In Group I-2 facilities, doors to *sleeping units* shall be exempted from the requirements for maneuvering clearance at the room side provided the door is a minimum of 44 inches (1118 mm) in width.~~

**1107.5.2 Group I-2 nursing homes.** *Accessible units* and *Type B units* shall be provided in nursing homes of Group I-2 occupancies in accordance with Sections 1107.5.2.1 and 1107.5.2.2.

**1107.5.2.1 Accessible units.** At least 50 percent but not less than one of each type of the *dwelling units* and *sleeping units* shall be *Accessible units*.

**1107.5.2.2 Type B units.** In structures with four or more *dwelling units* or *sleeping units intended to be occupied as a residence*, every *dwelling unit* and *sleeping unit intended to be occupied as a residence* shall be a *Type B unit*.

**Exception:** The number of *Type B units* is permitted to be reduced in accordance with Section 1107.7.

**1107.5.3 Group I-2 hospitals.** *Accessible units* and *Type B units* shall be provided in general-purpose hospitals, psychiatric facilities and detoxification facilities of Group I-2 occupancies in accordance with Sections 1107.5.3.1 and 1107.5.3.2.

**1107.5.3.1 Accessible units.** At least 10 percent, but not less than one, of the *dwelling units* and *sleeping units* shall be *Accessible units*.

**Exception:** Entry doors to Accessible dwelling or sleeping units shall not be required to provide the maneuvering clearance beyond the latch side of the door.

**1107.5.3.2 Type B units.** In structures with four or more *dwelling units* or *sleeping units intended to be occupied as a residence*, every *dwelling unit* and *sleeping unit intended to be occupied as a residence* shall be a *Type B unit*.

**Exception:** The number of *Type B units* is permitted to be reduced in accordance with Section 1107.7.

**1107.5.4 Group I-2 rehabilitation facilities.** In hospitals and rehabilitation facilities of Group I-2 occupancies which specialize in treating conditions that affect mobility, or units within either which specialize in treating conditions that affect mobility, 100 percent of the *dwelling units* and *sleeping units* shall be *Accessible units*.

**Reason:** The intent of the proposal is for coordination with the 2010 ADA Standard of Accessible Design for hospital doors. The 2010 ADA includes the following.

**404.2.4 Maneuvering Clearances.** Minimum maneuvering clearances at doors and gates shall comply with 404.2.4. Maneuvering clearances shall extend the full width of the doorway and the required latch side or hinge side clearance.

**EXCEPTION:** Entry doors to hospital patient rooms shall not be required to provide the clearance beyond the latch side of the door.

The current IBC text is written for all Group I-2 while the ADA is limited to hospitals. The exception for the maneuvering clearances do not match. By relocating the requirement as an exception specifically for the which rooms are required to be Accessible (Section 1107.5.3.1), it is clear that the entrances to the Accessible patient sleeping rooms are the rooms that are can use that exception, as well making it clear that the intent is to allow these rooms to not meet the unit entry requirements in ICC A117.1 Section 1002.5.

## #MOE10 –

**1109.2 Toilet and bathing facilities.** Each toilet room and bathing room shall be *accessible*. Where a floor level is not required to be connected by an *accessible route*, the only toilet rooms or bathing rooms provided within the facility shall not be located on the inaccessible floor. At least one of each type of fixture, element, control or dispenser in each *accessible* toilet room and bathing room shall be *accessible*.

**Exceptions:**

1. In toilet rooms or bathing rooms accessed only through a private office, not for *common* or *public use* and intended for use by a single occupant, any of the following alternatives are allowed:
  - 1.1. Doors are permitted to swing into the clear floor space, provided the door swing can be reversed to meet the requirements in ICC A117.1;
  - 1.2. The height requirements for the water closet in ICC A117.1 are not applicable;

- 1.3. Grab bars are not required to be installed in a toilet room, provided that reinforcement has been installed in the walls and located so as to permit the installation of such grab bars; and
- 1.4. The requirement for height, knee and toe clearance shall not apply to a lavatory.
2. This section is not applicable to toilet and bathing rooms that serve *dwelling units* or *sleeping units* that are not required to be *accessible* by Section 1107.
3. Where multiple single-user toilet rooms or bathing rooms are clustered at a single location, at least 50 percent but not less than one room for each use at each cluster shall be *accessible*.
4. Where no more than one urinal is provided in a toilet room or bathing room, the urinal is not required to be *accessible*.
5. Toilet rooms that are part of critical care or intensive care patient sleeping rooms servicing Accessible units are not required to be *accessible*.
6. Toilet rooms servicing Accessible sleeping units that are specifically designed to address clinical needs of bariatric patients are not required to be accessible.
7. Where toilet facilities are primarily for children's use, required *accessible* water closets, toilet compartments and lavatories shall be permitted to comply with children's provision of ICC A117.1.

