opener, or integral combination lock. All hardware shall comply with Section 1010.1.9.6.

Subp. 1c. **IFC section 1010.1.9.4.** IFC section 1010.1.9.4 is amended to read as follows:

1010.1.9.4 Locks and latches. Locks and latches shall be permitted to prevent operation of doors where any of the following exists:

1. Places of detention or restraint.

2. In buildings in occupancy Group A having an occupant load of 300 or less, in buildings in occupancy Groups B, F, M, and S and in places of religious worship, the main exterior door or doors are permitted to be equipped with key-operated locking devices from the egress side, provided:

2.1 The locking device is readily distinguishable as locked.

2.2 A readily visible durable sign is posted on the egress side on or adjacent to the door stating: THIS DOOR TO REMAIN UNLOCKED WHEN BUILDING IS OCCUPIED. The sign shall be in letters 1 inch (25 mm) high on a contrasting background.

2.3 The use of the key-operated locking device is revocable by the fire code official for due cause.

3. Where egress doors are used in pairs, approved automatic flush bolts shall be permitted to be used, provided that the door leaf having the automatic flush bolts has no doorknob or surface-mounted hardware.

4. Doors from individual dwelling or sleeping units of Group R occupancies having an occupant load of ten or less are permitted to be equipped with a

night latch, dead bolt, or security chain, provided such devices are openable from the inside without the use of a key or tool.

5. Fire doors, after the minimum elevated temperature has disabled the unlatching mechanism in accordance with listed fire door test procedures.

6. Doors serving roofs not intended to be occupied shall be permitted to be locked preventing entry to the building from the roof.

7. Delayed egress locks, installed and maintained in conformance with Section 1010.1.9.8.

8. Controlled egress doors installed and maintained in conformance with Section 1010.1.9.7.

9. Electrically locked egress doors installed and maintained in conformance with Section 1010.1.9.9 or 1010.1.9.10.

10. In rooms, other than detention cells, where occupants are being restrained for safety or security reasons, special detention arrangements that comply with the requirements of Section 1010.1.11 are permitted.

11. Means of egress stairway doors, installed and maintained in conformance with Section 1010.1.9.12.

Subp. 1d. **IFC section 1010.1.9.7.** IFC section 1010.1.9.7 is amended to read:

1010.1.9.7 Controlled egress doors in Groups I-1, I-2, R-3, and R-4 occupancies. Controlled egress door locking systems, including electromechanical locking systems and electromagnetic locking systems, shall be permitted in Groups I-1, I-2, R-3, and R-4 occupancies when a person's clinical needs require their containment. Controlled egress doors shall be permitted in these occupancies when the building is equipped throughout with an approved automatic sprinkler system

in accordance with Section 903.3.1.1 and an approved automatic smoke detection system installed in accordance with Section 907. Electric locking systems and controlled egress doors shall comply with the requirements in items 1 through 11 below.

1. The egress control locks shall unlock upon actuation of either the automatic sprinkler system or the automatic smoke detection system within the means of egress served by the locked area.

2. The egress control locks shall unlock upon loss of power controlling the lock or lock mechanism.

3. The egress control locking system shall have the capability of being unlocked by a signal or switch from the fire command center, a nursing station, or other approved location. The signal or switch shall directly break power to the lock.

4. A building occupant shall not be required to pass through more than one door equipped with a controlled egress lock before entering an exit.

5. The procedures for the operations of the unlocking system shall be described and approved as part of the emergency planning and preparedness required by Chapter 4.

6. All clinical staff shall have the keys, codes, or other means necessary to operate the controlled egress locking devices or systems.

7. Emergency lighting shall be provided at both sides of a door equipped with a controlled egress locking device.

8. 24-hour resident or patient supervision is provided within the secured area.

9. The controlled egress locking devices are designed to fail in the open position.

10. Floor levels within the building or portion of the building with controlled egress locking devices shall be divided into at least two compartments by smoke barriers meeting the requirements of the Minnesota Building Code.

11. The controlled egress door locking system units shall be listed in accordance with UL 294.

Exceptions to items 1 through 11:

1. Items 1 through 4 shall not apply to doors to areas occupied by persons who, 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 egress control system is utilized to reduce the risk of child abduction from nursery and obstetric areas of a Group I-2 hospital.

3. Item 10 shall not apply to existing Group R-3 or R-4, Condition 1 occupancies where all of the following conditions apply: (a) the construction of smoke barrier compartmentation is not practical; (b) existing sleeping rooms are provided with smoke-tight construction; and (c) existing sleeping rooms have an emergency escape and rescue opening complying with Section 1030.

Subp. 2. **IFC sections 1010.1.9.8 and 1010.1.9.8.1.** IFC sections 1010.1.9.8 and 1010.1.9.8.1 are amended to read:

1010.1.9.8 Delayed egress door locks. Delayed egress locking systems shall be permitted to be installed on doors serving the following occupancies in buildings that are equipped throughout with an automatic sprinkler system in accordance

with Section 903.3.1.1 or an approved smoke detection system installed throughout the means of egress in accordance with Section 907:

1. Group B, F, I, M, R, S, and U occupancies.

2. Group E in locations where the means of egress does not serve an assembly use area.

Exception: Delayed egress locking systems shall be permitted to be installed on exit or exit access doors, other than the main exit or exit access door, serving a courtroom in buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1.

1010.1.9.8.1 Delayed egress locking system. The delayed egress locking system shall be installed and operated in accordance with one of the following:

1. The delay electronics of the delayed egress locking system shall deactivate upon actuation of the automatic sprinkler system or automatic fire detection system, allowing immediate free egress.

2. The delay electronics of the delayed egress locking system shall deactivate upon loss of power controlling the lock or lock mechanism, allowing immediate free egress.

3. The delayed egress locking system shall have the capability of being deactivated at the fire command center and other approved locations.

4. An attempt to egress shall initiate an irreversible process that shall allow egress in not more than 15 seconds when a physical effort to exit of not more than 15 pounds (67 N) is applied to the egress side door hardware for not more than one second. Initiation of the irreversible process shall activate an audible signal in the vicinity of the door. Once

the delay electronics have been deactivated from an approved location, relocking the delay electronics shall be by manual means only.

Exception to item 4. Where approved, a delay of not more than 30 seconds is permitted on a delayed egress door.

5. The egress path from any point shall not pass through more than one delayed egress locking system.

Exceptions to item 5.

1. In Group I-2 or I-3 occupancies, the egress path from any point in the building shall pass through not more than two delayed egress locking systems provided that the combined delay does not exceed 30 seconds.

2. In Group I-1 or I-4 occupancies, the egress path from any point in the building shall pass through not more than two delayed egress locking systems provided that the combined delay does not exceed 30 seconds and the building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1.

6. A sign shall be provided on the door and shall be located above and within 12 inches (305 mm) of the door exit hardware.

6.1 For doors that swing in the direction of egress, the sign shall read: PUSH UNTIL ALARM SOUNDS. DOOR CAN BE OPENED IN 15 [30] SECONDS.

6.2 For doors that swing in the opposite direction of egress, the sign shall read: PULL UNTIL ALARM SOUNDS. DOOR CAN BE OPENED IN 15 [30] SECONDS.

6.3 The sign shall comply with the visual character requirements in ICC A117.1.

Exception to item 6. Where approved, in Group I occupancies, the installation of a sign is not required where care recipients, because of clinical needs, require restraint or containment as part of the function of the treatment area.

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

8. The delayed egress locking system units shall be listed in accordance with UL 294.

Subp. 2a. **IFC section 1010.1.9.12.** IFC section 1010.1.9.12 is amended by revising exception 3 to read as follows:

3. In stairways serving not more than four stories, doors are permitted to be locked from the side opposite the egress side. The exit door is permitted to be locked but shall be openable from the egress side.

Subp. 3. **IFC section 1010.1.** IFC section 1010.1 is amended by adding subsections to read:

1010.1.11 Special detention arrangements. Special detention arrangements meeting the requirements of Sections 1010.1.11.1 through 1010.1.11.4 are permitted for rooms, other than cells, where the occupants are being restrained for safety or security reasons. The use of Sections 1010.1.11.1 through 1010.1.11.4 may be revoked by the fire code official for due cause.

