INTERIOR FINISHES

MHCEA

2013 FALL CONFERENCE

HINCKLEY, MN

SEPTEMBER 12, 2013

INTERIOR FINISHES

K14 – Interior finishes means of egress

K15 – Interior finishes for room and spaces not used for corridor or exit ways

K16 – Newly installed interior floors

INTERIOR FINISHES

K73 – Combustible decorations

K74 – Draperies, curtain, and furniture

INTERIOR FINISHES

Interior wall and ceiling finishes are rated for their flame spread and smoke development

These rating are given as, Class A, Class B, and Class C

INTERIOR FINISHES

CLASS A

- **Has a flame spread rating of 0-25**
- **Has a smoke development rating of 0-450**

INTERIOR FINISHES

CLASS B

- **Has a flame spread rating of 26 - 75**
- **Has a smoke development rating of 0-450**

INTERIOR FINISHES

CLASS C

- **Has a flame spread rating of 76 - 200**
- **Has a smoke development rating of 0-450**

INTERIOR FINISHES

INTERIOR FINISHES

- **Existing materials – Class A or Class B**

****Exception: in rooms protected by a sprinkler system, existing Class C can be used in room separated from exit corridors***

INTERIOR FINISHES

INTERIOR FINISHES

- **Newly Installed Materials – Class A**

****Newly installed walls/ceiling are permitted to have Class A or Class B interior finishes in individual room not exceeding 4 persons***

INTERIOR FINISHES

INTERIOR FINISHES

newly installed corridor wall finish not exceeding 4 ft. in height that is restricted to the lower half of the wall is permitted to be Class A or Class B

INTERIOR FINISHES

Interior finishes existing before December 17, 2010 shall be permitted to remain in use without flame spread rating documentation if:

- **Applied directly to wall/ceiling**
- **Thickness of less than 1/28 inch**

INTERIOR FINISHES

INTERIOR FLOOR FINISH

- Newly installed interior floor finish shall be permitted in corridors and exits if Class I
- No restriction shall apply to existing interior floor finish

INTERIOR FINISHES

Class I

- **Critical radiant flux not less than 0.45 W/cm^2**

Class II

- **Critical radiant flux not less than 0.22 W/cm^2 but less than 0.45 W/cm^2**

INTERIOR FINISHES

INTERIOR FLOOR FINISH

- In smoke compartments protected by a fire sprinkler system no interior floor finish requirement shall apply

FURNISHINGS & DECORATIONS

COMBUSTIBLE DECORATIONS

- Combustible decorations shall be prohibited in any health care occupancy unless they are flame-retardant*

FURNISHINGS & DECORATIONS

COMBUSTIBLE DECORATIONS

***Exception: combustible decorations such as photographs and paintings in such limited quantities that a hazard of fire development or spread is not present**

FURNISHINGS & DECORATIONS

DRAPERIES & CURTAINS

- Must meet LSC 101 (00) - 10.3.1
- Shall be flame resistant
- NFPA 701 testing standards

FURNISHINGS & DECORATIONS

UPHOLSTERED FURNITURE & MATTRESSES

- LSC 101 (00) - 10.3.2
- Shall be resistant to a cigarette ignition

FURNISHINGS & DECORATIONS

- **With an approved automatic sprinkler system shall meet:**
  - Class I NFPA 260, or
  - 1.5” char length - NFPA 261, or
  - 2” char length – CFR 16 part 1632

FURNISHINGS & DECORATIONS

UPHOLSTERED FURNITURE & MATTRESSES

- **LSC 101 (00) – 10.3.4**
- **Shall have limited rates of heat release IAW**
  - NFPA 266 or ASTM E 1537

FURNISHINGS & DECORATIONS

- **The peak rate of heat release for the mattress shall not exceed 250kW**
- **The total energy release by the mattress during the first 5 minutes of the test shall not exceed 40Mj**

FURNISHINGS & DECORATIONS

QUESTIONS???

Egress

MHCEA

2013 FALL CONFERENCE

HINCKLEY, MN

SEPTEMBER 12, 2013

Egress - Objectives

- Walking surface
- Egress Reliability
- Locking requirements
- Lighting requirements
- Marking of exits

Code References

- 2000 NFPA 101 – Life Safety Code
- 2012 NFPA 101 – Life Safety Code
- 1999 NFPA 80 – Standard for Fire Doors and Windows

Egress – Walking Surfaces (K38)

7.1.6 Walking Surfaces in the Means of Egress.

7.1.6.1 General. Walking surfaces in the means of egress shall comply with 7.1.6.2 through 7.1.6.4.

Exception: Existing walking surfaces shall be permitted where approved by the authority having jurisdiction.

7.1.6.2 Changes in Elevation. Abrupt changes in elevation of walking surfaces shall not exceed 1/4 in. (0.6 cm). Changes in elevation exceeding 1/4 in. (0.6 cm), but not exceeding 1/2 in. (1.3 cm), shall be beveled 1 to 2. Changes in elevation exceeding 1/2 in. (1.3 cm) shall be considered a change in level and shall be subject to the requirements of 7.1.7.

7.1.6.3 Level. Walking surfaces shall be nominally level. 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. The slope perpendicular to the direction of travel shall not exceed 1 in 48.

Egress – Reliability (K38)

7.1.10 Means of Egress Reliability.

7.1.10.1* 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.

7.1.10.2 Furnishings and Decorations in Means of Egress.

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

CMS S&C Memo 12-21 http://www.cms.gov/Medicare/Provider-Enrollment-and Certification/SurveyCertificationGenInfo/Downloads/SCLetter12_21-.pdf

Egress – Reliability (K38)

2012 NFPA 101 sections 18/19.2.3 Capacity of Means of Egress and more specifically the requirements at 18/19.2.3.4 which allow, under certain circumstances, projections into the means of egress corridor width for wheeled equipment and fixed furniture;

Alternative & Unique Locking Arrangements Objectives

- Identify the various types of alternative locking arrangements in Institutional Group I-2
- Understand the specific requirements for Center for Medicare and Medicaid
- Testing requirements

Alternative & Unique Locking Arrangements
2007 MSFC 1008.1.8.3

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

5. Delayed egress locks, installed and maintained in conformance with Section 1008.1.8.6.

6. Special egress-control devices installed and maintained in conformance with Section 1008.1.11 are allowed in Group R-3 and Group R-4 congregate care facilities and in Group I occupancies.

Alternative & Unique Locking Arrangements 2007 MSFC 1008.1.8.3

7. Existing door-locking arrangements in Group I occupancies that were installed prior to **March 20,1995**, and comply with **Appendix I** may be allowed to continue.

Alternative & Unique Locking Arrangements
2007 MSFC Appendix I

SPECIAL LOCKING ARRANGEMENTS FOR GROUP I OCCUPANCIES

SECTION 1 - GENERAL

When approved by the fire chief and where there is a demonstrated safety or security concern for the patients or residents, existing door-locking arrangements conforming to Appendix I are permitted in Group I-2 occupancies.

NOTE: Appendix I is going to be removed in the next addition of the MSFC

Alternative & Unique Locking Arrangements
2007 MSFC 1008.1.11

Special egress control devices

Where the clinical needs of the patients require specialized security measures for their safety, door-locking arrangements are permitted in Group I-2 occupancies, provided that:

Alternative & Unique Locking Arrangements
2007 MSFC 1008.1.11

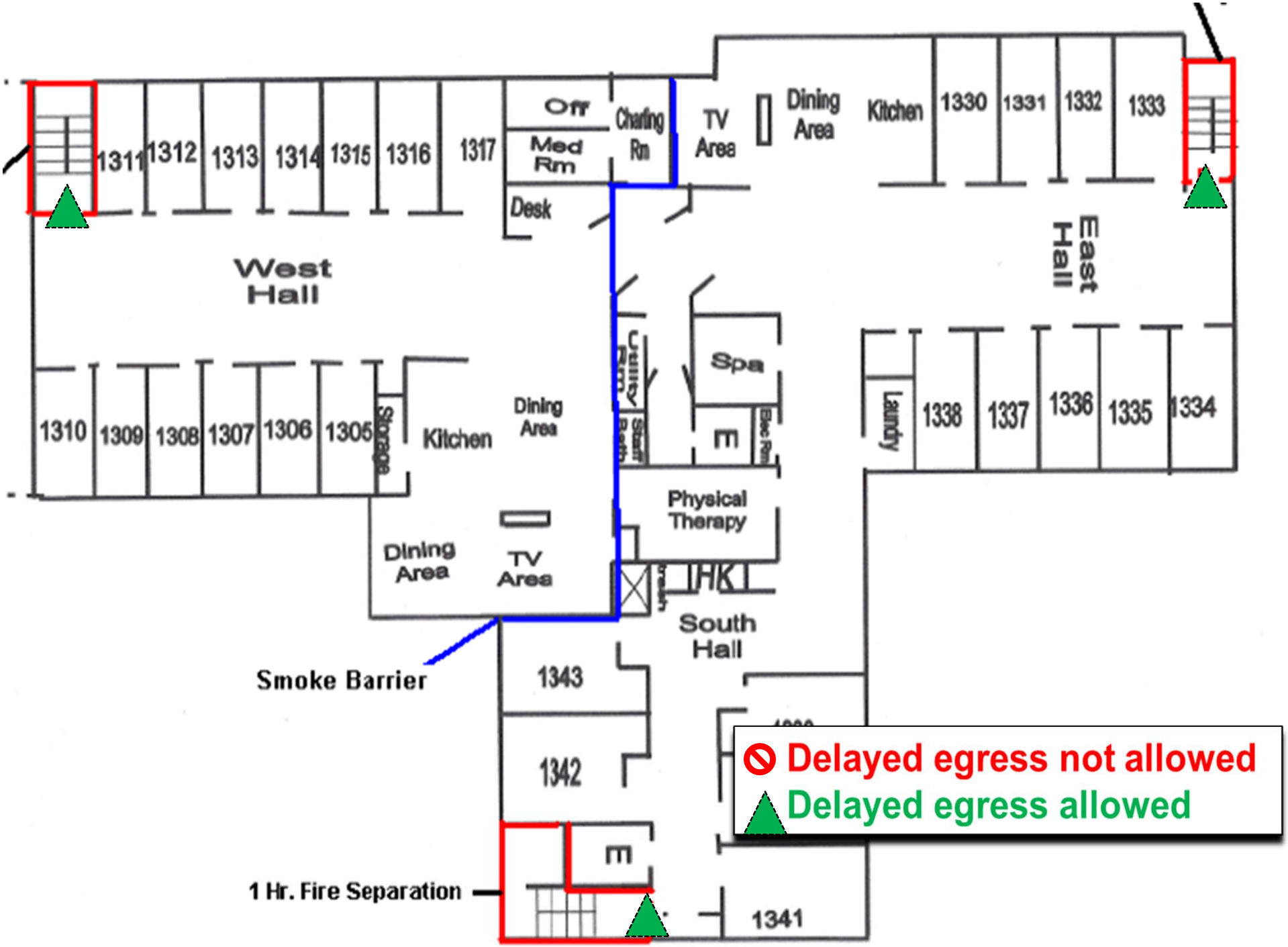
1. Keys or devices that function like keys are carried by staff at all times;