**Reason:** The intent of the new exception 6 is to address rooms specifically designed for bariatric patients. This issue is not addressed in new ADA requirements. The physical size of bariatric patients would not allow for water closets to be located with the center line 16" to 18" from the wall. In addition, if a nurse needs to get next to a patient to offer assistance in rising or sitting down, there is no space between the toilet and the wall.

While Exception 2 would exempt the toilet rooms in the 90% of the hospital rooms not required to be accessible, the additional language in Exception 5 would reinforce that intent.

Providing the Accessible units in other areas of the hospital is no longer an option. The Department of Justice regulations state that the Accessible rooms must be distributed by type of medical specialty provided in the hospital.

**DOJ regulations 35.151 (h) and 36.406 (g) Medical care facilities.** Medical care facilities that are subject to this section shall comply with the provisions of the 2010 Standards applicable to medical care facilities, including, but not limited to, sections 223 and 805. In addition, medical care facilities that do not specialize in the treatment of conditions that affect mobility shall disperse the accessible patient bedrooms required by section 223.2.1 of the 2010 Standards in a manner that is proportionate by type of medical specialty.

## ISSUE 6 - Other

- The term "24 hour care" is not used in the code. Change to defined term to be coordinated with how it is used in Group I-1, I-2 and R-4. The committee asked for three options:

## **MOE#11 - Option 1 - Change verbiage in the definitions:**

**24 HOUR CARE.** The actual time that a person is an occupant within a facility for the purpose of receiving care. It shall not include a facility that is open for 24 hours and is capable of providing care to someone visiting the facility during any segment of the 24 hours.

**308.3 Institutional Group I-1.** This occupancy shall include buildings, structures or portions thereof for more than 16 persons who reside ~~on a 24-hour basis~~ in a supervised environment and receive 24 hour custodial care. The persons receiving care are capable of self preservation. This group shall include, but not be limited to, the following:

- Alcohol and drug centers
- Assisted living facilities
- Congregate care facilities
- Convalescent facilities
- Group homes*
- Halfway houses
- Residential board and *custodial care* facilities
- Social rehabilitation facilities

**308.4 Institutional Group I-2.** This occupancy shall include buildings and structures used for 24 hour medical care ~~on a 24-hour basis~~ for more than five persons who are *incapable of self preservation*. This group shall include, but not be limited to, the following:

- Foster care facilities*
- Detoxification facilities*
- Hospitals*
- Nursing homes*
- Psychiatric hospitals*

**310.6 Residential Group R-4.** This occupancy shall include buildings, structures or portions thereof for more than five but not more than 16 persons, excluding staff, who reside ~~on a 24-hour basis~~ in a supervised residential environment and receive 24 hour custodial care. The persons receiving care are capable of self preservation. This group shall include, but not be limited to, the following:

- Alcohol and drug centers
- Assisted living facilities
- Congregate care facilities
- Convalescent facilities
- Group homes*
- Halfway houses
- Residential board and *custodial care* facilities
- Social rehabilitation facilities



Group R-4 occupancies shall meet the requirements for construction as defined for Group R-3, except as otherwise provided for in this code

**MOE#11 -Option #2: Change definition:**

**24 HOUR CARE BASIS.** The actual time that a person is an occupant within a facility for the purpose of receiving care. It shall not include a facility that is open for 24 hours and is capable of providing care to someone visiting the facility during any segment of the 24 hours.

**308.3 Institutional Group I-1.** This occupancy shall include buildings, structures or portions thereof for more than 16 persons who reside on a **24 hour basis** in a supervised environment and receive *custodial care*. The persons receiving care are capable of self preservation. This group shall include, but not be limited to, the following:

- Alcohol and drug centers
- Assisted living facilities
- Congregate care facilities
- Convalescent facilities
- Group homes*
- Halfway houses
- Residential board and *custodial care* facilities
- Social rehabilitation facilities

**308.4 Institutional Group I-2.** This occupancy shall include buildings and structures used for *medical care* on a **24 hour basis** for more than five persons who are *incapable of self preservation*. This group shall include, but not be limited to, the following:

- Foster care facilities*
- Detoxification facilities*
- Hospitals*
- Nursing homes*
- Psychiatric hospitals*

**310.6 Residential Group R-4.** This occupancy shall include buildings, structures or portions thereof for more than five but not more than 16 persons, excluding staff, who reside on a **24 hour basis** in a supervised residential environment and receive *custodial care*. The persons receiving care are capable of self preservation. This group shall include, but not be limited to, the following:

- Alcohol and drug centers
- Assisted living facilities
- Congregate care facilities
- Convalescent facilities
- Group homes*
- Halfway houses
- Residential board and *custodial care* facilities

Social rehabilitation facilities

Group R-4 occupancies shall meet the requirements for construction as defined for Group R-3, except as otherwise provided for in this code