1010.1.11.1 Locking hardware. Locking devices shall release upon any of the following conditions:

1. Activation of the automatic sprinkler system.

2. Activation of any automatic fire detection device.

3. Activation of an automatic fire alarm system.

4. Loss of electrical power to the locking device or the fire alarm system.

5. Activation of the fire alarm trouble signal.

6. Operation of a manual switch located in an approved location.

All locking devices shall be designed to fail in the open position. Following the release of the locking devices for any of the conditions specified in Items 1 through 6, relocking the devices shall be by manual means only at the door.

1010.1.11.2 Fire-extinguishing system. When special detention arrangements are used, the room or area being secured shall be protected with quick-response sprinklers.

1010.1.11.3 Fire alarm and detection. When special detention arrangements are used, the room or area and spaces between the room or area and an exterior exit door shall be protected with automatic smoke detection connected to the building's fire alarm system. If the walls of the room or area do not extend to the ceiling, automatic smoke detection can be provided in the adjacent room or area, provided that there are no substantial obstructions to delay activation of the smoke detection.

1010.1.11.4 Door swing. Doors separating detention rooms from other spaces must swing in the direction of egress travel from the detention room.

7511.1011 SECTION 1011, STAIRWAYS.

Subpart 1. **IFC section 1011.14.** IFC section 1011.14 is amended to read:

1011.14 Alternating tread devices. Alternating tread devices are limited to an element of a means of egress in buildings of Groups F, H, and S from a mezzanine not more than 250 square feet (23 m^2) in area and which serves not more than five occupants; and in buildings

of Groups I-3 from a guard tower, observation station, or control room not more than 250 square feet (23 m^2) in area and for access to unoccupied roofs. Access to mechanical equipment or appliances on a roof shall be in accordance with IBC Section 1208.3.1 and the Minnesota Mechanical Code.

(IFC sections 1011.14.1, 1011.14.2, and the exception still apply.)

Subp. 2. **IFC section 1011.15.** IFC section 1011.15 and all subsections are deleted in their entirety and replaced with the following:

1011.15 Ships ladders. Ships ladders constructed as required for permanent stairs in accordance with the Minnesota Mechanical Code, shall be permitted to be used as a means of egress component at the following locations:

1. Ships ladders are permitted to be used in Group I-3 occupancies for means of egress at control rooms or elevated facility observation stations not more than 250 square feet (23 m^2) in floor area.

2. Ships ladders are permitted to be used as a component for means of egress at recessed or elevated floors or platforms when the area served has an occupant load of five or fewer, and the space meets all of the following criteria:

2.1 access to the area served is limited to building facilities staff, maintenance staff, employees, or other authorized personnel;

2.2 required access to the area served is limited and periodic;

2.3 the area served is used for building maintenance service functions, or for equipment access or monitoring;

2.4 the area served is not required to have a second means of egress by other provisions of this code; and

2.5 the area served is not classified as a Group H occupancy.

3. Ships ladders are permitted to be used for access to unoccupied spaces in accordance with the Minnesota Mechanical Code.

7511.1013 [Renumbered 7511.1015]

7511.1015 SECTION 1015, GUARDS.

Subpart 1. **IFC section 1015.2 Where required.** IFC section 1015.2 is amended by adding item 8 to the exception as follows:

8. On bleachers 55 inches or less in height, in accordance with the Minnesota Bleacher Safety Act, Minnesota Statutes, section 326B.112.

Subp. 2. **IFC section 1015.3 Height.** IFC section 1015.3 is amended by modifying exception 4 to read as follows:

4. The guard height in assembly seating areas shall be in accordance with section 1029.17 and the Minnesota Bleacher Safety Act, Minnesota Statutes, section 326B.112.

Subp. 2a. **IFC section 1015.6 Mechanical equipment, systems, and devices.** IFC section 1015.6 is amended to read as follows:

1015.6 Mechanical equipment, systems, and devices. Guards shall be designed and installed in accordancc with the Minnesota Mechanical Code.

Subp. 3. **IFC section 1015.8.** IFC section 1015.8 is amended to read:

1015.8 Window openings. In occupancy groups R-1, R-2, R-3, one- and two-family, multiple-family dwellings, and townhouses, where the lowest part of the opening of an operable window is located more than 72 inches (1,829 mm) above the finished grade or other surface below, the lowest part of the window opening shall be at a height not less than 36 inches (914 mm) above the finished floor surface of the room in which the window is located. Operable sections of windows shall not permit openings that allow passage of a

4-inch-diameter (102 mm) sphere where such openings are located within 36 inches (914 mm) of the finished floor.

Exceptions:

1. Operable windows where the lowest part of the opening is located more than 75 feet (22,860 mm) above the finished grade or other surface below and that are provided with window fall-prevention devices that comply with ASTM F 2006.

2. Windows whose openings will not allow a 4-inch-diameter (102 mm) sphere to pass through the opening when the window is in its largest opened position.

3. Openings that are provided with window fall-prevention devices that comply with ASTM F 2090.

4. Windows that are provided with window opening control devices that comply with section 1015.8.1.

5. Replacement windows for occupancy groups R-1, R-2, R-3, one- and two-family, multifamily dwellings, and townhouses located on or below the third story above grade plane.

(Subsection 1015.8.1 remains unchanged.)

7511.1017 [Renumbered 7511.1018]

7511.1018 SECTION 1018, AISLES.

IFC section 1018 and all subsections are deleted in their entirety and replaced with the following:

SECTION 1018

AISLES

1018.1 Aisles and aisle accessways. Aisles and aisle accessways serving as a portion of the exit access in the means of egress system shall comply with the requirements of this section. Aisles and aisle accessways shall be provided from all occupied portions of the exit access. Aisles and aisle accessways serving assembly areas, other than seating at tables, shall comply with Section 1029. Aisles and aisle accessways serving reviewing stands, grandstands, and bleachers shall comply with Section 1029.

1018.2 Width determination. Where tables or counters are served by fixed seats, the width of the aisle or aisle accessway shall be measured from the back of the seat. Where seating is located at a table or counter and is adjacent to an aisle or aisle accessway, the measurement of required clear width of the aisle or aisle accessway shall be made to a line 19 inches (483 mm) away from and parallel to the edge of the table or counter. The 19-inch (483 mm) distance shall be measured perpendicular to the side of the table or counter. In the case of other side boundaries for aisle or aisle accessways, the clear width shall be measured to walls, tread edges, or other obstructions. The required width of aisles and aisle accessways shall be unobstructed.

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

1018.2.1 Minimum aisle accessway width. Aisle accessways not required to be accessible by the Minnesota Accessibility Code, Minnesota Rules, chapter 1341, shall provide a minimum 12 inches (305 mm) of width, plus 0.5 inch (12.7 mm) of width for each additional 1 foot (305 mm), or fraction thereof, beyond 12 feet (3, 658 mm) of aisle accessway length.

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

1018.2.2 Minimum aisle width. The minimum clear width shall be determined by Section 1005.1 for the occupant load served, but shall not be less than 36 inches (914 mm).

Exception: Nonpublic aisles serving fewer than 50 people, and that are not required to be accessible by the Minnesota Accessibility Code, Minnesota Rules, chapter 1341, need not exceed 28 inches (711 mm) in width.

1018.3 Length.

1018.3.1 Aisle accessway. The length of travel along the aisle accessway shall not exceed 30 feet (9,144 mm) to an aisle or exit access doorway.

1018.3.2 Aisle. The length of travel along an aisle or combination aisle accessway and aisle to a point where a person has a choice of two or more paths of egress travel to separate exits or exit access doorways shall not exceed that permitted by Section 1006.2.1 for common path of egress travel.