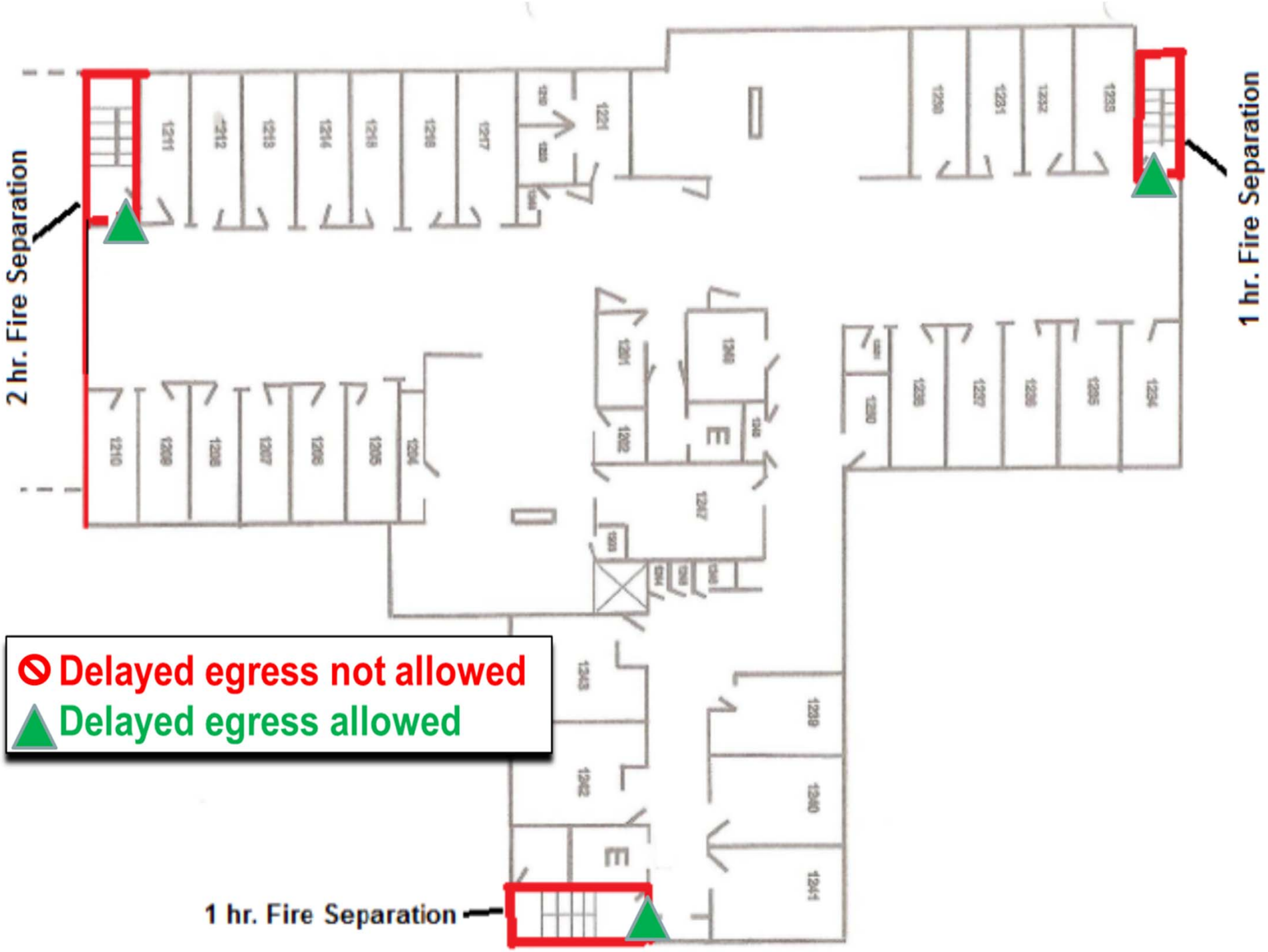
2000 NFPA 101 18/19.2.2.2.4 Exception No.1

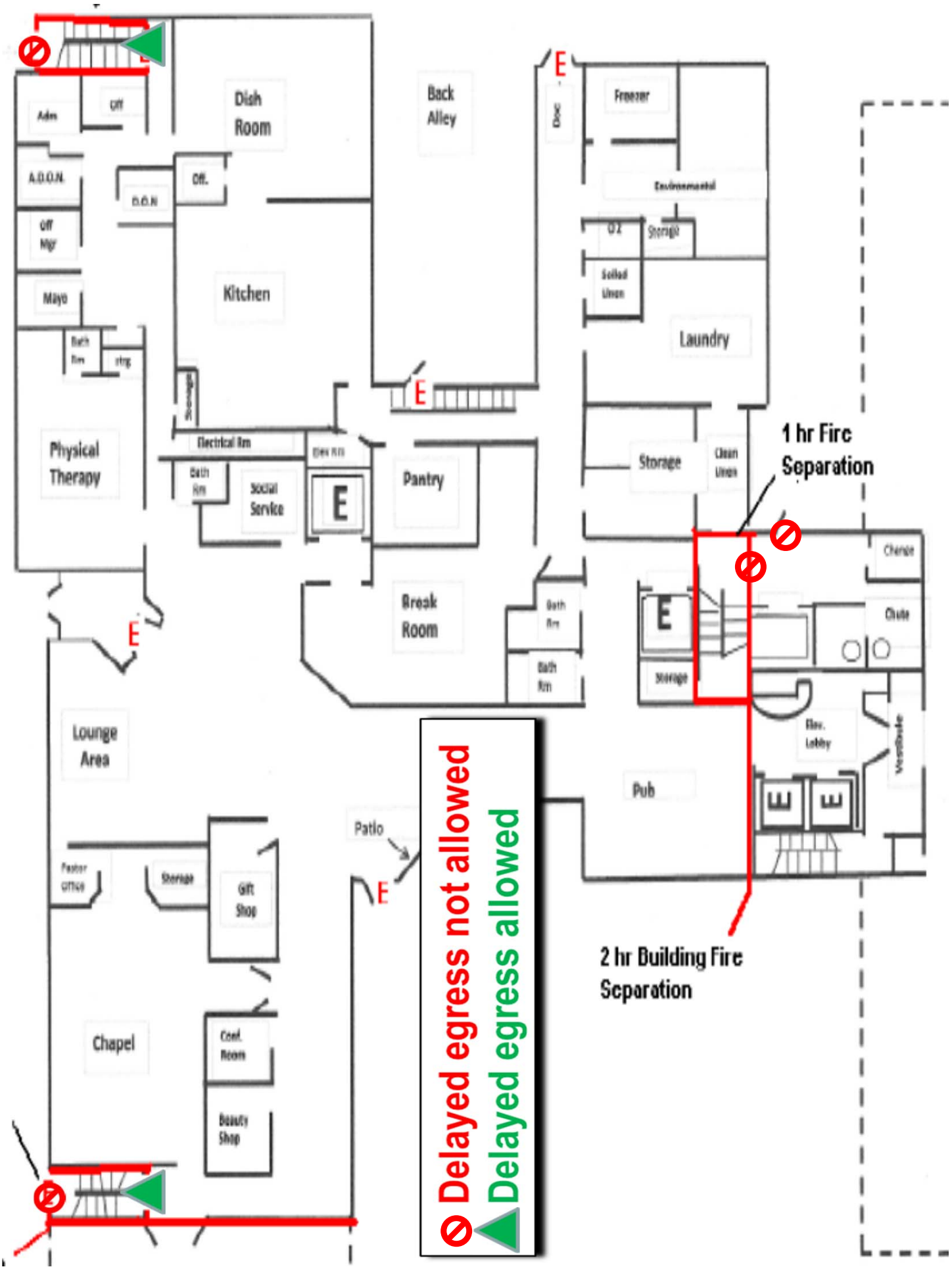
Alternative & Unique Locking Arrangements
2007 MSFC 1008.1.11

2. In at least one egress path, not more than one such arrangement is located;

2000 NFPA 101 - 18/19.2.2.2.5


1311
1312
1313
1314
1315
1316
1317
Off
Med Rm
Charting Rm
TV Area
Dining Area
Kitchen
1330
1331
1332
1333
Desk
West Hall
East Hall
Spa
Laundry
1338
1337
1336
1335
1334
1310
1309
1308
1307
1306
1305
Storage
Kitchen
Dining Area
Physical Therapy
Dining Area
TV Area
South Hall
Smoke Barrier
1343
1342
1341
1 Hr. Fire Separation
Delayed egress not allowed
Delayed egress allowed


2 hr. Fire Separation
1 hr. Fire Separation
1 hr. Fire Separation
Delayed egress not allowed
Delayed egress allowed


Dish Room
Back Alley
Freezer
Kitchen
Laundry
Physical Therapy
Electrical Rm
Social Service
Pantry
Storage
Clean Linen
1 hr Fire Separation
Break Room
Lounge Area
Pub
Patio
Gift Shop
Chapel
Coef. Room
Beauty Shop
2 hr Building Fire Separation
Delayed egress not allowed
Delayed egress allowed

Alternative & Unique Locking Arrangements 2007 MSFC 1008.1.11

3. The building or fire area is protected by an approved automatic sprinkler system in accordance with Section 903.3.1.1 **and** an approved fire alarm system having smoke detection installed throughout the exit corridor system and areas open to the exit corridor;

NOTE: Per CMS **ALL** nursing homes have to be fully sprinkled as of August 13, 2013.

Alternative & Unique Locking Arrangements 2007 MSFC 1008.1.11

4. Locking devices automatically unlock upon activation of any of the following:

a. Automatic sprinkler system;

b. Automatic smoke-detection system;

c. Automatic fire alarm system; or

d. Loss of electrical power;

NOTE: SFMD has permitted combination of any two smoke detectors to release doors in the secured area (2000 NFPA 101 7.2.1.6.1)

Alternative & Unique Locking Arrangements

Devices In Use

Security against infant abduction:

- Insures that baby does not leave the nursing unit unless authorized
- If infant gets within 10 feet of any one of the egress doors from the nursing unit it will activate an audible alarm. At 3 feet a audible / visual alarm and magnetically lock **ALL** the egress doors on that nursing unit.