### **MOE#11 Option #3: Move definition into Group I-2**

~~**24 HOUR CARE.** The actual time that a person is an occupant within a facility for the purpose of receiving care. It shall not include a facility that is open for 24 hours and is capable of providing care to someone visiting the facility during any segment of the 24 hours.~~

**308.3 Institutional Group I-1.** This occupancy shall include buildings, structures or portions thereof for more than 16 persons who reside on a **24 hour basis** in a supervised environment and receive *custodial care*. The persons receiving care are capable of self preservation. This group shall include, but not be limited to, the following:

- Alcohol and drug centers
- Assisted living facilities
- Congregate care facilities
- Convalescent facilities
- Group homes*
- Halfway houses
- Residential board and *custodial care* facilities
- Social rehabilitation facilities

**308.4 Institutional Group I-2.** This occupancy shall include buildings and structures used for *medical care* on a **24 hour basis** for more than five persons who are *incapable of self preservation*. This occupancy shall not include a facility that is open for 24 hours but is capable of providing care to someone visiting the facility for only a segment of the 24 hours. This group shall include, but not be limited to, the following:

- Foster care facilities*
- Detoxification facilities*
- Hospitals*
- Nursing homes*
- Psychiatric hospitals*

**310.6 Residential Group R-4.** This occupancy shall include buildings, structures or portions thereof for more than five but not more than 16 persons, excluding staff, who reside on a **24 hour basis** in a supervised residential environment and receive 24 hour custodial care. The persons receiving care are capable of self preservation. This group shall include, but not be limited to, the following:

- Alcohol and drug centers
- Assisted living facilities
- Congregate care facilities
- Convalescent facilities

*Group homes*  
Halfway houses  
Residential board and *custodial care* facilities  
Social rehabilitation facilities

Group R-4 occupancies shall meet the requirements for construction as defined for Group R-3, except as otherwise provided for in this code

## Corridor Walls and Doors

### K17 – Corridor Separation - Ed Altizer

**IFC 1104.17 Corridors.** Corridors serving an occupant load greater than 30 and the openings therein shall provide an effective barrier to resist the movement of smoke. Transoms, louvers, doors and other openings shall be kept closed or self-closing.

**Exceptions:**

1. Corridors in occupancies other than in Group H, which are equipped throughout with an approved automatic sprinkler system in accordance with Section 903.3.
2. Patient room doors in corridors in occupancies in Group I-2 shall not be required to be kept closed or be self-closing where smoke barriers are provided in accordance with the International Building Code.
3. *Corridors* in occupancies in Group E where each room utilized for instruction or assembly has at least one-half of the required *means of egress* doors opening directly to the exterior of the building at ground level.
4. *Corridors* that are in accordance with the *International Building Code*.

**IFC 1104.17.1 Corridor openings.** Openings in corridor walls shall comply with the requirements of the International Building Code.

**Exceptions:**

1. Where 20-minute fire door assemblies are required, solid wood doors at least 1.75 inches (44 mm) thick or insulated steel doors are allowed.
2. Openings protected with fixed wire glass set in steel frames.
3. Openings covered with 0.5-inch (12.7 mm) gypsum wallboard or 0.75-inch (19.1 mm) plywood on the room side.
4. Opening protection is not required when the building is equipped throughout with an approved automatic sprinkler system in accordance with Section 903.3.

**Reason:** I feel there is considerable difference in the 2012 LSC and the 2012 IFC. As an example exception number 2 to 1104.17 could be interpreted to mean the door is not required to resist the passage of smoke. In fact that is what the code says. Exception 4 to 1014.17.1 indicates that opening protection is not required if sprinklered. No real requirements for the sprinkler system except that it is approved. The LSC has minimum requirements for the sprinkler system. The LSC is much more detailed and thorough on corridor requirements.

### K18 – Opening protectives - Reassigned to John Williams

**Reason:** There are five components to this KTAG:

1. Substantial doors (1.75" solid cors or 20 minute doors) in corridors, unless the smoke compartment is sprinklered. IFC 4604.18.1 exempts any requirements for existing opening protection where there is a sprinkler system. This is essentially the same
2. Smoke limiting. Doors in sprinklered smoke compartments are only required to limit the passage of

smoke. IFC section 4604.18 would be the section that would require doors to limit the transfer of smoke. However, it exempts this requirement for corridors serving <30 occupants and it also exempts this for group I-2s. THIS IS SIGNIFICANTLY DIFFERENT.

- 3. Positive latching. Do not see that this is addressed.
- 4. Dutch doors. do not see this is addressed.
- 5. Roller latches. Do not see this is addressed.