7511.1018 [Renumbered 7511.1020]

7511.1020 SECTION 1020, CORRIDORS.

Subpart 1. **IFC Table 1020.1.** IFC Table 1020.1 is amended as follows:

TABLE 1020.1

CORRIDOR FIRE-RESISTANCE RATING

		REQUIRED FIRE-RESISTANCE RATING (hours)	
OCCUPANCY	OCCUPANT LOAD SERVED BY CORRIDOR	Without sprinkler system	With sprinkler system[c]

H-1, H-2, H-3	All	Not permitted		1
H-4, H-5	Greater than 30	Not permitted		1
A, B, E, F, M, S, U	Greater than 30	1		0
R	Greater than 10	1		0.5[c]/1[d]
I-2[a]	All	Not permitted		0
I-1, I-3	All	Not permitted		1[b]
I-4	All	1		0

[a] For requirements for occupancies in Group I-2, see IBC Sections 407.2 and 407.3.

[b] For a reduction in the fire-resistance rating for occupancies in Group I-3, see IBC Section 408.8.

[c] Buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2, where allowed.

[d] Group R-3 and R-4 buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.3. See Section 903.2.8 for occupancies where automatic sprinkler systems are permitted in accordance with Section 903.3.1.3.

Subp. 2. **IFC section 1020.6.** IFC section 1020.6 is amended by modifying the exceptions to read as follows:

Exceptions:

1. Foyers, lobbies, or reception rooms constructed as required for corridors shall not be construed as intervening rooms if the aggregate area of these spaces does not exceed 1,000 square feet per floor.

2. Foyers, lobbies, or reception rooms that are more than 1,000 square feet per floor in aggregate area and other rooms or spaces that are constructed as required for corridors

shall not be construed as intervening rooms when the rooms or spaces meet the following:

(a) The spaces are not occupied as dwelling units, sleeping units, incidental uses or hazardous uses.

(b) The rooms, spaces, or corridors are protected by an automatic smoke detection system that initiates alarm notification devices in all normally occupied rooms or spaces that use the corridor for a means of egress.

(c) The room or space is arranged so that it does not obstruct access to the required exits.

(d) Group R occupancies shall be provided with an automatic sprinkler system throughout to allow the use of exception #2.

3. Enclosed elevator lobbies as permitted by Section 1016.2, item 1, shall not be constructed as intervening rooms.

7511.1022 [Renumbered 7511.1023]

7511.1023 SECTION 1023, INTERIOR EXIT STAIRWAYS AND RAMPS.

IFC section 1023.5 is amended to read as follows:

1023.5 Penetrations. Penetrations into or through interior exit stairways and ramps are prohibited except for the following:

1. Equipment and ductwork necessary for independent ventilation or pressurization.

2. Fire protection systems.

3. Security systems that serve the exit stairway or ramp.

4. Wiring that serves the exit stairway or ramp.

5. Two-way communication systems that serve the exit stairway or ramp.

6. Electrical raceway for fire department communication systems.

7. Electrical raceway serving the interior exit stairway or ramp and terminating in a steel box not exceeding 16 square inches (0.010 m^2).

Such penetrations shall be protected in accordance with Section 714 of the Building Code. There shall not be penetrations or communication openings, whether protected or not, between adjacent interior exit stairways and ramps or exit passageways.

(The exception to Section 1023.5 is deleted.)

7511.1023 [Renumbered 7511.1024]

7511.1024 SECTION 1024, EXIT PASSAGEWAYS.

IFC section 1024.6 is amended to read as follows:

1024.6 Penetrations. Penetrations into or through an interior exit passageway are prohibited except for the following:

1. Equipment and ductwork necessary for independent ventilation or pressurization.

2. Fire protection systems.

3. Security systems that serve the exit passageway.

4. Wiring that serves the exit passageway.

5. Two-way communication systems that serve the exit passageway.

6. Electrical raceway for fire department communications systems.

7. Electrical raceway serving the exit passageway and terminating in a steel box not exceeding 16 square inches (0.010 m^2).

Such penetrations shall be protected in accordance with Section 714 of the Building Code. There shall not be penetrations or communication openings, whether protected or not, between adjacent interior exit stairways and ramps or adjacent exit passageways.

(The exception to Section 1024.6 is deleted.)

7511.1028 [Renumbered 7511.1029]

7511.1029 SECTION 1029, ASSEMBLY.

Subpart 1. **IFC section 1029.1.1.** IFC section 1029.1.1 is amended to read as follows:

1029.1.1 Bleachers. Bleachers, grandstands, and folding and telescopic seating, that are not building elements, shall comply with International Code Council (ICC) 300, with the following amendments to ICC 300:

a. ICC 300 Section 404.5 is amended by adding an exception as follows:

Exception: Aisles shall not be required to be more than 66 inches (1,676 mm) in width when the following are satisfied:

1. the seating area served by such aisles is composed entirely of bleachers;

2. the row-to-row dimension is 28 inches (71 cm) or less; and

3. front egress is not limited.

b. ICC 300 Section 405.1 is amended to read as follows:

405.1 Aisles. The minimum width of aisles shall be in accordance with Section 404.5, but not less than that required by this section. An aisle is not required in seating facilities where all of the following conditions exist:

1. Seats are without backrest.

2. The rise from row to row does not exceed 6 inches (152 mm) per row.

Exception: Bleachers 55 inches or less in height.

3. The row-to-row spacing does not exceed 28 inches (711 mm) unless the seat boards and footboards are at the same elevation.

4. The number of rows does not exceed 16 rows in height.

5. The first seat board is not more than 12 inches (305 mm) above the ground floor or a cross aisle.

Exception: Bleachers 55 inches or less in height.

6. Seat boards have a continuous flat surface.

7. Seat boards provide a walking surface with a minimum width of 11 inches (279 mm).

8. Egress from seating is not restricted by rails, guards, or other obstructions.

c. ICC 300 Section 405.6 is amended by adding an exception as follows:

3. Aisles serving bleachers in compliance with Section 404.5.

d. ICC 300 Section 408.1, item 1, is amended by modifying the exceptions to read as follows:

Exceptions:

1. Tiered seating is not required to have a guard if: (a) the tiered seating is located adjacent to a wall; and (b) the space between the wall and the tiered seating is less than 4 inches (102 mm).

2. In accordance with the Minnesota Bleacher Safety Act, Minnesota Statutes, section 326B.112:

(a) bleachers must have vertical perimeter guards or other approved guards that address climbability and are designed to prevent accidents; and

(b) guards are not required on bleachers 55 inches (1,397 mm) and less in height.

e. ICC 300 Section 408.3 is amended to read as follows:

408.3 Guard design. Guards and their attachment shall be designed to resist the loads indicated in Section 303. Bleachers must have vertical perimeter guards or other approved guards that address climbability and are designed to prevent accidents, in accordance with the Minnesota Bleacher Safety Act, Minnesota Statutes, section 326B.112.

f. ICC 300 Chapter 5 is deleted and replaced with the following:

All bleachers or bleacher open spaces over 55 inches (1,397 mm) above grade or the floor below, and all bleacher guardrails, if any part of the guardrail is over 30 inches (762 mm) above grade or the floor below, must be certified to conform with the safety requirements contained in Minnesota Statutes, section 326B.112.

(IFC Section 1029.1.1.1 still applies.)

Subp. 2. **IFC section 1029.6.** IFC section 1029.6 is amended by adding a section to read:

1029.6.4 Width of means of egress for bleacher facilities. Aisles for bleachers shall not be required to be more than 66 inches (167 cm) in width when calculated in accordance with Section 1029.6.1 or 1029.6.3 when the following conditions are satisfied:

1. the seating area served by such aisles is composed entirely of bleachers;

2. the row-to-row dimension is 28 inches (71 cm) or less; and

3. front egress is not limited.

Subp. 3. **IFC section 1029.9.5.** IFC section 1029.9.5 is amended by adding an exception to read:

5. Aisles serving bleachers in compliance with Section 1029.6.4.

Subp. 4. **IFC section 1029.17.** IFC section 1029.17 is amended by adding an exception to read:

Exception: In accordance with the Minnesota Bleacher Safety Act, Minnesota Statutes, section 326B.112:

1. guards are not required on bleachers 55 inches and less in height; and

2. bleachers must have vertical perimeter guards or other approved guards that address climbability and are designed to prevent accidents.