Alternative & Unique Locking Arrangements Devices In Use

- When the fire alarm activates the egress doors that have delayed egress or magnetically locked, now have to unlock immediately
- Remember manual pull stations are not require at every exit in an I-2, as long as the facility meets **907.2.6.1 Exception** that manual pull station can be located at the nurses station or a 24 hour attended location and meets **907.4.1** the 200 feet travel distance.

Alternative & Unique Locking Arrangements Devices In Use

If the facility wants the pull stations by the exits they can place a protective cover over the manual pull station which emits a local alarm signal. Facility needs prior approval by the AHJ per **907.4.5.**

Alternative & Unique Locking Arrangements Devices In Use

Security against nursing home resident elopement:

Magnetic Lock

Key pad for staff to use stairwell and also to reset delayed egress

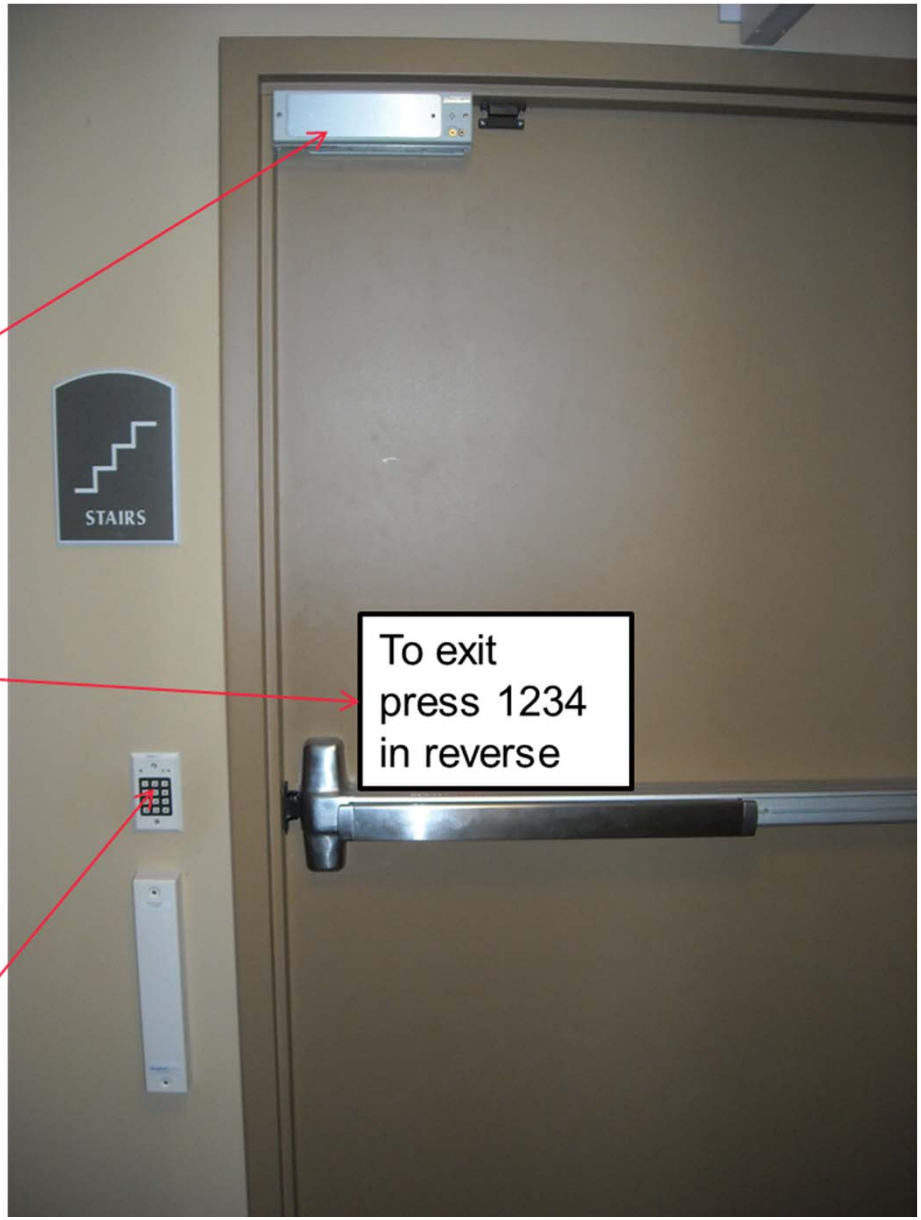
Antenna for wander bracelet

CMS Requirements

Magnetic Lock

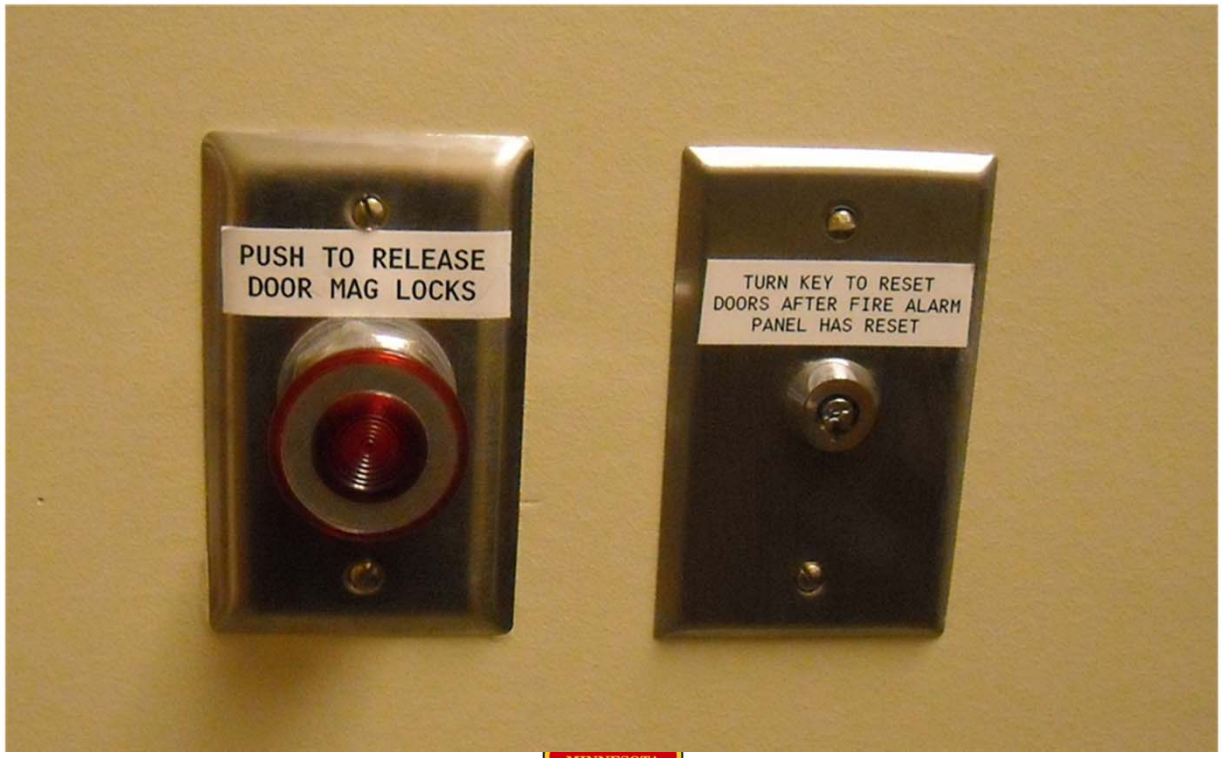
Require by CMS 2000 NFPA 101 – 7.2.1.6.1 (d)

Key pad for anyone over the age of 13 to exit



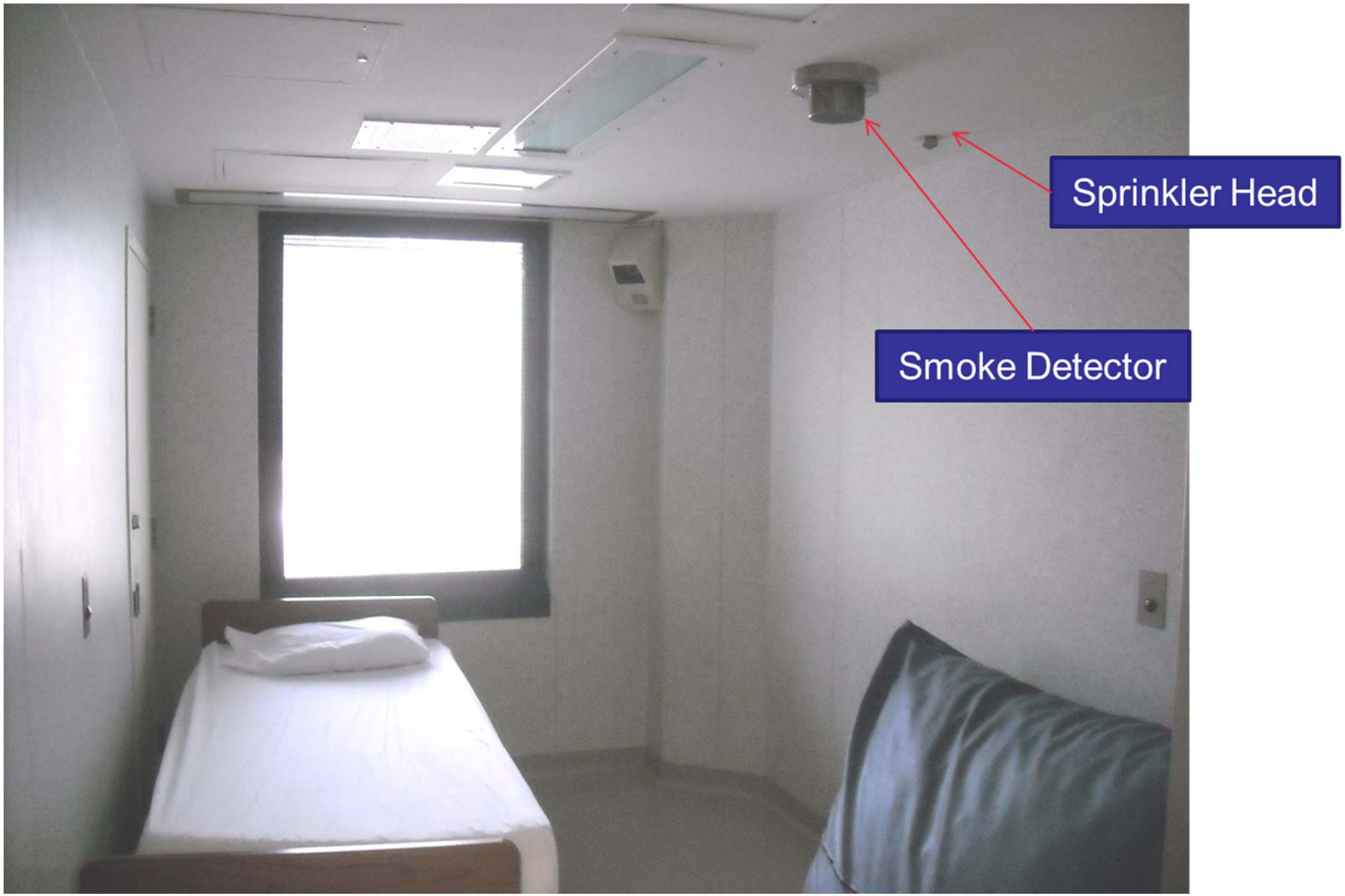
Alternative & Unique Locking Arrangements
2007 MSFC 1008.1.11

5. Locking devices can be remotely unlocked from an approved location within the secured area;



Magnetic Lock

Key switch to activate magnet lock


Sprinkler Head
Smoke Detector

Alternative & Unique Locking Arrangements
2007 MSFC 1008.1.11

6. There is **<u>no public assembly space</u>** within the secured area;

7. 24-hour patient supervision is provided within the secured area;

Alternative & Unique Locking Arrangements
2007 MSFC 1008.1.11

8. Relocking of the locking device is by manual means from an approved location within the secured area;

Alternative & Unique Locking Arrangements
2007 MSFC 1008.1.11

9. Locking devices are designed to fail in the open position.

Alternative & Unique Locking Arrangements Testing

Appendix I - SECTION 6

TESTING OF DEVICES AND SYSTEMS

Special locking arrangements shall be tested at least monthly in conjunction with the fire alarm system to ensure that they will release under the conditions as set forth above.