**K22** – Exit signs – Ed Altizer  
NO CHANGE NEEDED

**Vertical Openings**

**K21** – Door closing – Brad Pollitt  
NO CHANGE NEEDED

**K33** – Rated enclosure – Tim Peglow  
NO CHANGE NEEDED

**Exit and Exit Access**

**K32** – Two exits – Jonathan Flannery and Henry Kosarzycki  
NO CHANGE NEEDED

**Exits remote from each other are provided for each floor or fire section of a building**

**K34** – Stairway – Jeff Bresette  
NO CHANGE NEEDED

**K35** – Exit capacity – Jeff Bresette  
NO CHANGE NEEDED

**K36** – Travel distance – Jonathan Flannery and Henry Kosarzycki  
NO CHANGE NEEDED

**K37** – Dead end corridors – Ed Altizer

Revise I-2 requirements in IFC Table 1104.17.2.

**TABLE 1104.17.2  
COMMON PATH, DEAD-END AND TRAVEL DISTANCE LIMITS (by occupancy)**

OCCUPAN CY	COMMON PATH LIMIT		DEAD-END LIMIT		TRAVEL DISTANCE LIMIT	
	Unsprinkler ed (feet)	Sprinkler ed (feet)	Unsprinkler ed (feet)	Sprinkler ed (feet)	Unsprinkler ed (feet)	Sprinkler ed (feet)
Group I-2 (Health	NR <sup>e</sup>	NR <sup>e</sup>	NR	NR	150	200 <sup>c</sup>

Care)						
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NR = No requirements.

For SI: 1 foot = 304.8 mm, 1 square foot = 0.0929 m<sup>2</sup>.

- a. 20 feet for common path serving 50 or more persons; 75 feet for common path serving less than 50 persons.
- b. See Section 1028.9.5 for dead-end aisles in Group A occupancies.
- c. This dimension is for the total travel distance, assuming incremental portions have fully utilized their allowable maximums. For travel distance within the room, and from the room exit access door to the exit, see the appropriate occupancy chapter.
- d. See the *International Building Code* for special requirements on spacing of doors in aircraft hangars.
- e. Any patient sleeping room, or any suite that includes patient sleeping rooms, of more than 1,000 square feet shall have at least two exit access doors placed a distance apart equal to not less than one-third of the length of the maximum overall diagonal dimension of the patient sleeping room or suite to be served, measured in a straight line between exit access doors.
- f. Where a tenant space in Group B, S and U occupancies has an occupant load of not more than 30, the length of a common path of egress travel shall not be more than 100 feet.

**IEBC 805.6 Dead-end corridors.** Dead-end corridors in any work area shall not exceed 35 feet (10 670 mm).

**Exceptions:**

1. Where dead-end corridors of greater length are permitted by the International Building Code.
2. In other than Group A and H occupancies, the maximum length of an existing dead-end corridor shall be 50 feet (15 240 mm) in buildings equipped throughout with an automatic fire alarm system installed in accordance with the International Building Code.
3. In other than Group A and H occupancies, the maximum length of an existing dead-end corridor shall be 70 feet (21 356 mm) in buildings equipped throughout with an automatic sprinkler system installed in accordance with the International Building Code.
4. In other than Group A and H occupancies, the maximum length of an existing, newly constructed, or extended dead-end corridor shall not exceed 50 feet (15 240 mm) on floors equipped with an automatic sprinkler system installed in accordance with the International Building Code.

**Reason:** The IFC has no requirements so existing dead ends may remain. The LSC gives the AHJ the authority to eliminate dead ends if “practical.” The 2000 LSC does not have the 30 foot language only as shown in K37.

**Staff note:** See IEBC 805.4.1.2 and IFC Table 1104.7.2 note e for 1,000 sq. ft. patient sleeping rooms. No requirement for care suites in IEBC of IFC Table 1104.7.2. See IBC 407.4.3.5.2 for sleeping room suites and 407.4.3.6.2 for care suites.

**K38 – Exits readily accessible – DN/HK/BP**  
**NO CHANGE NEEDED**

## **K39 – Aisle and corridor width – Ed Altizer**

Add something under IFC 1104.17 to maintain corridor width see code change from committee for maintained corridor width (#MOE4).

### **SECTION 1104 MEANS OF EGRESS FOR EXISTING BUILDINGS**

**1104.1 General.** *Means of egress* in existing buildings shall comply with the minimum egress requirements when specified in Table 1103.1 as further enumerated in Sections 1104.2 through 1104.23, and the building code that applied at the time of construction. Where the provisions of this chapter conflict with the building code that applied at the time of construction, the most restrictive provision shall apply. Existing buildings that were not required to comply with a building code at the time of construction shall comply with the minimum egress requirements when specified in Table 1103.1 as further enumerated in Sections 1104.2 through 1104.24.

**IFC 1104.17 Corridors.** *Corridors* serving an *occupant load* greater than 30 and the openings therein shall provide an effective barrier to resist the movement of smoke. Transoms, louvers, doors and other openings shall be kept closed or self-closing.