(Subsections 1029.17.1 through 1029.17.4 remain unchanged.)

7511.1029 [Renumbered 7511.1030]

7511.1030 SECTION 1030, EMERGENCY ESCAPE AND RESCUE.

Subpart 1. **IFC section 1030.1.** IFC section 1030.1 is amended to read as follows:

1030.1 General. In addition to the means of egress required by this chapter, emergency escape and rescue openings shall be provided in Group R occupancies as follows. Basements and sleeping rooms below the fourth story above grade plane shall have at least one exterior emergency escape and rescue opening in accordance with this section. Where basements contain one or more sleeping rooms, emergency escape and rescue openings shall be required in each sleeping room, but shall not be required in adjoining areas of the basement. Such openings shall open directly into a public way or to a yard or court that opens to a public way.

Exceptions:

1. Basements with a ceiling height of less than 80 inches (2,032 mm) and not used for purposes other than mechanical equipment or storage shall not be required to have emergency escape and rescue openings.

2. Emergency escape and rescue openings are not required from basements or sleeping rooms that have an exit door or exit access door that opens directly into a public way or to a yard, court, or exterior exit balcony that opens to a public way.

3. Basements without habitable spaces and having not more than 200 square feet (18.6 m^2) in floor area shall not be required to have emergency escape and rescue openings.

4. Emergency escape and rescue openings shall not be required under the following conditions:

A. the building is equipped throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2; and

B. the means of egress system complies without utilizing Section 1006.3.3.

5. In other than Group R-3 occupancies, sleeping rooms provided with a door to a fire-resistance-rated corridor having access to two remote exits in opposite directions.

6. The emergency escape and rescue opening is permitted to open onto a balcony within an atrium in accordance with the requirements of IBC Section 404, provided the balcony provides access to an exit and the dwelling unit or sleeping unit has a means of egress that is not open to the atrium.

7. High-rise buildings in accordance with IBC Section 403.

8. Basements in Group R-3 occupancies used only to house mechanical equipment and not exceeding total floor area of 200 square feet (18.58 m^2).

Subp. 2. [See repealer.]

Subp. 3. [See repealer.]

7511.1030 [Renumbered 7511.1031]

7511.1031 SECTION 1031, MAINTENANCE OF THE MEANS OF EGRESS.

Subpart 1. **IFC section 1031.2.** IFC section 1031.2 and subsection 1031.2.1 are amended and subsection 1031.2.3 is added to read as follows:

1031.2 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.

1031.2.1 Security devices and egress locks. Security devices affecting means of egress shall be subject to approval of the fire code official. Security devices and locking arrangements in the means of egress that restrict, control, or delay egress shall be installed and maintained as required by this chapter or IFC Chapter 11, as amended.

(IFC section 1031.2.2 remains unchanged.)

1031.2.3 Inspection and testing. Locking arrangements in the means of egress that restrict, control, or delay egress, including locking arrangements and devices in accordance with Sections 1010.1.9.7 through 1010.1.9.10, shall be tested as follows:

1. The primary release functions shall be tested monthly for operability.

2. Fire alarm and sprinkler system interconnects and other failsafe release functions shall be tested at least annually for operability.

3. Testing shall be done by individuals who can demonstrate knowledge and understanding of the operating components of the door being tested.

4. Deficiencies shall be corrected without delay. Written records of inspection and testing shall be kept and available to the fire code official.

Subp. 2. **IFC section 1031.3.** IFC section 1031.3 is amended to read:

1031.3 Obstructions. A means of egress shall be free from obstructions that would prevent its use, including the accumulation of snow and ice. Means of egress shall remain free of any material or matter where its presence would obstruct or render the means of egress hazardous. No combustible storage is allowed in corridors or exit stairs.

Subp. 3. **IFC section 1031.7.** IFC section 1031.7 is amended to read:

1031.7 Emergency escape and rescue openings. Required emergency escape and rescue openings shall be operational from the inside of the room without the use of keys or tools. Bars, grilles, grates, or similar devices are allowed to be placed over emergency escape and rescue openings provided the minimum net clear opening size complies with this code and such devices shall be releasable or removable from the inside without the use of a key, tool, or force greater than that which is required for normal operation of the escape and rescue opening.

Exception: Window fall protection required by the building code.

Subp. 4. **IFC section 1031.10.2.** IFC section 1031.10.2 is amended to read:

1031.10.2 Power test. For battery-powered emergency lighting, a power test of the emergency lighting equipment shall be completed annually. The power test shall operate the emergency lighting for a minimum of 30 minutes. All emergency lighting shall remain sufficiently illuminated for the duration of the test.

7511.1103 SECTION 1103, FIRE SAFETY REQUIREMENTS FOR EXISTING BUILDINGS.

Subpart 1. **IFC section 1103.1.** IFC section 1103.1 is amended to read:

1103.1 Required construction. Existing buildings shall comply with the minimum provisions specified in Sections 1103.2 through 1106.1.2.

Table 1103.1 is deleted.

Subp. 2. **IFC section 1103.2.** IFC section 1103.2 is deleted.

Subp. 3. **IFC section 1103.3.** IFC section 1103.3 and all subsections are deleted.

Subp. 4. **IFC section 1103.4.** IFC section 1103.4 and all subsections are deleted entirely and replaced with the following:

1103.4 Vertical openings. Interior vertical shafts, including stairways, elevator hoistways, and service and utility shafts, that connect two or more stories of a building, shall be enclosed or protected as specified in Section 1103.4.1 and Table 1103.4.

1103.4.1 Fire-resistive-rated construction. Where one-hour fire-resistive rated construction is required by IFC Chapter 11, as amended, it includes equivalent ratings for openings in that construction. When openings are required to be protected, opening protectives shall be maintained self-closing or automatic-closing by smoke detection. Existing fusible-link-type automatic door-closing devices are permitted if the fusible link rating does not exceed 135° F (57° C).

TABLE 1103.4

VERTICAL OPENING PROTECTION REQUIRED

OCCUPANCY CLASSIFICATION	CONDITIONS	PROTECTION REQUIRED
Group I	Vertical openings connecting two or more stories	1-hour protection
All, other than Group I	Vertical openings connecting two stories	No protection required[a,b]
All, other than Group I	Vertical openings connecting three to five stories	1-hour protection or automatic sprinklers throughout[a,b]
All, other than Group I	Vertical openings connecting more than five stories	1-hour protection[a,b]
All	Mezzanines open to the floor below	No protection required[a,b]
All, other than Group I	Atriums and covered mall buildings	1-hour protection or automatic sprinklers throughout

All, other than Groups B and M	Escalator openings connecting four or less stories in a sprinklered building. Openings must be protected by a draft curtain and closely spaced sprinklers in accordance with NFPA 13.	No protection required
Group B and M	Escalator openings in a sprinklered building protected by a draft curtain and closely spaced sprinklers in accordance with NFPA 13.	No protection required

[a] Vertical opening protection is not required for Group R-3 occupancies.

[b] Vertical opening protection is not required for open parking garages and ramps.

Subp. 5. [See repealer.]

Subp. 6. **IFC section 1103.5.** IFC section 1103.5 and its subsections are deleted entirely and replaced with the following:

1103.5 Sprinkler systems. An automatic sprinkler system shall be provided in existing buildings in accordance with Sections 1103.5.1 through 1103.5.5.

1103.5.1 Reserved.

1103.5.2 Group I-2. An automatic sprinkler system shall be provided throughout existing Group I-2 fire areas. The sprinkler system shall be provided throughout the floor where the Group I-2 occupancy is located, and in all floors between the Group I-2 occupancy and the level of exit discharge, including the level of exit discharge.