Alternative & Unique Locking Arrangements
2007 MSFC 1008.1.12

1008.1.12 Exit stair door locking. Doors are not to be locked on the stairwell side unless meeting one of the following criteria:

1. Delayed egress locks meeting Section 1008.1.8.6.

2. Locking devices meeting the requirements of Section 403.12 of the *International Building Code*.

3. Non-high-rise buildings that are more than four stories meeting NFPA 101 Section 7.2.1.5.2.

Alternative & Unique Locking Arrangements Hardware

1999 NFPA 80 3-4.3 Fire Door Hardware.

3-4.3.1 General. Only labeled fire door hardware shall be used. The design and construction of typical fire door hardware for swinging fire doors shall be as illustrated in ANSI A133.1, *Tin-Clad Fire Doors Mounted Singly and in Pairs.*

3-4.3.2 Components. Fire door hardware shall include hinge brackets, hinges, latches, latch keepers, and operating handle mechanisms; hardware for inactive door or pairs of doors includes top and bottom bolts and keepers.

Alternative & Unique Locking Arrangements Hardware

Egress - Lighting (K45)

All egress corridors 24X7 requires the following per 2000 NFPA 101:

7.8.1.3* The floors and other walking surfaces within an exit and within the portions of the exit access and exit discharge designated in 7.8.1.1 shall be illuminated to values of at least 1 ft-candle (10 lux) measured at the floor.

Egress - Lighting (K45)

7.8.1.4* Required illumination shall be arranged so 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.

Egress - Marking (K38)

2000 NFPA 101 - 7.10.8.1* No Exit. Any door, passage, or stairway that is neither an exit nor a way of exit access and that is located or arranged so that it is likely to be mistaken for an exit shall be identified by a sign that reads as follows:

NO

EXIT

Such sign shall have the word NO in letters 2 in. (5 cm) high with a stroke width of 3/8 in. (1 cm) and the word EXIT in letters 1 in. (2.5 cm) high, with the word EXIT below the word NO.

Exception: *This requirement shall not apply to approved existing signs.*

Corridors (K17+)

MHCEA

2013 FALL CONFERENCE

HINCKLEY, MN

SEPTEMBER 12, 2013

Corridors

- **18 /19.3.6 Corridors.**
- **18 /19.3.6.1** Corridors shall be separated from all other areas by partitions complying with 18/19.3.6.2 through 18/19.3.6.5.

(See also 18/19.2.5.9.)

- *There are (8) Exceptions*

Corridor - Walls

- **18/19.3.6.2 Construction of Corridor Walls.**
- 18/19.3.6.2.1* Corridor walls shall be continuous from the floor to the underside of the floor or roof deck above, through any concealed spaces, such as those above suspended ceilings, and through interstitial structural and mechanical spaces, and they shall have a fire resistance rating of not less than 1/2 hour.

- **Exception No. 1:*** In smoke compartments protected throughout by an approved, supervised automatic sprinkler system in accordance with 19.3.5.2, a corridor shall be permitted to be separated from all other areas by non-fire-rated partitions and shall be permitted to terminate at the ceiling where the ceiling is constructed to limit the transfer of smoke.
- *There are (3) Exceptions*

Corridor - Walls

- 19.3.6.2.2* Corridor walls shall form a barrier to limit the transfer of smoke.
- 19.3.6.2.3 Fixed fire window assemblies in accordance with 8.2.3.2.2 shall be permitted in corridor walls.

Corridor - Doors

- **18/19.3.6.3 Corridor Doors.**
- **19.3.6.3.1*** Doors protecting corridor openings in other than required enclosures of vertical openings, exits, or hazardous areas shall be substantial doors, such as those constructed of 13/4-in. (4.4-cm) thick, solid-bonded core wood or of construction that resists fire for not less than 20 minutes and shall be constructed to resist the passage of smoke. Compliance with NFPA 80, *Standard for Fire Doors and Fire Windows*, shall not be required. Clearance between the bottom of the door and the floor covering not exceeding 1 in. (2.5 cm) shall be permitted for corridor doors.
- ***Exception No. 1:*** *Doors to toilet rooms, bathrooms, shower rooms, sink closets, and similar auxiliary spaces that do not contain flammable or combustible materials.*
- ***Exception No. 2:*** *In smoke compartments protected throughout by an approved, supervised automatic sprinkler system in accordance with 19.3.5.2, the door construction requirements of 19.3.6.3.1 shall not be mandatory, but the doors shall be constructed to resist the passage of smoke.*

Corridor - Doors

- 18.3.6.3.2 Doors shall be provided with positive latching hardware. Roller latches shall be prohibited.
- Exception: Doors to toilet rooms, bathrooms, shower rooms, sink closets, and similar auxiliary spaces that do not contain flammable or combustible materials.

Corridor – Doors

- 18/19.3.6.3.3* Hold-open devices that release when the door is pushed or pulled shall be permitted.
- 18/19.3.6.3.4 Door-closing devices shall not be required on doors in corridor wall openings other than those serving required exits, smoke barriers, or enclosures of vertical openings and hazardous areas.
- 18/19.3.6.3.5 Nonrated, factory- or field-applied protective plates extending not more than 48 in. (122 cm) above the bottom of the door shall be permitted.
- 18/19.3.6.3.6 Dutch doors shall be permitted where they conform to 19.3.6.3. In addition, both the upper leaf and lower leaf shall be equipped with a latching device, and the meeting edges of the upper and lower leaves shall be equipped with an astragal, a rabbet, or a bevel.
- Dutch doors protecting openings in enclosures around hazardous areas shall comply with NFPA 80, *Standard for Fire Doors and Fire Windows*.

Corridor – Transfer Grills

- 18/19.3.6.4 Transfer Grilles. Transfer grilles, regardless of whether they are protected by fusible link–operated dampers, shall not be used in these walls or doors.
- Exception: Doors to toilet rooms, bathrooms, shower rooms, sink closets, and similar auxiliary spaces that do not contain flammable or combustible materials shall be permitted to have ventilating louvers or to be undercut.

Corridor – Openings

- 18/19.3.6.5 Openings. In other than smoke compartments containing patient bedrooms, miscellaneous openings such as mail slots, pharmacy pass-through windows, laboratory pass through windows, and cashier pass-through windows shall be permitted to be installed in vision panels or doors without special protection, provided that the aggregate area of openings per room does not exceed 20 in.2 (130 cm2), and the openings are installed at or below half the distance from the floor to the room ceiling.
- Exception: For rooms protected throughout by an approved, supervised automatic sprinkler system in accordance with 19.3.5.2, the aggregate area of openings per room shall not exceed 80 in.2 (520 cm2).

Smoke Barrier (K25)

MHCEA

2013 FALL CONFERENCE

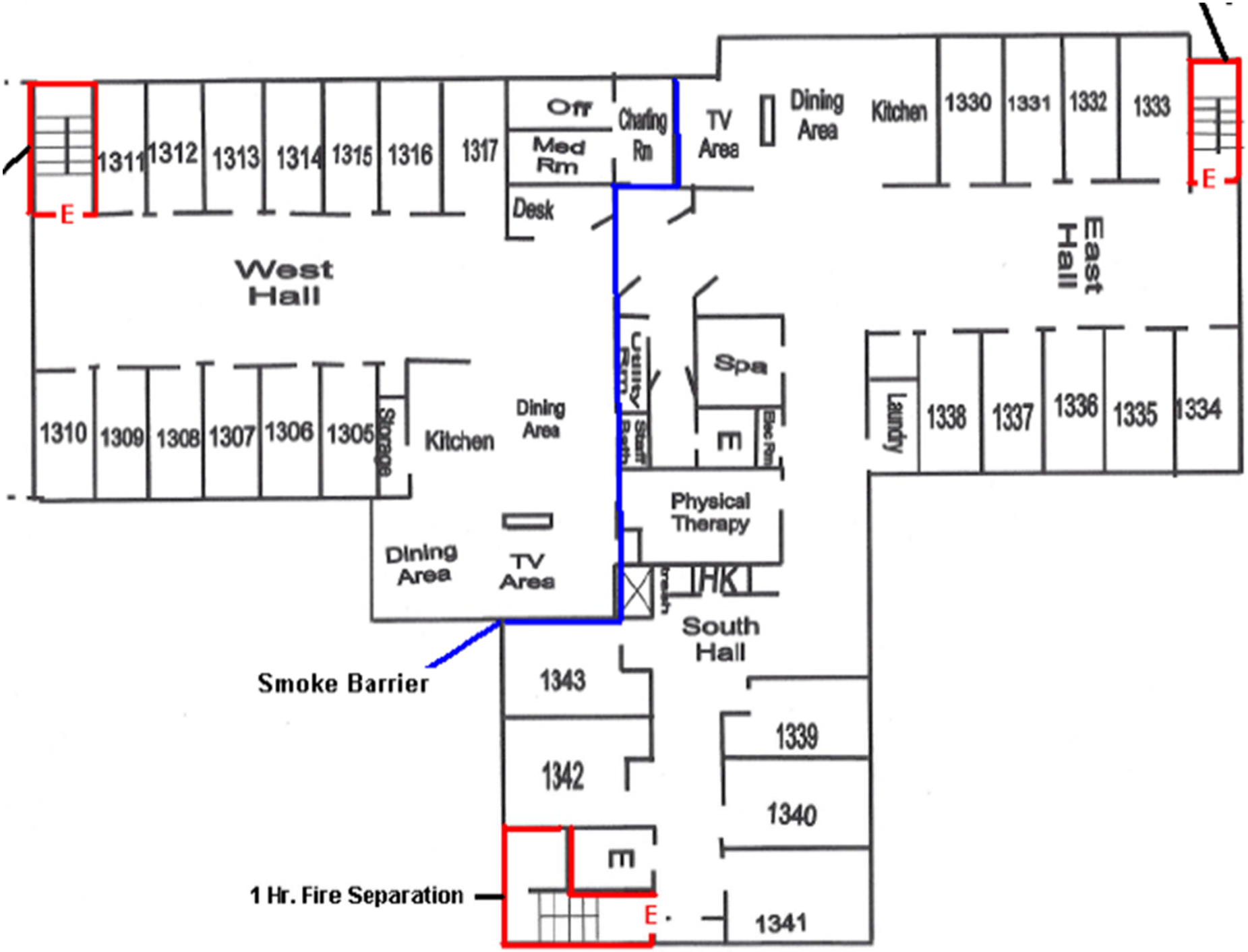
HINCKLEY, MN

SEPTEMBER 12, 2013

Smoke Barrier (K25)

2000 NFPA 101 - 8.3.2* Continuity. Smoke barriers required by this *Code* shall be continuous from an outside wall to an outside wall, from a floor to a floor, or from a smoke barrier to a smoke barrier or a combination thereof. Such barriers shall be continuous through all concealed spaces, such as those found above a ceiling, including interstitial spaces.