#### **Exceptions:**

1. *Corridors* in occupancies other than in Group H, which are equipped throughout with an *approved automatic sprinkler system*.
2. Patient room doors in *corridors* in occupancies in Group I-2 where *smoke barriers* are provided in accordance with the *International Building Code*.
3. *Corridors* in occupancies in Group E where each room utilized for instruction or assembly has at least one-half of the required *means of egress* doors opening directly to the exterior of the building at ground level.
4. *Corridors* that are in accordance with the *International Building Code*.

**Reason:** This is an interesting section. I ran out of time on this one but I can find no minimum requirements for existing buildings in the IFC except that existing MOE shall comply with the requirements of the code under which it was constructed. If there was not an existing code, the requirements in Chapter 46 (09) or Chapter 11 (12). I guess we can scrap the 09 code which does have some verbiage on how to determine but that is missing from the 12 code. Would need to add here a section dealing with the minimum requirements. The 12 LSC has some significant changes from the 2000 relating to 4 and 6 foot corridors.

**Staff note:** IFC Chapter 11 is retroactive. When must corridors be altered for width? Maybe better in IEBC with corridor requirements in 805.5 and 805.6. NFPA also addresses aisle. This is all related to corridors

**K40 – Door width – Jeff Bressette**  
NO CHANGE NEEDED

**K41 – Door to corridor – Jeff Bressette**  
NO CHANGE NEEDED

**K42** – Sleeping suites – Jonathan Flannery  
NO CHANGE NEEDED

**K43** – Patient room door locks – Henry Kosarzycki  
NO CHANGE NEEDED

**K44** – Horizontal exits – Ed Altizer

Put a reference in 1104.1 to 1025.1

**IFC 1104.1 General.** Means of egress in existing buildings shall comply with the minimum egress requirements when specified in Table 1103.1 as further enumerated in Sections 1104.2 through 1104.23, and the building code that applied at the time of construction. Where the provisions of this chapter conflict with the building code that applied at the time of construction, the most restrictive provision shall apply. Existing buildings that were not required to comply with a building code at the time of construction shall comply with the minimum egress requirements when specified in Table 1103.1 as further enumerated in Sections 1104.2 through 1104.24.

*Add changes for horizontal exits in IFC 1104 with specific criteria for Group I-2.  
Do not reference 1007 but instead allow for defend in place as alternative to refuge areas.*

**Reason:** I disagree with the comment that there is no direct IFC reference. 1104.1 Discusses Means Of Egress and by definition Horizontal Exits are allowed as part of a means of egress. If clarity, a new section 1104.1 could be added to state that existing horizontal exits in I-2 facilities shall comply with 1007.2, 1025 (or other appropriate sections. Option to put something in IFC for 1030 for maintenance of horizontal exits and/or general egress requirements.

## **Illumination and emergency power**

**K45** – Illumination – Tim Peglow

### **SECTION 1006 MEANS OF EGRESS ILLUMINATION**

**1006.1 Illumination required.** The *means of egress*, including the *exit discharge*, shall be illuminated at all times the building space served by the *means of egress* is occupied.

**Exceptions:**

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

**1006.2 Illumination level.** The *means of egress* illumination level shall not be less than 1 foot-candle (11 lux) at the walking surface.

**Exception:** For auditoriums, theaters, concert or opera halls and similar assembly occupancies, the illumination at the walking surface is permitted to be



reduced during performances to not less than 0.2 foot-candle (2.15 lux), provided that the required illumination is automatically restored upon activation of a premises' fire alarm system where such system is provided.

**1006.3 Emergency power for illumination.** The power supply for *means of egress* illumination shall normally be provided by the premises' electrical supply.

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

1. *Aisles* and unenclosed egress stairways in rooms and spaces that require two or more *means of egress*.
2. *Corridors, interior exit stairways and ramps and exit passageways* in buildings required to have two or more *exits*.
3. Exterior egress components at other than their levels of *exit discharge* until *exit discharge* is accomplished for buildings required to have two or more *exits*.
4. Interior *exit discharge* elements, as permitted in Section 1027.1, in buildings required to have two or more *exits*.
5. Exterior landings as required by Section 1008.1.6 for *exit discharge* doorways in buildings required to have two or more *exits*.

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

**1006.3.1 Illumination level under emergency power.** Emergency lighting facilities shall be arranged to provide initial illumination that is at least an average of 1 foot-candle (11 lux) and a minimum at any point of 0.1 foot-candle (1 lux) measured along the path of egress at floor level. Illumination levels shall be permitted to decline to 0.6 foot-candle (6 lux) average and a minimum at any point of 0.06 foot-candle (0.6 lux) at the end of the emergency lighting time duration. A maximum-to-minimum illumination uniformity ratio of 40 to 1 shall not be exceeded.

## **SECTION 1024 LUMINOUS EGRESS PATH MARKINGS**

**1024.5 Illumination.** Where *photoluminescent* exit path markings are installed they shall be provided with the minimum *means of egress* illumination required by Section 1006 for at least 60 minutes prior to periods when the building is occupied.