1103.5.3 Basement access or sprinkler protection. An approved automatic sprinkler system shall be provided in the following occupancies located in basements when such areas exceed 2,500 square feet (232.3 m^2) in size and do not have 20 square feet (1.86 m^2) of opening entirely above the adjoining ground level in each 50 lineal feet (15,240 mm) or fraction thereof of exterior wall on at least one side of the building:

1. Group A occupancies used as commercial drinking and dining establishments.

2. Group A occupancies used as bowling alleys.

3. Group E occupancies used for student occupancy.

4. Group I occupancies.

5. Group R-1 and R-2 occupancies having dwelling units or guest rooms.

Openings required by this section shall have a minimum dimension of 30 inches (762 mm).

If any portion of the basement is located more than 75 feet (22.86 m) from required openings, the basement shall be provided with an approved automatic sprinkler system throughout.

1103.5.4 Pyroxylin plastics. An automatic sprinkler system shall be provided throughout existing buildings where cellulose nitrate film or pyroxylin plastics are manufactured, stored, or handled in quantities exceeding 100 pounds (45 kg). Vaults located within buildings for the storage of raw pyroxylin shall be protected with an approved automatic sprinkler system capable of discharging 1.66 gallons per minute per square foot (68 $L/mn/m^2$) over the area of the vault.

1103.5.5 Existing rubbish and linen chutes. Existing rubbish and linen chutes that connect three or more stories shall be protected with automatic sprinklers installed and maintained in conformance with Section 903.2.11.2.

Subp. 7. **IFC section 1103.7.** IFC section 1103.7 and its subsections are deleted entirely and replaced with the following:

1103.7 Fire alarm systems. An approved fire alarm system shall be installed in existing buildings and structures in accordance with Sections 1103.7.1 through 1103.7.6.1.

In buildings containing mixed occupancies that are designed as separated uses (see Section 102.14), fire alarm and detection systems need only be installed in those occupancies where required by this section.

In areas protected by an approved, supervised automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2, automatic fire detectors required by Section 1103.7 need not be provided. Where Section 1103.7 requires smoke detectors, such protection shall be installed.

1103.7.1 Group A, general. A fire alarm system shall be installed in accordance with Sections 1103.7.1 through 1103.7.1.3.1 in existing Group A occupancies having an occupant load of 300 or more.

1103.7.1.1 Exemptions for Group A. A fire alarm system is not required in Group A occupancies having the following conditions:

1. Assembly areas used solely for worship purposes.

2. A fire alarm system is not required when an approved automatic fire-sprinkler system is installed throughout the building.

3. Assembly uses located inside Group E occupancies shall have alarms as required for the Group E occupancy.

4. A-5 occupancies.

1103.7.1.2 Initiation. Initiation of the fire alarm system shall be by automatic means. Approved automatic fire detectors shall be installed in laundry rooms, boiler and furnace rooms, mechanical and electrical rooms, shops, kitchens, trash-collection rooms, storage rooms, and similar areas.

1103.7.1.3 Notification. The required fire alarm system shall activate an audible and visible notification appliance at a constantly attended location within the

building for the purposes of initiating emergency action. A presignal feature and positive alarm sequencing in accordance with NFPA 72 are permitted. Occupant notification shall be by means of voice announcements, either live or prerecorded, initiated by the person in the constantly attended location.

1103.7.1.3.1 Exemption for voice evacuation. Where no constantly attended location exists, an automatic fire alarm system providing a general evacuation signal or an approved emergency voice/alarm communications system is permitted.

1103.7.2 Group E, general. A fire alarm system shall be installed in accordance with Sections 1103.7.2 through 1103.7.2.4 in existing Group E occupancies having an occupant load of 50 or more.

1103.7.2.1 Exemption for single classroom. A fire alarm system is not required for a building with a maximum area of 1,000 square feet (93 m^2) that contains a single classroom and is located no closer than 20 feet (15,240 mm) from another building.

1103.7.2.2 Initiation. Initiation of the fire alarm system shall be by manual and automatic means. Approved automatic fire detectors shall be provided in laundry rooms, boiler and furnace rooms, mechanical and electrical rooms, shops, laboratories, kitchens, locker rooms, custodial closets, trash-collection rooms, storage rooms, lounges, and similar areas.

1103.7.2.2.1 Manual activation. In buildings protected throughout by an approved, automatic fire sprinkler system or having an approved fire alarm system equipped with corridor smoke detection, manual fire alarm boxes are only required in the main office and in a custodial area.

1103.7.2.3 Travel through adjoining rooms. Where the only means of egress travel from an interior room or rooms having an aggregate occupant load of more than ten occupants is through an adjoining or intervening room, automatic smoke detectors shall be installed throughout the common atmosphere through which the path of egress travel passes.

1103.7.2.3.1 Sprinkler protection. In buildings that are protected throughout by an approved automatic sprinkler system installed in accordance with Section 903.3.1.1, smoke detectors are not required in intervening or adjoining rooms.

1103.7.2.4 Notification. Activation of the fire alarm system or automatic sprinkler system shall initiate a general evacuation signal.

1103.7.3 Group I, general. A fire alarm system shall be installed in accordance with Sections 907.2.6 through 907.2.6.4.2 in existing Group I occupancies.

1103.7.4 Group R-1, general. A fire alarm system shall be installed in accordance with Sections 1103.7.4 through 1103.7.4.4.1 in existing Group R-1 occupancies where:

1. Any sleeping unit or dwelling unit is located two or more stories above the story containing the lowest level of exit discharge.

2. Any sleeping unit or dwelling unit is located more than one story below the highest level of exit discharge of exits serving the dwelling unit.

3. The building contains 20 or more guest rooms or dwelling units.

4. The building is used as a congregate living facility, dormitory, convent, monastery, fraternity, sorority, group home, or shelter and has an occupant load of 20 or more.

1103.7.4.1 Direct exits to exterior. A fire alarm system is not required in buildings that do not have interior corridors serving guest rooms and where each guest room

has an exit door opening directly to an exterior exit access that leads directly to the exits.

1103.7.4.2 Initiation. Initiation of the fire alarm system shall be by automatic means. Approved automatic fire detectors shall be provided in boiler and furnace rooms, shops, laundry rooms, mechanical and electrical rooms, trash-collection rooms, storage rooms, gift shops, locker rooms, and similar areas. Automatic smoke detectors shall be provided in all common areas and interior corridors serving as required means of egress.

1103.7.4.2.1 Sprinkler protection. System fire and smoke detectors are not required when an approved automatic fire-extinguishing system is installed in accordance with Section 903.3.1.1 or 903.3.1.2 and a manual fire alarm box is provided at a constantly attended location. When a constantly attended location is not provided the manual fire alarm box shall be provided at the main exit.

1103.7.4.3 Notification. Activation of the fire alarm system or automatic sprinkler system shall initiate a general evacuation signal.

1103.7.4.4 Guest room smoke alarms. Guest room smoke alarms required by Section 1103.8 shall not be connected to a fire alarm system.

1103.7.4.4.1 Annunciation allowed. Connection of such alarms for annunciation is permitted.

1103.7.5 Group R-2, general. A fire alarm system shall be installed in accordance with Sections 1103.7.5 through 1103.7.5.3 in existing Group R-2 occupancies where:

1. any sleeping unit or dwelling unit is located two or more stories above the story containing the lowest level of exit discharge;

2. any sleeping unit or dwelling unit is located more than one story below the highest level of exit discharge of exits serving the dwelling unit;

3. the building contains more than 16 sleeping units or dwelling units; or

4. the building is used as a congregate living facility, dormitory, convent, monastery, fraternity, sorority, group home, or shelter and has an occupant load of 20 or more.

1103.7.5.1 Direct exits to exterior. A fire alarm system is not required in buildings that do not have interior corridors serving guest rooms and where each dwelling unit has an exit door opening directly to an exterior exit access that leads directly to the exits.

1103.7.5.2 Initiation. Initiation of the fire alarm system shall be by automatic means. Approved automatic fire detectors shall be provided in boiler and furnace rooms, shops, laundry rooms, mechanical and electrical rooms, trash-collection rooms, storage rooms, and similar areas. Automatic smoke detectors shall be provided in all common areas and interior corridors serving as required means of egress.