Exception: *A smoke barrier required for an occupied space below an interstitial space shall not be required to extend through the interstitial space, provided that the construction assembly forming the bottom of the interstitial space provides resistance to the passage of smoke equal to that provided by the smoke barrier.*


West Hall
East Hall
South Hall
1310
1309
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1314
1315
1316
1317
Off
Med Rm
Charting Rm
Desk
TV Area
Dining Area
Kitchen
1330
1331
1332
1333
Storage
Kitchen
Dining Area
Dining Area
TV Area
Utility Rm
Staff Bath
Spa
Elec Rm
Physical Therapy
HK
Laundry
1338
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1342
1339
1340
1341
E
E
E
Smoke Barrier
1 Hr. Fire Separation

Smoke Barrier (K25)

Existing

2000 NFPA 101 - 19.3.7.1 Smoke barriers shall be provided to divide every story used for sleeping rooms for more than 30 patients into not less than two smoke compartments.

The size of any such smoke compartment shall not exceed 22,500 ft2 (2100 m2), and the travel distance from any point to reach a door in the required smoke barrier shall not exceed 200 ft. (60 m).

Smoke Barrier (K25)

Existing

2000 NFPA 101 - 19.3.7.5 Openings in smoke barriers shall be protected by fire-rated glazing; by wired glass panels and steel frames; by substantial doors, such as 1 3/4-in. (4.4-cm) thick, solid-bonded wood core doors; or by construction that resists fire for not less than 20 minutes. Nonrated factory- or field-applied protective plates extending not more than 48 in. (122 cm) above the bottom of the door shall be permitted.

Smoke Barrier (K25)

Existing

2000 NFPA 101 - 19.3.7.6* Doors in smoke barriers shall comply with 8.3.4 and shall be self-closing or automatic-closing in accordance with 19.2.2.2.6. Such doors in smoke barriers shall not be required to swing with egress travel. Positive latching hardware shall not be required.

Smoke Barrier (K25)

New

2000 NFPA 101 - 18.3.7.1 Buildings containing health care facilities shall be subdivided by smoke barriers as follows:

1. To divide every story used by inpatients for sleeping or treatment into not less than two smoke compartments

2. To divide every story having an occupant load of 50 or more persons, regardless of use, into not less than two smoke compartments

3. To limit the size of each smoke compartment required by (1) and (2) to an area not exceeding 22,500 ft2 (2100 m2)

- ***Exception:*** *The area of an atrium separated in accordance with 8.2.5.6 shall not be limited in size.*

Smoke Barrier (K25)

New

4. To limit the travel distance from any point to reach a door in the required smoke barrier to a distance not exceeding 200 ft (60 m).

Exception No. 1: *Stories that do not contain a health care occupancy, located totally above the health care occupancy.*

Exception No. 2: *Areas that do not contain a health care occupancy and that are separated from the health care occupancy by a fire barrier complying with 7.2.4.3.*

Exception No. 3: *Stories that do not contain health care occupancies and that are more than one story below the health care occupancy.*

Exception No. 4: *Open-air parking structures protected throughout by an approved, supervised automatic sprinkler system in accordance with Section 9.7.*

Smoke Barrier (K25)

New

2000 NFPA 101 - 18.3.7.3 Any required smoke barrier shall be constructed in accordance with Section 8.3 and shall have a fire resistance rating of not less than 1 hour.

Smoke Barrier (K25)

New

2000 NFPA 101 - 18.3.7.5* Doors in smoke barriers shall be substantial doors, such as 1 3/4-in. (4.4-cm) thick, solid-bonded wood core doors, or shall be of construction that resists fire for not less than 20 minutes. Nonrated factory- or field-applied protective plates extending not more than 48 in. (122 cm) above the bottom of the door shall be permitted. Cross-corridor openings in smoke barriers shall be protected by a pair of swinging doors or a horizontal sliding door complying with 7.2.1.14. Swinging doors shall be arranged so that each door swings in a direction opposite from the other.

Smoke Barrier (K25)

New

2000 NFPA 101 - 18.3.7.6* Doors in smoke barriers shall comply with 8.3.4 and shall be self-closing or automatic-closing in accordance with 18.2.2.2.6.

18.3.7.7* Vision panels consisting of fire-rated glazing or wire 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.

Smoke Barrier (K25)

New

2000 NFPA 101 - 18.3.7.8 Rabbets, bevels, or astragals shall be required at the meeting edges, and stops shall be required at the head and sides of door frames in smoke barriers. Positive latching hardware shall not be required. Center mullions shall be prohibited.

WRAP UP

QUESTIONS ?

SFMD – Healthcare Inspection Website

https://dps.mn.gov/divisions/sfm/programs-services/Pages/health-care-inspection.aspx

Documentation

REMEMBER

If you didn't document it.

It didn't happen!

THANK YOU!

WALLS & CEILINGS

MHCEA

2013 FALL CONFERENCE

HINCKLEY, MN

SEPTEMBER 12, 2013

WALLS & CEILINGS

CORRIDOR WALLS – NEW CONSTRUCTION

- ***LSC 101 (00) New 18.6.3.2***
- ***LSC 101 (00) Existing 19.6.3.2.1***

WALLS & CEILINGS

LSC 101 (00) – NEW 18.6.3.2

Corridor walls shall

- **Form a barrier to limit the transfer of smoke**
- **Be permitted to terminate at the ceiling**

WALLS & CEILINGS

LSC 101 (00) – NEW 18.6.3.2

Corridor walls shall

- **When terminating at the ceiling where it is constructed to limit the transfer of smoke**
- **No rating required for corridor walls**

WALLS & CEILINGS

LSC 101 (00) – EXISTING 19.6.3.2.1

Corridor walls shall

- **Continuous**
  - Floor to roof deck above
  - Through any concealed spaces
  - Through interstitial spaces

WALLS & CEILINGS

- Through mechanical spaces
- Shall have a fire resistive rating of not less than ½ hour

WALLS & CEILINGS

LSC 101 (00) – EXISTING 19.6.3.2.1

Guess What???

Exceptions – again!

WALLS & CEILINGS

1. **Smoke compartments protected throughout by an approved sprinkler system:**
   - Separated from other areas by a non-fire-rated partition
   - Terminate where the ceiling will limit the transfer of smoke

WALLS & CEILINGS

2. Existing corridor partitions are permitted to terminate at ceilings that are:

- not an integral part of a floor construction if 5ft or more of space between the top of the ceiling and the floor/roof above

WALLS & CEILINGS

- **Provided that they meet the following criteria:**
  - Be a part of a fire rated assembly of not less than 1 hour in compliance with LSC 101 (00) 8.2.3.1
  - The corridor partitions form a smoketight joint with the ceiling

WALLS & CEILINGS

- Each compartment of interstitial space that constitutes a separate smoke area is vented to the outside by mechanical means that can provide atleast 2 air changes per hour with a capacity of less than 5000 ft^3

WALLS & CEILINGS

- The interstitial space shall not be used for storage, and
- The space shall not be used as a plenum except as noted in 19.63.6.2.1(3)

WALLS & CEILINGS

3. Existing corridor partitions shall be permitted to terminate at a monolithic ceiling that resists the passage of smoke where there is a smoketight joint between the top of the partition and the bottom of the ceiling

WALLS & CEILINGS

SEPARATIONS:

- **2hr separation between occupancies, e.g. clinics and hospital or nursing home and assisted living…**
- **1hr for hazardous areas**

WALLS & CEILINGS

- **½ hr. for Smoke barriers**
- **Corridor walls:**
  - Existing = ½ hour rating
  - New = limit the transfer of smoke – non-fire-rated

WALLS & CEILINGS

QUESTIONS???

ELECTRICAL

MHCEA

2013 FALL CONFERENCE

HINCKLEY, MN

SEPTEMBER 12, 2013

ELECTRICAL

EXTENSION CORDS, PORWER TAPS, AND PANELS… OH MY!

ELECTRICAL

POWER TAP:

- **A device that is connected to an electrical receptacle,**
- **Has built-in overcurrent protection,**

ELECTRICAL

- **Allows connection of one or more electrical plugs to supply electricity to other devices and equipment.**

ELECTRICAL

- Cannot be plugged into each other
- Different from surge protectors

ELECTRICAL

- **Taps shall be of the polarized or grounded type, equipped with overcurrent protection, and shall be listed in accordance with UL 1363.**

ELECTRICAL

- Shall be directly connected to a permanently installed receptacle
- Cords shall not extend through walls, ceilings, floors, under doors floor coverings,

ELECTRICAL

- **be subject to environmental or physical damage**

ELECTRICAL

EXTENSION CORDS:

- **Extension cords and flexible cords shall not be a substitute for permanent wiring**
- **Shall not be affixed to structures**

ELECTRICAL

- Shall not be affixed to structures, extended through walls, ceilings or floors, or under doors or floor coverings
- Be subject to environmental damage or physical impact

ELECTRICAL

- Extension cords shall be used only with portable appliances
- The ampacity of the extension cords shall not be less than the rated capacity of the portable appliance supplied by the cord.

ELECTRICAL

ELECTRICAL EQUIPMENT:

- **Working space of not Less than 30 inches (762 mm) in width, 36 inches (914 mm) in Depth and 78 inches (1981 mm) in height shall be provided in Front of electrical service equipment**

ELECTRICAL

- **No storage of any materials shall be located within the designated working space.**

ELECTRICAL

QUESTIONS???