**Reason:** Three additions

Occupancy sensors shall be permitted within the means of egress provided they meet the following conditions:

- 1 they operate as fail safe devices
- 2 when activated by an occupant the area served is illuminated for a minimum duration of 15 minutes.

Coordination with 1024.5. Add in 1006.2 & 1006.3.1. Having trailing edge requirement? Remains illuminated during evacuation? Connection to fire alarm system activation. Two separate changes. 1006.2 exception In new construction stairwell illumination level shall not be less than 10 footcandle measured at the walking surface. Coordinate with open exit access stairways and exit stairways.

Add into section 1006.3.1. A failure of any single lighting unit shall not reduce the illumination level to less than 0.2 footcandles.

*NFPA 101 10 ft candle is general lighting*

*NFPA 101 loss of bulb is general lighting, not emergency lighting*

**Staff note:** Which provisions apply to general and which to emergency? Separate change.

**K46** – Emergency lighting duration – Tim Peglow  
NO CHANGE NEEDED

**K47** – Exit signs – Jeff Bressette

**[B] 1011.6.3 Power source.** *Exit signs shall be illuminated at all times. To ensure continued illumination for a duration of not less than 90 minutes in case of primary power loss, the sign illumination means shall be connected to an emergency power system provided from storage batteries, unit equipment or an on-site generator. The installation of the emergency power system shall be in accordance with Section 604.*

**Exceptions:**

1. *Approved exit sign illumination means that provide continuous illumination independent of external power sources for a duration of not less than 90 minutes, in case of primary power loss, are not required to be connected to an emergency electrical system.*
2. *Group I-2 hospital emergency power system shall not be permitted to be provided by unit batteries only.*

**Reason:** The IBC and IFC both have the same requirements. NFPA is less restrictive for UL listings of equipment. NFPA 70 is not referenced by IBC/IFC as does NFPA 99. IBC/IFC permit batteries.

## **Finishing and Decorations**

**K72** – No obstructions - Jonathan Flannery & Henry Kosarzycki & John Williams  
NO CHANGE NEEDED

## **Electrical**

**K106** – Generator – Lennon Peake

**IBC Section 407.11 Emergency Power.** *In Group I-2 occupancies, an emergency power system ~~complying shall be provided in accordance~~ with Chapter 27 and shall meet the requirement contained in Chapter XX of NFPA 99, ~~Standard for Health Care Facilities,~~ shall be provided for emergency power loads.*

**IFC Section 604.1.2 Group I-2 Occupancies.** *In Group I-2 occupancies, emergency power shall comply with this Section and NFPA 99 ~~Standard for Health Care Facilities.~~*

**Exception:** *Existing installations shall be maintained in accordance with original approval where system does not pose a distinct hazard to life.*

**Reason:** The K-TAG requirement is from NFPA 99 which is only referenced for Hyperbaric chambers in IBC Section 407.10 and Compressed Medical Gas in IFC Section 5306.4.

**Staff note:** May not need exception. Location better under 604.2? Repeated in IBC Chapter 27.

**K144** – Generator maintenance – Lennon Peake  
NO CHANGE NEEDED

**K145** – Emergency power – Lennon Peake  
NO CHANGE NEEDED

**K146** – Alternate power – Lennon Peake  
NO CHANGE NEEDED

**K147** – reference for electrical equipment – Lennon Peake  
NO CHANGE NEEDED

September 30, 2011

**AD HOC COMMITTEE ON HEALTHCARE  
MEETING # 4**

**MOE WORK GROUP REPORT  
(IBC Chapters 4, 10 & 11)**

**CURRENT CODE ISSUES: (based on issues identified at AHC #1)**

MEANS OF EGRESS WORK GROUP

CODES:

IBC: Ch 10 and 11

ISSUES:

- EGRESS THROUGH ELEVATOR LOBBY (NEED TO COORDINATE WITH CTC EFFORTS)
- GENERAL EGRESS
  - WIDTH – 8' CORRIDOR VS 5' CLEAR;
  - COMMON PATH OF TRAVEL
  - TRAVEL DISTANCE
  - SLIDING DOORS
- SPECIAL LOCKING DEVICES
  - DELAYED EGRESS
  - LATCHES ON SMOKE BARRIER DOORS
  - STAFF CONTROL IN PSYCH WARDS
  - INFANT CONTROL
- OCCUPANT EVACUATION VIA ELEVATORS
- PATIENTS AS PART OF OCCUPANT LOAD CALCULATION/REFUGE AREAS
- SUITE SIZE AND SUPERVISION
  - MEANS OF EGRESS
- WAITING SPACES OPEN TO CORRIDOR
- ACCESSIBILITY - MAXIMUM 18" CLEAR MAX ON THE SIDE OF TOILET FOR CARE-GIVER ACCESS