1103.7.5.2.1 Sprinkler protection. System fire and smoke detectors are not required when an approved automatic fire-extinguishing system is installed throughout the building.

1103.7.5.3 Notification. Activation of the fire alarm system or automatic sprinkler system shall initiate a general evacuation signal.

1103.7.5.4 Dwelling unit smoke alarms. Dwelling unit smoke alarms required by Section 1103.8 shall not be connected to the building fire alarm system.

1103.7.5.4.1 Annunciation allowed. Connection of such alarms for annunciation is permitted.

1103.7.6 Audible alarms. Audible alarm notification appliances shall be provided and sound a distinctive sound that is not to be used for any purpose other than that of a fire alarm. The audible alarm notification appliances shall provide a sound pressure level of 15 decibels (dBA) above the average ambient sound level or 5 dBA above the maximum sound level having a duration of at least 60 seconds, whichever is greater, in every occupied space within the building. The maximum sound pressure level for audible alarm notification appliances shall be 110 dBA at the minimum hearing distance from the audible appliance. Where the average ambient noise is greater than 105 dBA, visible alarm notification appliances shall be provided in accordance with NFPA 72 and audible alarm notification appliances shall not be required.

1103.7.6.1 Maximum sound pressure. Fire alarm system audibility levels shall not exceed 35 dB above the average ambient sound level described in Section 907.5.2.1.1 or 35 dB above the peak ambient sound level. The maximum sound pressure level for audible alarm notification appliances shall be 110 dBA at the minimum hearing distance from the audible appliance. Where the average ambient noise is greater than 95 dBA, visible alarm notification appliances shall be provided in accordance with NFPA 72 and audible alarm notification appliances shall not be required.

Subp. 8. **IFC section 1103.8.** IFC section 1103.8 and its subsections are deleted entirely and replaced with the following:

1103.8 Single- and multiple-station smoke alarms. Single- and multiple-station smoke alarms shall be installed in existing Group I-1 and R occupancies in accordance with Table 1103.8.

TABLE 1103.8

SMOKE ALARM REQUIREMENTS

Condition:	Location:	Power Supply:	Interconnection Required:
Existing buildings that do not have any smoke alarms (same as new).	In hallways outside sleeping rooms. In sleeping rooms. On each level of the building and in basements. On ceiling or wall (less than 12 inches below ceiling). On center of ceiling above stairways.	If constructed on or after 8/1/1989, smoke alarms are required to be hard-wired (120 volt). If constructed before 8/1/1989, smoke alarms can be battery-powered.	No interconnection is required for battery-powered alarms.
Existing buildings (constructed on or after 8/1/1989).	In hallways outside sleeping rooms. On each level and in basements. On ceiling or wall (less than 12 inches below ceiling).	Smoke alarms are required to be hard-wired (120 volt).	No interconnection is required.
Existing buildings (constructed before 8/1/1989).	In hallways outside sleeping rooms. On each level and in basements. On ceiling or wall (less than 12 inches below ceiling).	Smoke alarms can be battery-powered.	No interconnection is required.
Replacement of smoke alarms in existing buildings.	Smoke alarms must be installed in same locations as originally installed.	Power supply must be the same as the smoke alarms being replaced.	Interconnection must be provided if the smoke alarms being replaced were interconnected.

1103.8.1 Replacement of smoke alarms. Single and multiple-station smoke alarms shall be replaced when:

1. They fail to respond to operability tests.

2. They exceed ten years from the date of manufacture.

Smoke alarms shall be replaced with smoke alarms having the same type of power supply.

Subp. 9. **IFC section 1103.11.** IFC section 1103 is amended by adding a section to read:

1103.11 Protection of existing cooking equipment. Approved automatic fire-extinguishing systems shall be provided for the protection of existing commercial-type cooking equipment that produces grease-laden vapors in accordance with Section 904.

7511.1104 SECTION 1104, MEANS OF EGRESS FOR EXISTING BUILDINGS.

Subpart 1. **IFC section 1104.1.** IFC section 1104.1 is amended and sections added to read:

1104.1 General. Means of egress in existing buildings shall comply with the minimum egress requirements specified in Sections 1104.1 through 1104.26.7.

1104.1.1 Occupant loads. The number of occupants shall be determined in accordance with Section 1004.

1104.1.2 Egress width. The minimum required egress width shall be determined in accordance with Section 1005.1.

1104.1.3 Ceiling height. The ceiling height in corridors shall be not less than 78 inches (1,981 mm).

1104.1.4 Special exiting provisions for younger students. Rooms in Group E occupancies used by preschool, kindergarten, first- or second-grade pupils, latchkey, child care, early childhood family education, teen parent, or similar programs shall be located as required by the Building Code.

[For text of subparts 2 and 3, see Minnesota Rules]

Subp. 4. **IFC section 1104.5.** IFC section 1104.5 is amended and sections added to read:

1104.5 Illumination - general. Normal and emergency illumination of the means of egress shall comply with Sections 1104.5.1 through 1104.5.3.

1104.5.1 Illumination required. The means of egress shall be illuminated at all times that the building space served by the means of egress is occupied. Natural lighting in the interior rooms or spaces can be used to satisfy this requirement during periods of daylight.

1104.5.1.1 Group U occupancies. Illumination is not required in Group U occupancies.

1104.5.1.2 Aisle accessways. Illumination is not required for aisle accessways.

1104.5.1.3 Dwelling units and sleeping rooms. Illumination is not required for dwelling units and sleeping rooms of Group I, R-1, R-2, and R-3 occupancies.

1104.5.2 Illumination level. Floors and other walking surfaces within the means of egress shall be illuminated according to Sections 1104.5.2.1 and 1104.5.2.2:

1104.5.2.1 General. The means of egress illumination level shall not be less than one foot-candle (11 lux) at the floor level.

1104.5.2.2 Assembly performances. In assembly occupancies, the illumination of the floors of exit access shall be at least 0.2 foot-candle (2.2 lux) during periods of performances or projections involving directed light.

1104.5.3 Illumination emergency power. The power supply for means of egress illumination shall normally be provided by the premises' electrical supply. In the event of power supply failure, illumination shall be automatically provided from an emergency system for the following occupancies where such occupancies require two or more means of egress:

1. Group A having 50 or more occupants. Assembly occupancies used exclusively as a place of worship and having an occupant load of less than 300 are not required to have emergency illumination.

2. Group B buildings three or more stories in height, buildings with 100 or more occupants above or below the level of exit discharge, or buildings with 1,000 or more total occupants.

3. Group E in interior stairs, corridors, windowless areas with student occupancy, shops, and laboratories.

4. Group F having more than 100 occupants. Buildings used only during daylight hours that are provided with windows for natural light are not required to have emergency illumination.

5. Group I.

6. Group M buildings greater than 3,000 square feet (2,879 m^2) in gross sales area or exceeding one story in height.

7. Group R-1. Where each guest room has direct access to the outside of the building at grade, emergency illumination is not required.

8. Group R-2. Where each living unit has direct access to the outside of the building at grade, emergency illumination is not required.

9. Group R-4. Where each sleeping room has direct access to the outside of the building at ground level, emergency illumination is not required.

The emergency power system shall provide power for not less than 30 minutes and consist of storage batteries, unit equipment, or an on-site generator. The installation of the emergency power system shall be in accordance with Section 1203.

Subp. 5. **IFC section 1104.6.** IFC section 1104.6 and its subsections are deleted entirely and replaced with the following:

1104.6 Guards. Guards complying with this section shall be provided at the open sides of means of egress that are more than 30 inches (762 mm) above the floor or grade below.

Exception: Approved existing open guards.

1104.6.1 Height of guards. Guards shall form a protective barrier not less than 42 inches (1,067 mm) high except for the following existing guards:

1. Existing guards on the open side of stairs, which are permitted to be not less than 30 inches (760 mm) high.

2. Existing guards within dwelling units, which are permitted to be not less than 36 inches (910 mm) high.

3. Existing guards in assembly areas.

4. Existing guards on stairs and balconies of buildings designated as historic structures, which are permitted to be not less than 24 inches (610 mm) high.