HAZARDOUS AREAS

MHCEA

2013 FALL CONFERENCE

HINCKLEY, MN

SEPTEMBER 12, 2013

What is a Hazardous Area?
LSC 18/19.3.2.1

- Boiler and fuel-fired heater rooms
- Central laundries greater than 100 sq.ft.
- Paint/repair shops
- Soiled linen rooms
- Trash collection rooms

What is a Hazardous Area, Cont.? LSC 18/19.3.2.1

- Storage rooms greater than 50 sq.ft.
- New construction requirements are different
- Laboratories
- All doors to hazardous areas must self or automatically close and self-latch

Existing hazardous area requirements

- All hazardous areas or rooms shall be protected by 1-hour fire rated construction, -OR-
- Protected by a complete fire sprinkler system

- When fire sprinkler are present, the walls and doors must only be smoke resistant

New hazardous area requirements

- All hazardous areas are required to be 1-hour fire separated
- Exceptions:

- Laboratories with flammable/combustible liquids that are not considered a severe hazard (labs containing more than 20 gal. of flammable/combustible liquids)
- MN State Fire Code only allows 10 gal. in use or 20 gal. when fire sprinkler protected (operational supply limitations)

New hazardous area requirements

- Exceptions cont.:

- Storage rooms greater than 50 sq.ft. <u>but</u> less than 100 sq.ft.
- These are permitted to only be smoke resistant

Hazardous area tips

- Most problems are “human caused”

- Self-closing doors get abused
- Doors require regular inspection
- Doors that need to be held open (such as laundry) are permitted to be automatic closing

Questions?

Alcohol Based Hand Rub (ABHR) Sanitizer Dispensing in Health Care Facilities

MHCEA

2013 FALL CONFERENCE

HINCKLEY, MN

SEPTEMBER 12, 2013

http://top-10-list.org/wp-content/uploads/2009/05/alcohol-hand-sanitizers.jpg

- ABHR is used to avoid transmission of pathogens, including bacteria, fungi, and some viruses.

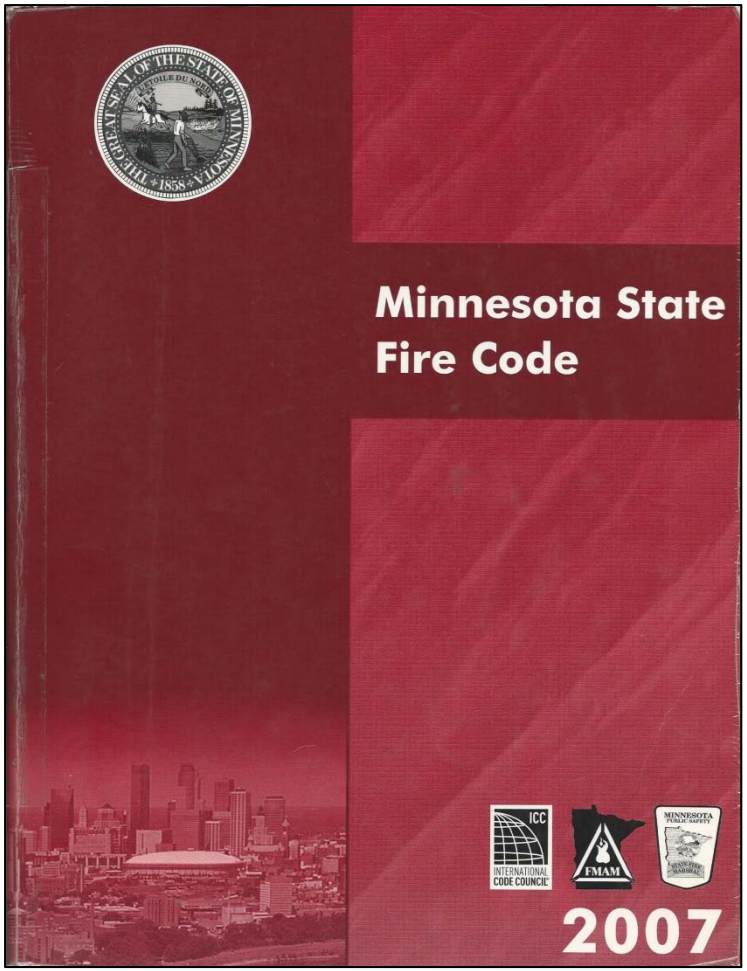
- The Centers for Disease Control (CDC) authorizes the use of ABHR as the preferred method of hand hygiene, where hands are not visibly dirty.

Question: What are the Fire and Life Safety concerns surrounding the use and dispensing of ABHR??

Answer: The stuff is extremely flammable!

- ABHR gel is between 60% - 70% alcohol.

- The dispensing and storage of ABHR is regulated by Minnesota State Fire Code (MSFC), 2007 edition



3401.1 Scope and application. Prevention, control and mitigation of dangerous conditions related to storage, use, dispensing of flammable liquids.

3401.2(10): The use of wall-mounted dispensers containing nonaerosol, ABHR classified as Class I or Class II liquids shall be in accordance with Section 3405.5.

CHAPTER 34

FLAMMABLE AND COMBUSTIBLE LIQUIDS

SECTION 3401 GENERAL

3401.1 Scope and application. Prevention, control and mitigation of dangerous conditions related to storage, use, dispensing, mixing and handling of flammable and combustible liquids shall be in accordance with Chapter 27 and this chapter.

3401.2 Nonapplicability. This chapter shall not apply to liquids as otherwise provided in other laws or regulations or chapters of this code, including:

1. Specific provisions for flammable liquids in motor fuel-dispensing facilities, repair garages, airports and marinas in Chapter 22.
2. Medicines, foodstuffs, cosmetics, and commercial, institutional and industrial products in the same concentration and packaging containing not more than 50 percent by volume of water-miscible liquids and with the remainder of the solution not being flammable, and alcoholic beverages in retail or wholesale sales or storage uses when packaged in individual containers not exceeding 1.3 gallons (5 L).
3. Storage and use of fuel oil in tanks and containers connected to oil-burning equipment. Such storage and use shall be in accordance with Section 603. For abandonment of fuel oil tanks, this chapter applies.
4. Refrigerant liquids and oils in refrigeration systems (see Section 606).
5. Storage and display of aerosol products complying with Chapter 28.
6. Storage and use of liquids that have no fire point when tested in accordance with ASTM D 92.
7. Liquids with a flashpoint greater than 95°F (35°C) in a water-miscible solution or dispersion with a water and inert (noncombustible) solids content of more than 80 percent by weight, which do not sustain combustion.
8. Liquids without flash points that can be flammable under some conditions, such as certain halogenated hydrocarbons and mixtures containing halogenated hydrocarbons.
9. The storage of distilled spirits and wines in wooden barrels and casks.
10. The use of wall-mounted dispensers containing nonaerosol, alcohol-based hand sanitizers classified as Class I or Class II liquids shall be in accordance with Section 3405.5.

3401.3 Referenced documents. The applicable requirements of Chapter 27, other chapters of this code, the *International Building Code* and the *International Mechanical Code* pertaining to flammable liquids shall apply.

3401.4 Permits. Permits shall be required as set forth in Sections 105.6 and 105.7.

3401.5 Material classification. Flammable and combustible liquids shall be classified in accordance with the definitions in Section 3402.1.

When mixed with lower flash-point liquids, Class II or III liquids are capable of assuming the characteristics of the lower flash-point liquids. Under such conditions the appropriate provisions of this chapter for the actual flash point of the mixed liquid shall apply. When heated above their flash points, Class II and III liquids assume the characteristics of Class I liquids. Under such conditions, the appropriate provisions of this chapter for flammable liquids shall apply.

SECTION 3402 DEFINITIONS

3402.1 Definitions. The following words and terms shall, for the purposes of this chapter and as used elsewhere in this code, have the meanings shown herein.

ALCOHOL-BASED HAND RUB. An alcohol-containing preparation designed for application to the hands for reducing the number of viable microorganisms on the hands and containing ethanol or isopropanol in an amount not exceeding 70 percent by volume.

BULK PLANT OR TERMINAL. That portion of a property where flammable or combustible liquids are received by tank vessel, pipelines, tank car or tank vehicle and are stored or blended in bulk for the purpose of distributing such liquids by tank vessel, pipeline, tank car, tank vehicle, portable tank or container.

BULK TRANSFER. The loading or unloading of flammable or combustible liquids from or between tank vehicles, tank cars or storage tanks.

COMBUSTIBLE LIQUID. A liquid having a closed cup flash point at or above 100°F (38°C). Combustible liquids shall be subdivided as follows:

Class II. Liquids having a closed cup flash point at or above 100°F (38°C) and below 140°F (60°C).

Class IIIA. Liquids having a closed cup flash point at or above 140°F (60°C) and below 200°F (93°C).

Class IIIB. Liquids having closed cup flash points at or above 200°F (93°C).

The category of combustible liquids does not include compressed gases or cryogenic fluids.

FIRE POINT. The lowest temperature at which a liquid will ignite and achieve sustained burning when exposed to a test flame in accordance with ASTM D 92.

FLAMMABLE LIQUID. A liquid having a closed cup flash point below 100°F (38°C). Flammable liquids are further categorized into a group known as Class I liquids. The Class I category is subdivided as follows:

ABHR: An alcohol-containing preparation designed for application to the hands for reducing the number of viable microorganisms on the hands and containing ethanol or isopropanol in an amount not exceeding 70 percent by volume.

Flash Point. The minimum temperature in degrees Fahrenheit at which a liquid will give off sufficient vapors to form an ignitable mixture with air near the surface or in the container, but will not sustain combustion.

Class IA. Liquids having a flash point below 73°F (23°C) and having a boiling point below 100°F (38°C).

Class IB. Liquids having a flash point below 73°F (23°C) and having a boiling point at or above 100°F (38°C).

Class IC. Liquids having a flash point at or above 73°F (23°C) and below 100°F (38°C).

The category of flammable liquids does not include compressed gases or cryogenic fluids.

FLASH POINT. The minimum temperature in degrees Fahrenheit at which a liquid will give off sufficient vapors to form an ignitable mixture with air near the surface or in the container, but will not sustain combustion. The flash point of a liquid shall be determined by appropriate test procedure and apparatus as specified in ASTM D 56, ASTM D 93 or ASTM D 3278.

FUEL LIMIT SWITCH. A mechanism, located on a tank vehicle, that limits the quantity of product dispensed at one time.

INTERMEDIATE BULK CONTAINER. A storage container meeting the requirements of and containing products authorized by the U.S. Department of Transportation Hazardous Materials Regulations, Code of Federal Regulations, title 49, or by Part 6 of the United Nations Recommendations on the Transport of Dangerous Goods for classes 31H1, 31H2 and 31HZ1.