CHAIR: FLANNERY

AHC MEMBERS: POLLITT, KOSARZYCKI, ALTIZER, NICHOLS

INTERESTED PARTIES: WOESTMAN, MANLEY, BEBE, KOFFEL, JAQUES,  
HELLMAN, PURSELL, CHRIS, COLLINS

**The Means of Egress Work Group chose to subdivide the issues identified at the April 20 and 21, 2011 meeting into 5 areas of study:**

1. Elevators –
  - EGRESS THROUGH ELEVATOR LOBBY
  - OCCUPANT EVACUATION VIA ELEVATORS
  
2. Corridors-
  - GENERAL EGRESS
    - WIDTH – 8’ CORRIDOR VS 5’ CLEAR;
    - COMMON PATH OF TRAVEL
    - TRAVEL DISTANCE
  - PATIENTS AS PART OF OCCUPANT LOAD CALCULATION/REFUGE AREAS
  - WAITING SPACES OPEN TO CORRIDOR
  
3. Security and locking arrangements –
  - SPECIAL LOCKING DEVICES
    - DELAYED EGRESS
    - LATCHES ON SMOKE BARRIER DOORS
    - STAFF CONTROL IN PSYCH WARDS
    - INFANT CONTROL
    - SLIDING DOORS
  
4. Suites
  - SUITE SIZE AND SUPERVISION
    - MEANS OF EGRESS SUITE
  
5. Accessibility -
  - ACCESSIBILITY - MAXIMUM 18” CLEAR ON THE SIDE OF TOILET FOR CARE-GIVER ACCESS
  
6. Other -
  - Definition for 24 hour care

**Following are the reports on each topic:**

**Issue #1:**

1. Elevators –
  - EGRESS THROUGH ELEVATOR LOBBY
  - OCCUPANT EVACUATION VIA ELEVATORS

**Conclusion #1:**

- CTC committee on elevator lobbies is still in process – coordinate efforts

- Address elevator shafts through smoke barriers and elevator door protection
- Propose to delete Group I-2 lobby requirements
- See code proposal report #MOE1 and #MOE2

Notes from August 10 & 11 meeting:

- The CTC elevator lobby study group should address technical changes for lobbies.
- This committee has written letter to CTC asking for Group I-2 to not have elevator lobbies required
- The CTC technical information says that in sprinklered buildings there is not a problem with smoke migration through the elevator shafts – thus the elevators penetrating the smoke compartment is not detrimental to the defend-in-place strategy.
- Wait for CTC elevator lobby group.

## Issues #2:

### 2. Corridors-

- GENERAL EGRESS
  - WIDTH – 8' CORRIDOR VS 5' CLEAR;
  - COMMON PATH OF TRAVEL
  - TRAVEL DISTANCE
- PATIENTS AS PART OF OCCUPANT LOAD CALCULATION/REFUGE AREAS
- WAITING SPACES OPEN TO CORRIDOR

## Conclusions #2 (Corridors):

#MOE3 – Coordinate aisle widths with ramp and corridor width as part of means of egress path for areas with movement of beds.

#MOE4 - An 8 foot corridor with an effective clear path of 5' that allows the passage of staff, patients and equipment under normal operating conditions is allowed. This is an operational issue.

Areas Open to the Corridor – Current requirements are sufficient for hospitals. Suggest referring to CTC Care Facilities for different needs.

Notes from August 10 & 11 meeting:

Corridor width:

- This allowance is attended for IFC maintenance only, not a reduction in IBC corridor width.

- Allow the following for hospital function:
  - movable equipment that is moved first as part of the fire evacuation plan,
  - attended/in-use equipment (i.e., food cart, linen cart)
  - patient transport and handling devices (i.e. gurneys, wheelchairs)
  - emergency equipment (i.e., crash cart)
- Doug to get NFPA code change regarding available width to the MOE committee
- Eugene, Ed, Jonathan, Brad, Doug to look at permitted projections in NFPA new section

Areas open to corridor:

- Equipment in areas open to the corridor should not obstruct the required corridor width.
- Operational areas are nutrition areas, chart areas, play rooms, family waiting rooms – look at what is in 407.2 – what would we want to add? Broaden waiting and treatment areas.
- Consensus was to take out exercise/therapy areas

**Issue #3**

3. Security and locking arrangements –
  - SPECIAL LOCKING DEVICES
    - DELAYED EGRESS
    - LATCHES ON SMOKE BARRIER DOORS
    - STAFF CONTROL IN PSYCH WARDS
    - INFANT CONTROL
    - SLIDING DOORS

**Conclusion #3:**

#MOE5 – Delayed egress locks

#MOE 6 – Delayed egress locks with allowance from number of locks

#MOE7 – Access controlled egress doors

#MOE8 – Special locking arrangements in Group I-2

Correlation with IBC Section 1008.1.9.9 and IFC 1030.2.1 for term changes

Refer to Bob Davidson any possible conflicts with Sections 1008.1.9.10 for Group I-3

Verify that Section 1008.1.9.11 for stair doors will not conflict with allowance for proposals.