1104.6.2 Opening limitations. Open guards shall have balusters or ornamental patterns such that a 6-inch (152 mm) diameter sphere cannot pass through any opening up to a height of 34 inches (864 mm) except when one of the following conditions exist:

1. At elevated walking surfaces for access to and use of electrical, mechanical, or plumbing systems or equipment, guards shall have balusters or be of solid materials such that a sphere with a diameter of 21 inches (533 mm) cannot pass through any opening.

2. In occupancies in Group I-3, F, H, or S, the clear distance between intermediate rails measured at right angles to the rails shall not exceed 21 inches (533 mm).

Subp. 6. **IFC section 1104.7.** IFC section 1104.7 and its subsections are deleted entirely and replaced with the following:

1104.7 Doors - general. Except where modified by Section 1010.1.2, doors shall be of the side-hinged swing type. Doors shall swing in the direction of egress travel when serving an occupant load of 50 or more persons. The minimum width of each door opening shall be

sufficient for the occupant load thereof. Locks and latches shall comply with Sections 1010.1.9 through 1010.1.11.4.

1104.7.1 Size of doors. Except where modified by this section, each required means of egress door shall comply with the minimum dimensions specified herein. Doors shall provide a clear width of not less than 28 inches (711 mm). Where this section requires a minimum clear width of 28 inches (711 mm) and a door opening includes two door leaves without a mullion, one leaf shall provide a clear opening width of 28 inches (711 mm). The maximum width of a swinging door leaf shall be 48 inches (1,219 mm) nominal. The height of doors shall not be less than 80 inches (2,032 mm).

1104.7.1.1 Closets. Door openings to storage closets less than 10 square feet (0.93 m^2) in area shall not be limited by the minimum width.

1104.7.1.2 Revolving doors. Width of door leaves in revolving doors shall not be limited.

1104.7.1.3 Dwelling units. Door openings within a dwelling unit are permitted to be 78 inches (1,981 mm) in height.

1104.7.1.4 Small rooms. Exit access doors serving a room not larger than 70 square feet (6.5 m^2) are permitted to be 24 inches (610 mm) in door width.

1104.7.1.5 Health care facilities. The minimum clear width for doors in the means of egress from hospitals; nursing homes; limited care facilities; psychiatric hospital sleeping rooms; and diagnostic and treatment areas, such as x-ray, surgery, or physical therapy, shall be not less than 32 inches (810 mm) wide. Existing 34-inch (865 mm) doors shall be permitted. Existing 28-inch (710 mm) corridor doors in facilities where the fire plans do not require evacuation by bed, gurney, or wheelchair shall be permitted.

Subp. 7. **IFC section 1104.10.** IFC section 1104.10 and subsection 1104.10.1 are amended to read:

1104.10 Stair dimensions for existing stairs. Existing stairs in buildings shall be permitted to remain if the rise does not exceed 8.25 inches (210 mm) and the run is not less than 9 inches (229 mm). Existing stairs are permitted to have a minimum width of 36 inches (914 mm) but not less than the width required for the number of occupants served as determined by Section 1005.1. Existing stairs can be rebuilt.

1104.10.1 Stair dimensions for replacement stairs. The replacement of an existing stairway in a structure shall not be required to comply with the new stairway requirements of Section 1011 where the existing space and construction will not allow a reduction in pitch or slope.

[For text of subpart 8, see Minnesota Rules]

Subp. 9. **IFC section 1104.16.** IFC section 1104.16 and its subsections are deleted in their entirety and replaced with the following:

1104.16 Fire escape stairs. Fire escape stairs shall comply with Sections 1104.16.1 through 1104.16.7.

1104.16.1 Existing means of egress. Fire escape stairs shall be permitted in existing buildings but shall not constitute more than 50 percent of the required exit capacity.

1104.16.2 Protection of openings. Openings within 10 feet (3,048 mm) of fire escape stairs shall be protected by fire assemblies having a minimum 3/4-hour fire-resistance rating. In buildings equipped throughout with an approved automatic sprinkler system, opening protection is not required.

1104.16.3 Dimensions. Fire escape stairs shall meet the minimum width, capacity, riser height, and tread depth as specified in Table 1104.16.

1104.16.4 Access. Access to a fire escape from a corridor shall not be through an intervening room. Access to a fire escape stair shall be from a door or window meeting the criteria of Section 1005.3.2. Access to a fire escape stair shall be directly to a balcony, landing, or platform. These shall be no higher than the floor or windowsill level and no lower than 8 inches (203 mm) below the floor level or 18 inches (457 mm) below the windowsill.

1104.16.5 Materials and strength. Components of fire escape stairs shall be constructed of noncombustible materials.

Fire escape stairs and balconies shall support the dead load plus a live load of not less than 100 pounds per square foot (4.78 kN/m^2). Fire escape stairs and balconies shall be provided with a top and intermediate handrail on each side.

The fire code official is authorized to require testing or other satisfactory evidence that an existing fire escape stair meets the requirements of this section.

1104.16.6 Termination. The lowest balcony shall not be more than 18 feet (5,486 mm) from the ground. Fire escape stairs shall extend to the ground or be provided with counterbalanced stairs reaching the ground. For fire escape stairs serving ten or fewer occupants, an approved fire escape ladder is allowed to serve as the termination for fire escape stairs.

1104.16.7 Maintenance. Fire escapes shall be kept clear and unobstructed at all times and shall be maintained in good working order.

TABLE 1104.16

DIMENSIONS FOR EXISTING FIRE ESCAPE STAIRS

Feature:	Serving More Than 10 Occupants	Serving 10 or Fewer Occupants
Minimum Width	22 inches	18 inches

Maximum Height of Risers	9 inches	12 inches
Minimum Tread Depth	9 inches	6 inches

Subp. 10. **IFC section 1104.17.** IFC section 1104.17 and its subsections are deleted entirely and replaced with the following:

1104.17 Corridors. Corridors, common path of travel, and travel distance shall comply with Sections 1104.17.1 through 1104.17.4.1. Corridors complying with Section 1020.1 need not be fire-resistance rated.

1104.17.1 Construction. Corridors shall be fire-resistance rated in accordance with this section and Table 1104.17.1. Existing walls surfaced with wood lath and plaster in good condition or 1/2-inch gypsum wallboard are acceptable for corridor walls and ceilings. Where Table 1104.17.1 allows a sprinkler system in lieu of fire-resistance-rated construction, the building shall be protected throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2.

1104.17.1.1 Existing places of religious worship. In Group A occupancies used as places of religious worship, existing corridor walls, ceilings, and opening protection not in compliance with Section 1104.17.1 may be continued when such buildings are protected with an approved automatic fire alarm system. The fire alarm system shall include automatic smoke detection throughout the exit system and approved detection in all boiler rooms, furnace rooms, mechanical rooms, and storage rooms.

1104.17.1.2 Existing Group B occupancies. In office areas of Group B occupancies not exceeding 10,000 square feet (929 m^2) in size, existing corridor walls, ceilings, and opening protection not in compliance with Section 1104.17.1 may be continued when such buildings are protected with an approved automatic fire alarm system. The fire alarm system shall include automatic smoke detection

throughout the exit system and approved detection in all boiler rooms, furnace rooms, mechanical rooms, and storage rooms.

1104.17.1.3 Existing Group E occupancies. In Group E occupancies, existing corridor walls, ceilings, and opening protection not in compliance with Section 1104.17.1 may be continued when such buildings are protected with an approved automatic fire alarm system that is monitored by a central, proprietary, or remote station service. The fire alarm system shall include automatic smoke detection throughout the exit system and approved detection in all rooms and areas other than classrooms and offices.