LIQUID STORAGE ROOM. A room classified as a Group H-3 occupancy used for the storage of flammable or combustible liquids in a closed condition.

LIQUID STORAGE WAREHOUSE. A building classified as a Group H-2 or H-3 occupancy used for the storage of flammable or combustible liquids in a closed condition.

MOBILE FUELING. The operation of dispensing liquid fuels from tank vehicles into the fuel tanks of motor vehicles. Mobile fueling may also be known by the terms "Mobile fleet fueling," "Wet fueling" and "Wet hosing."

PROCESS TRANSFER. The transfer of flammable or combustible liquids between tank vehicles or tank cars and process operations. Process operations may include containers, tanks, piping and equipment.

REFINERY. A plant in which flammable or combustible liquids are produced on a commercial scale from crude petroleum, natural gasoline or other hydrocarbon sources.

REMOTE EMERGENCY SHUTOFF DEVICE. The combination of an operator-carried signaling device and a mechanism on the tank vehicle. Activation of the remote emergency shutoff device sends a signal to the tanker-mounted mechanism and causes fuel flow to cease.

REMOTE SOLVENT RESERVOIR. A liquid solvent container enclosed against evaporative losses to the atmosphere during periods when the container is not being utilized, except for a solvent return opening not larger than 16 square inches (10 322 mm^2). Such return allows pump-cycled used solvent to drain back into the reservoir from a separate solvent sink or work area.

SOLVENT DISTILLATION UNIT. An appliance that receives contaminated flammable or combustible liquids and which distills the contents to remove contaminants and recover the solvents.

TANK, PRIMARY. A listed atmospheric tank used to store liquid. See "Primary containment."

TANK, PROTECTED ABOVE GROUND. A tank listed in accordance with UL 2085 consisting of a primary tank provided with protection from physical damage and fire-resistive protection from a high-intensity liquid pool fire exposure. The tank may provide protection elements as a unit or may be an assembly of components, or a combination thereof.

SECTION 3403
GENERAL REQUIREMENTS

3403.1 Electrical. Electrical wiring and equipment shall be installed and maintained in accordance with the *International Code Council Electrical Code Administrative Provisions*.

3403.1.1 Classified locations for flammable liquids. Areas where flammable liquids are stored, handled, dispensed or mixed shall be in accordance with Table 3403.1.1. A classified area shall not extend beyond an unpierced floor, roof or other solid partition.

The extent of the classified area is allowed to be reduced, or eliminated, where sufficient technical justification is provided to the fire code official that a concentration in the area in excess of 25 percent of the lower flammable limit (LFL) cannot be generated.

3403.1.2 Classified locations for combustible liquids. Areas where Class II or III liquids are heated above their flash points shall have electrical installations in accordance with Section 3403.1.1.

Exception: Solvent distillation units in accordance with Section 3405.4.

3403.1.3 Other applications. The fire code official is authorized to determine the extent of the Class I electrical equipment and wiring location when a condition is not specifically covered by these requirements or the *International Code Council Electrical Code Administrative Provisions*.

3403.2 Fire protection. Fire protection for the storage, use, dispensing, mixing, handling and on-site transportation of flammable and combustible liquids shall be in accordance with this chapter and applicable sections of Chapter 9.

3403.2.1 Portable fire extinguishers and hose lines. Portable fire extinguishers shall be provided in accordance with Section 906. Hose lines shall be provided in accordance with Section 905.

3403.3 Site assessment. In the event of a spill, leak or discharge from a tank system, a site assessment shall be completed by the owner or operator of such tank system if the fire code official determines that a potential fire or explosion hazard exists. Such site assessments shall be conducted to ascertain potential fire hazards and shall be completed and submitted to the fire department within a time period established by the fire code official, not to exceed 60 days.

MINNESOTA PUBLIC SAFETY
STATE FIRE MARSHAL
EST. 1905

TABLE 3405.3.8.2
MAXIMUM ALLOWABLE QUANTITIES FOR DISPENSING OF FLAMMABLE AND COMBUSTIBLE LIQUIDS IN OUTDOOR CONTROL AREAS[a,b]

CLASS OF LIQUID	QUANTITY (gallons)
Flammable	
Class IA	10
Class IB	15
Class IC	20
Combination Class IA, IB and IC	30[c]
Combustible	
Class II	30
Class IIIA	80
Class IIIB	3,300

For SI: 1 gallon = 3.785 L.

a. For definition of "Outdoor Control Area," see Section 2702.1.

b. The fire code official is authorized to impose special conditions regarding locations, types of containers, dispensing units, fire control measures and other factors involving fire safety.

c. Containing not more than the maximum allowable quantity per control area of each individual class.

3405.3.8.3 Location of processing vessels. Processing vessels shall be located with respect to distances to lot lines which can be built on in accordance with Table 3405.3.4(1).

Exception: In refineries and distilleries.

3405.3.8.4 Weather protection. Weather protection for outdoor use shall be in accordance with Section 2705.3.9.

3405.4 Solvent distillation units. Solvent distillation units shall comply with Sections 3405.4.1 through 3405.4.9.

3405.4.1 Unit with a capacity of 60 gallons or less. Solvent distillation units used to recycle Class I, II or IIIA liquids having a distillation chamber capacity of 60 gallons (227 L) or less shall be listed, labeled and installed in accordance with Section 3405.4 and UL 2208.

Exceptions:

1. Solvent distillation units installed in dry cleaning plants in accordance with Chapter 12.
2. Solvent distillation units used in continuous through-put industrial processes where the source of heat is remotely supplied using steam, hot water, oil or other heat transfer fluids, the temperature of which is below the auto-ignition point of the solvent.
3. Solvent distillation units listed for and used in laboratories.
4. Approved research, testing and experimental processes.

3405.4.2 Units with a capacity exceeding 60 gallons. Solvent distillation units used to recycle Class I, II or IIIA liquids, having a distillation chamber capacity exceeding 60 gallons (227 L) shall be used in locations that comply with the use and mixing requirements of Section 3405 and other applicable provisions in this chapter.

3405.4.3 Prohibited processing. Class I, II and IIIA liquids also classified as unstable (reactive) shall not be processed in solvent distillation units.

Exception: Appliances listed for the distillation of unstable (reactive) solvents.

3405.4.4 Labeling. A permanent label shall be affixed to the unit by the manufacturer. The label shall indicate the capacity of the distillation chamber, and the distance the unit shall be placed away from sources of ignition. The label shall indicate the products for which the unit has been listed for use or refer to the instruction manual for a list of the products.

3405.4.5 Manufacturer's instruction manual. An instruction manual shall be provided. The manual shall be readily available for the user and the fire code official. The manual shall include installation, use and servicing instructions. It shall identify the liquids for which the unit has been listed for distillation purposes along with each liquid's flash point and auto-ignition temperature. For units with adjustable controls, the manual shall include directions for setting the heater temperature for each liquid to be instilled.

3405.4.6 Location. Solvent distillation units shall be used in locations in accordance with the listing. Solvent distillation units shall not be used in basements.

3405.4.7 Storage of liquids. Distilled liquids and liquids awaiting distillation shall be stored in accordance with Section 3404.

3405.4.8 Storage of residues. Hazardous residue from the distillation process shall be stored in accordance with Section 3404 and Chapter 27.

3405.4.9 Portable fire extinguishers. Approved portable fire extinguishers shall be provided in accordance with Section 906. At least one portable fire extinguisher having a rating of not less than 40-B shall be located not less than 10 feet (3048 mm) or more than 30 feet (9144 mm) from any solvent distillation unit.

3405.5 Alcohol-based hand sanitizers. Alcohol-based hand-rub dispensers containing liquids classified as Class I or Class II liquids shall comply with the following:

1. Where dispensers are installed in a corridor, the corridor shall have a minimum width of at least 6 feet (1830 mm).
2. The maximum individual dispenser fluid capacity shall be as follows: 40.5 fl. oz.
   - 2.1. 0.32 gallons (1.2 L) for dispensers in rooms, corridors and areas open to corridors.
   - 2.2. 0.53 gallons (2.0 L) for dispensers in suites of rooms.
3. The dispensers shall be separated from each other by a horizontal spacing of not less than 48 inches (1220 mm).
4. Not more than an aggregate 10 gallons (37.8 L) of alcohol-based hand sanitizer solution shall be in use outside of a storage cabinet in a single smoke compartment.
5. Storage quantities greater than 5 gallons (18.9 L) in a single smoke compartment shall meet the requirements of this chapter.

3405.5 Alcohol-based hand sanitizers. ABHR dispensers containing liquids classified as Class I or Class II liquids shall comply with the following:

** There are seven requirements... Refer to SFMD handout.

MINNESOTA STATE DEPARTMENT OF PUBLIC SAFETY

State Fire Marshal Division

444 Cedar Street, Suite 145, St. Paul, Minnesota 55101-5145
Phone: 651/201-7200 FAX: 651/215-0525 TTY: 651/282/6555
Internet: http://www.fire.state.mn.us

ALCOHOL BASED HAND SANITIZERS (ABHR)

A lot has been written about alcohol-based hand sanitizers and their effectiveness in dealing with infection control, particularly in health care facilities. What many don't realize is that these products contain alcohol, a flammable liquid. In fact, in order to meet the definition of a waterless hand sanitizer for the Centers for Disease Control (CDC), the product must be at least 60% alcohol by volume. Flammable liquids give off vapors that can be easily ignited. Once ignited, they burn very intensely (alcohols normally burn with a clean blue flame and produce very little smoke). They can contribute to the rapid spread of fires that originate elsewhere in the building (e.g. linen or cleaning cart fire).

The Minnesota State Fire Code (MSFC 07) controls the use and storage of flammable liquids in Chapter 34. Section 3401.2 of the MSFC (07) is amended by adding item 10, which reads:

The use of wall-mounted dispensers containing non-aerosol, alcohol-based hand sanitizers classified as Class I or Class II liquids shall be in accordance with section 3405.5.

1. Where dispensers are in a corridor, the corridor shall have a minimum width of 6 feet.

2. The maximum individual dispenser fluid capacity shall be as follows:
Dispensers in rooms, corridors and areas open to corridors 1.2 liters or 40.57 fl. oz.
Dispensers in suites of rooms 2.0 liters or 67.63 fl. oz.

3. The dispensers shall be separated from each other by at least 48 inches horizontally.

4. Not more than 10 gallons (37.8 L) (aggregate) shall be in use outside of a storage cabinet within a single smoke compartment.

5. Storage quantities greater than 5 gallons (18.9 L) in a single smoke compartment shall meet the requirements of chapter 3400.