Notes from August 5 & 6 meeting:

- Delayed egress 1008.1.9.7
  - Look at A117.1 visible signage for information on hardware
  - Coordinate with CTC care facilities nursing homes
  - Item 4, Exception 2 – put in as separate code change.

- In reason statement, mention possibility of temporary man trap as a means to stop patients from leaving the building.
- Provide other examples of when used – top and bottom of stairs, on suite and on stairs, subdivide suite into medium and higher security areas
- Add to reason statement to show this could be used in other use groups
- Coordinate with CTC care facilities nursing homes
- Can this be used for ambulatory care?
- Ed will bring forward information from Virginia lock expert – look this up on ICC website
- Needs additional tweaks – committee has no problem with idea.
- Special locking arrangements in Group I02 - 1008.1.9.6
  - 1008.1.6 Item 3 – switch could be limiting in application of options for unlocking, “unlocked by a signal that directly breaks the power” suggested
  - Justification for the pull station to not open the doors – clarify that this is only for patient care areas, not all areas.
  - Needs to be in emergency action plan
  - 1008.1.6 Exception suggested as separate change
  - Can this be used for ambulatory care? Nursing homes (see CTC care facilities group)?
  - 1008.1.9.9 can be processed as a separate code change
  - 1008.1.9.6 needs additional tweaks – committee has no problem with idea.

#### **Issue #4**

##### 4. Care Suites

- SUITE SIZE AND SUPERVISION
  - MEANS OF EGRESS SUITE

Revisions to Section 407. Waiting for report from ASHE. No proposal at this time.

#### **Issue #5**

##### 5. Accessibility -

- ACCESSIBILITY - MAXIMUM 18” CLEAR ON THE SIDE OF TOILET FOR CARE-GIVER ACCESS

Coordinate with new CTC Accessibility study group.

MOE#9 – hospital doors

MOE#10 – concern with bariatric rooms and accessible bathroom requirements

#### **Issue #6**

##### 6. Other -

- Definition for 24 hour care – three options in #MOE11



## **NEW CODE ISSUES:**

- Evacuation for all hazards not just fire
- Doors – swing, size, corridor overlap, break out, smoke seal, maneuvering clearances
- Renovations for suites or smoke compartment vs. new construction
- Aug. 10 & 11 - Are you being prevented from returning through the smoke compartment of fire origin or the smoke compartment of egress origin?

## **WG CROSS OVER ISSUES:**

- Coordination with Fire study group regarding locking arrangements
- **Fire Safety - ISSUE 2. ELEVATOR RECALL PROCEDURES WHEN THERE IS SMOKE IN MACHINE ROOM/ELEVATOR LOBBY**
  - Conclusion: By direction of the AHC at Meeting #2, moved to Means of Egress Work Group.
  - Related to K160.
  - No change needed since is this covered in ASME A17.3 and this is referenced in IFC 1103.3.
- Coordination with General study group for care suite sizes
- Coordination with CTC Care Facilities study group
- Coordination with CTC Elevator Lobby study group
- Coordination with Code Action Committees

## **FURTHER RESEARCH ISSUES:**

Remaining from August 10 and 11 meeting:

Information on how elevators are used during different emergencies.

Study efficiency, occupant load and staffing needed for suite sizes.

*From #1 Elevator comments above:*

AHC could check with NIST or ASME to see if there has been any occupant evacuation models with hospitals either during a general evacuation (i.e., flood, hurricane, tornado)

or during a fire event. Is there any history on a hospital needing to do a building evacuation for a fire event? ASHE will provide general building evacuation studies.

*From #4 Suite Sizes above:*

A study to statistically determine the area needed for “average patient care area” within a typical suite arrangement (i.e. area needed for an ICU care area – bed, equipment, staff movement, supplies, etc) - The 5,000 sq.ft. was an arbitrary number. Study should address

- If the suite size increases, will the travel distance still work? Is there a chance to look at travel distance for patients only – not all spaces?
- NFPA 101 will be increasing the suite size 7,500/10,000 sq.ft with smoke detection/staff notification. Should the travel distance within the suite be increased if it is suggested to increase size in IBC? Does the number of doors slow down travel?

**OUT-OF-SCOPE ISSUES:**

None at this time

**ADDITIONAL ISSUES TO BE BROUGHT TO AHC ATTENTION**

Are you being prevented from returning through the smoke compartment of fire origin or the smoke compartment of egress origin?

**WG PROGRESS ASSESSMENT:**

The MOE work group has teleconferences every Friday, from approximately 10:00 to 11:30 EST. At the writing of this report we have had 21 teleconferences.

Of the 6 areas of study, the committee has proposals for 5 areas and a direction for the 6<sup>th</sup> area of study.