6. Dispensers shall not be installed over or within 6 inches to the centerline of the dispenser to an electrical receptacle, switch, appliance, device or other ignition source.

7. Dispensers installed directly over carpeted floors shall be permitted only in sprinklered smoke compartments

8. The dispenser shall not project over any walking surface (corridor, aisle) by more than 4 inches (102m) between the heights of 27 inches (686 mm) and 80 inches (2032 mm) on either side. (MSFC (2007) section 1003.3.3).

While the use of ABHR was first found in health care occupancies (hospitals, nursing home, ambulatory surgery centers), the use is showing up in other occupancies such as schools, doctor's offices, churches, and even grocery stores.

So Much For The State, What About The Federal Government?

- Centers for Medicare and Medicaid Services (CMS): Use and dispensing of ABHR mirrors the State requirements.

ID PREFIX		MET	NOT MET	N/A	REMARKS
	2000 NEW Hazardous areas are protected in accordance with 8.4. The areas shall be enclosed with a one hour fire-rated barrier, with a ¾ hour fire-rated door, without windows (in accordance with 8.4). Doors shall be self-closing or automatic closing in accordance with 7.2.1.8. 18.3.2.1				
K30	Gift shops shall be protected as hazardous areas when used for storage or display of combustibles in quantities considered hazardous. Non-rated walls may separate gift shops that are not considered hazardous, have separate protected storage and that are completely sprinkled. Gift shops may be open to the corridor if they are not considered hazardous, have separate protected storage, are completely sprinklered and do not exceed 500 square feet. 18.3.2.5, 19.3.2.5				
K211	2000 EXISTING Where Alcohol Based Hand Rub (ABHR) dispensers are installed: ❑ The corridor is at least 6 feet wide ❑ The maximum individual fluid dispenser capacity shall be 1.2 liters (2 liters in suites of rooms) ❑ The dispensers shall have a minimum spacing of 4 ft from each other ❑ Not more than 10 gallons are used in a single smoke compartment outside a storage cabinet. ❑ Dispensers are not installed over or adjacent to an ignition source. ❑ If the floor is carpeted, the building is fully sprinklered. CFR 403.744, 418.100, 460.72, 482.41, 483.70, 483.623, 485.623				

Area	Automatic Sprinkler	Separation	N/A
a. Boiler and Fuel-Fired Heater Rooms			
c. Laundries (greater than 100 sq feet)			
d. Repair, Maintenance and Paint Shops			
e. Laboratories (if classified a Severe Hazard - see K31)			
f. Combustible Storage Rooms/Spaces (over 50 and less than 100 sq feet)			
g. Trash Collection Rooms			
i. Soiled Linen Rooms			
m. Combustible Storage Rooms/Spaces (over 100 sq feet)			

Describe the floor and zone locations of hazardous areas that are deficient in REMARKS.

Area	Automatic Sprinkler	Separation	N/A
L. Gift Shop storing hazardous quantities of combustibles			

ID PREFIX		MET	NOT MET	N/A	REMARKS
K211	2000 NEW Where Alcohol Based Hand Rub (ABHR) dispensers are installed: ❑ The corridor is at least 6 feet wide ❑ The maximum individual fluid dispenser capacity shall be 1.2 liters (2 liters in suites of rooms) ❑ The dispensers shall have a minimum spacing of 4 ft from each other ❑ Not more than 10 gallons are used in a single smoke compartment outside a storage cabinet. ❑ Dispensers are not installed over or adjacent to an ignition source. ❑ If the floor is carpeted, the building is fully sprinklered. CFR 403.744, 418.100, 460.72, 482.41, 483.70, 483.623, 485.623				
	EXIT AND EXIT ACCESS				
K32	Not less than two exits, remote from each other, are provided for each floor or fire section of the building. Only one of these two exits may be a horizontal exit. 18.2.4.1, 18.2.4.2, 19.2.4.1, 19.2.4.2				
	EXITS AND EGRESS				
K34	Stairways and smokeproof towers used as exits are in accordance with 7.2. 18.2.2.4, 19.2.2.3, 19.2.2.4				
K35	Capacity of exits in number of persons per unit of exit width is in accordance with 7.3. 18.2.3.1, 19.2.3.1				
K36	Travel distance (exit access) to exits are in accordance with 7.6. 18.2.6, 19.2.6				
K37	2000 EXISTING Existing dead-end corridors shall be permitted to be continued to be used if it is impractical and unfeasible to alter them so that exists are accessible in not less than two different directions from all points in aisles, passageways, and corridors. 19.2.5.10				

DEPARTMENT OF HEALTH & HUMAN SERVICES
Centers for Medicare & Medicaid Services
7500 Security Boulevard, Mail Stop S2-12-25
Baltimore, Maryland 21244-1850

Center for Medicaid and State Operations/Survey and Certification Group

Ref: S&C-07-01

DATE: **November 1, 2006**

TO: State Survey Agency Directors
State Fire Authorities

FROM: Director
Survey and Certification Group

SUBJECT: Provisions of the Final Rule regarding Adoption of New Fire Safety Requirements for the Use of Alcohol Based Hand Rubs (ABHRs) and Installation of Battery Powered Smoke Alarms

Letter Summary

- This letter highlights the final rule concerning fire safety requirements for Hospitals, Ambulatory Surgical Centers, Nursing Homes, Religious Non-Medical Health Care Institutions, Programs of All-Inclusive Care for the Elderly (PACE) Facilities, Critical Access Hospitals, and Intermediate Care Facilities for the Mentally Retarded.
- Regarding ABHRs, the final rule clarifies terminology and adds a requirement for maintenance in accordance with manufacturer's recommendations.
- Regarding battery powered smoke alarms, the final rule changed terminology and defined the terms "common areas" and "fully sprinklered." The maintenance requirements were modified to include manufacturer's recommendations.

This memorandum notifies States and the Centers for Medicare & Medicaid Services' (CMS) regional offices of the September 22, 2006 publication of the final rule entitled: *"Medicare and Medicaid Programs; Fire Safety Requirements for certain Health Care Facilities; Amendment"* (*Federal Register* Vol. 70, No. 184, Page 55326). A copy of the regulation is attached to this memorandum.

Previously, CMS provided guidance concerning the use of ABHRs and smoke alarms in two Survey and Certification letters (S&C-05-25 and S&C-05-33) which described the requirements of the interim final rule published on March 25, 2005.

- ABHR Dispensers must be installed in a manner that adequately protects against inappropriate access.

Page 2 – State Survey Agency Directors and State Fire Authorities

The final rule adopts the substance of the April 15, 2004 tentative interim amendment (TIA) on the use of ABHR Solutions, which was published by the National Fire Protection Association (NFPA) as an amendment to the 2000 edition of the Life Safety Code. This amendment allows certain health care facilities to place ABHR dispensers in egress corridors under certain specified conditions.

The final rule also requires that nursing facilities that are not fully sprinklered at a minimum install battery-powered single station smoke alarms in resident and common areas if the facility does not have system-based smoke detectors in those areas. This final rule confirms as final the provisions of the March 25, 2005 interim final rule with changes and responded to public comments.

Although the final rule confirms for the most part the provisions of the interim final rule of March 25, 2005 several changes to the interim final rule were made. Those changes are highlighted below.

Alcohol Based Hand Rubs:

- The term "vulnerable populations" was deleted and the requirement now states: "The dispensers are installed in a manner that adequately protects against inappropriate access."
- A requirement was added that "The dispensers are maintained in accordance with manufacturer guidelines." Regular maintenance is seen as a crucial step in making sure that dispensers neither leak nor the contents spill. If the manufacturer does not have specific maintenance requirements, the facility is expected to develop their own policies and procedures to ensure that the dispensers neither leak nor the contents spill.

Smoke Alarms:

- Terminology was altered in the final regulation in response to public comments received. "Smoke detectors" are now termed "smoke alarms, "public areas" are now termed "common areas," "sprinklers installed throughout" is now termed "fully sprinklered," and "a hard wired smoke detection system" is now termed "system-based smoke detectors." Additionally, definitions of the terms "common areas" and "fully sprinklered" were added to the definitions section of the regulation at 42 CFR 483.5 (d) and (e).
- The requirement for testing, maintenance, and batter replacement was modified to be more specific about what is required. A facility is now required to "have a program for inspection, testing, maintenance, and battery replacement that conforms to the manufacturer's recommendations and that verifies correct operation of the smoke alarms." This should help ensure that smoke alarms are consistently functioning and we expect that this program would be included in the facility's own policies and procedures.

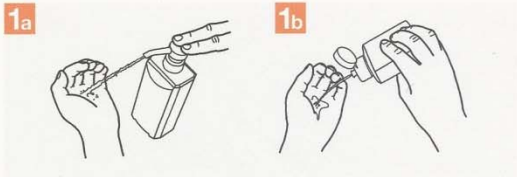
- ABHR Dispensers must be maintained in accordance with manufacturer guidelines.
- Regular maintenance to prevent leaks or spills that could lead to falls. Facilities must develop policies and procedures to ensure that the dispensers neither leak nor the contents spill.

How to Handrub?

RUB HANDS FOR HAND HYGIENE! WASH HANDS WHEN VISIBLY SOILED

Duration of the entire procedure: 20-30 seconds

1a



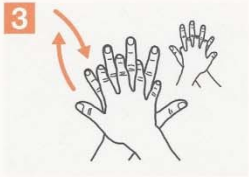
Apply a palmful of the product in a cupped hand, covering all surfaces;

1b

2

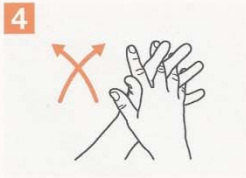
Rub hands palm to palm;

3



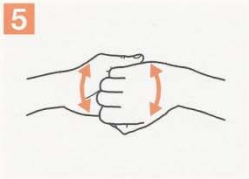
Right palm over left dorsum with interlaced fingers and vice versa;

4



Palm to palm with fingers interlaced;

5



Backs of fingers to opposing palms with fingers interlocked;

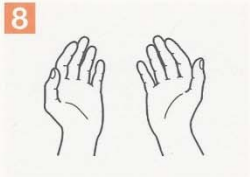
6

Rotational rubbing of left thumb clasped in right palm and vice versa;

7

Rotational rubbing, backwards and forwards with clasped fingers of right hand in left palm and vice versa;

8



Once dry, your hands are safe.

World Health Organization | Patient Safety — A World Alliance for Safer Health Care | SAVE LIVES Clean Your Hands

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WHO acknowledges the Hôpitaux Universitaires de Genève (HUG), in particular the members of the Infection Control Programme, for their active participation in developing this material.

May 2009

MINNESOTA PUBLIC SAFETY
STATE FIRE MARSHAL
EST. 1905

THE END

Thank You!

Questions?

Documentation

REMEMBER

If you didn't document it.

It didn't happen!

THANK YOU!