TABLE 1104.17.1

CORRIDOR FIRE-RESISTANCE RATING

Occupancy	Occupant Load Served by Corridor	Required Fire-Resistance Rating (hours)	
		Without sprinkler system	With sprinkler system
A, B, E, F, H, M, S, U	Greater than 30	1	0
I	Greater than 10	1 (see Section 1104.17.2.3)	0
R	Greater than 10	1	0

1104.17.2 Corridor openings. Openings into corridors shall comply with Sections 1104.17.2.1 through 1104.17.2.3.

1104.17.2.1 Doors. Doors opening into corridors required by Table 1104.17.1 to be fire-resistance rated shall be protected by 20-minute fire assemblies or solid wood doors not less than 1-3/4 inches (45 mm) thick. Where the existing frame will not accommodate the 1-3/4 inches (45 mm) thick door, a 1-3/8 inches (35 mm) thick solid bonded wood core door or equivalent insulated steel door shall be permitted. Doors shall be self-closing or automatic-closing by smoke detection.

1104.17.2.2 Other openings. Openings with fixed wired glass set in steel frames are permitted for corridor walls and ceilings. Transoms, louvers, and openings other than doors from corridors to rooms shall be automatic-closing by smoke detection or shall be covered with a minimum of 3/4-inch (19 mm) gypsum wallboard or equivalent material on the room side.

1104.17.2.3 Existing Group I-2 and I-3 occupancies. Group I-3 corridor doors and patient room doors in Group I-2 corridors need not be fire-resistance rated or self-closing where smoke barriers are provided in accordance with the Building Code or NFPA 101.

1104.17.3 Corridor width. The minimum corridor width shall be in accordance with Sections 1104.17.3.1 through 1104.17.3.2.

1104.17.3.1 Minimum width. The minimum corridor width shall be as determined by the occupant load calculations in Section 1005.3 but not less than 36 inches.

1104.17.3.2 Minimum width in mechanical areas. The minimum corridor width is allowed to be reduced to 24 inches (610 mm) for spaces providing access to electrical, mechanical, or plumbing systems.

1104.17.4 Dead ends. Where more than one exit or exit access doorway is required, the exit access shall be arranged such that dead ends do not exceed the limits specified in Section 1104.17.4.1 and Table 1104.17.4.

1104.17.4.1 Wide corridors and dead-end provisions. A dead-end passageway or corridor shall not be limited in length where the length of the dead-end passageway or corridor is less and 2.5 times the least width of the dead-end passageway or corridor.

TABLE 1104.17.4

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

Occupancy	Common Path Limit		Dead-End Corridor Limit		Travel Distance Limit	
	Unspr (feet)	Spr (feet)	Unspr (feet)	Spr (feet)	Unspr (feet)	Spr (feet)
Group A	20/75[a]	20/75[a]	20[b]	20[b]	200	250
Group B	75	100	50	50	200	300
Group E	75	75	50	50	200	250
Groups F-1, S-1[d]	75	100	50	50	200	250
Groups F-2, S-2[d]	75	100	50	50	300	400
Group H-1	25	25	0	0	75	75
Group H-2	50	100	0	0	75	100
Group H-3	50	100	20	20	100	150
Group H-4	75	75	20	20	150	175
Group H-5	75	75	20	50	150	200
Group I-1	75	75	20	20	200	250
Group I-2 (Health Care)	N/R	N/R	N/R	N/R	150	200[c]
Group I-3	100	100	N/R	N/R	150[c]	200[c]
Group I-4 (Day Care)	75	100	20	20	200	250
Group M (Covered Mall)	75	100	50	50	200	400
Group M (Mercantile)	75	100	50	50	200	250
Group R-1 (Hotels)	75	75	50	50	200	250
Group R-2 (Apart-ments)	75	125	50	50	200	250

Groups R-3, R-4	N/R	N/R	N/R	N/R	N/R	N/R
Group U	75	100	20	50	300	400

"Unspr" means unsprinklered and "Spr" means sprinklered.

For SI: 1 foot = 304.8 mm.

[a] 20 feet for common path serving more than 50 persons; 75 feet for common path serving 50 or fewer persons.

[b] See Section 1029.9.5 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 hangers.

N/R = No requirements.

Subp. 10a. **IFC section 1104.18.** IFC section 1104.18 is deleted.

Subp. 11. **IFC section 1104.19.** IFC section 1104.19 is amended to read:

1104.19 Exit access travel distance. Exits shall be located so that the maximum length of exit access travel, measured from the most remote point to an approved exterior exit, vertical exit enclosure, horizontal exit, or exit passageway along the natural and unobstructed path of egress travel, does not exceed the distances given in Table 1104.17.4.

Subp. 12. **IFC section 1104.20.** IFC section 1104.20 is amended to read:

1104.20 Common path of egress travel. The common path of egress travel shall not exceed the distances given in Table 1104.17.4.

Subp. 13. **IFC section 1104.21.** IFC section 1104.21 is amended to read:

1104.21 Stairway discharge identification. A stairway in an exit enclosure that continues below the level of exit discharge shall be arranged and marked to make the direction of egress to a public way readily identifiable. Stairs that continue one-half story beyond the level of exit discharge need not be provided with barriers where the exit discharge is obvious.

Subp. 14. **IFC section 1104.22.** IFC section 1104.22 is amended to read:

1104.22 Exterior stairway protection. Exterior exit stairs shall be separated from the interior of the building as required in Section 1027.6.

Subp. 15. **IFC section 1104.23.** IFC section 1104.23 is amended and sections added to read:

1104.23 Minimum aisle width. The minimum clear width of aisles and aisle accessways shall be in accordance with this section and Table 1104.23.

1104.23.1 Aisle and aisle accessway width. Aisles and aisle accessway widths shall be as determined by the occupant load calculations in Section 1005.3, but not less than the widths shown in Table 1104.23.

TABLE 1104.23

MINIMUM AISLE AND AISLE ACCESSWAY WIDTHS

Condition	Minimum Width (in inches)
Aisle accessways serving seating areas having 50 or fewer seats, tables, or desks	24 inches (610 mm)
Aisle accessways serving seating areas more than 50 seats, tables, or desks	30 inches (760 mm)
Aisle accessways serving employee areas only	24 inches (610 mm)
Level or ramped aisles having seating on each side and serving 50 or fewer seats	36 inches (914 mm)

Level or ramped aisles having seating on each side and serving more than 50 seats	42 inches (1,067 mm)
Level or ramped aisles having seating on one side and serving 60 or fewer seats	30 inches (760 mm)
Level or ramped aisles having seating on one side and serving more than 60 seats	36 inches (914 mm)
Aisle stairs having seating on each side and serving 50 or fewer seats	36 inches (914 mm)
Aisle stairs having seating on each side and serving more than 50 seats	42 inches (1,067 mm)
Aisle stairs having seating on one side and serving 60 or fewer seats	30 inches (760 mm)
Aisle stairs having seating on one side and serving more than 60 seats	36 inches (914 mm)
Aisle stair - distance between seating and aisle handrail or guard when the aisle is subdivided	20 inches (508 mm)

Subp. 16. **IFC section 1104.24.** IFC section 1104.24 is amended to read:

1104.24 Stairway floor number signs. Existing stairs shall be marked in accordance with Section 1023.9.

Subp. 17. **IFC section 1104.25.** IFC section 1104.25 is amended and sections added to read:

1104.25 Number of means of egress or exits. The number of means of egress doors or exits from a room, area, story, or building shall be in accordance with Sections 1104.25.1 through 1104.25.4 and Table 1104.25.

Where two or more means of egress doors or exits are required from a room or area, such doors shall be separated from each other by a distance not less than one-third of the length of the maximum overall diagonal dimension of the area served.

1104.25.1 Number based on capacity. Two means of egress doors or exits are required from rooms, areas, stories, or buildings when the number of occupants exceeds the values shown in Table 1104.25.

1104.25.1.1 Dormitories. Dormitory sleeping rooms having an exit doorway direct to the exterior are not required to have a second exit or exit access doorway provided that:

a. the room has 16 or fewer occupants;

b. the travel distance from any point in the room to the exit doorway does not exceed 30 feet;

c. the room is not located more than two stories above grade;

d. the room is not located on a level below grade; and

e. the room is provided with an emergency escape window in accordance with Sections 1030.2 through 1030.5 and the escape window is separated from the exit doorway in accordance with Section 1007.1.1.

1104.25.2 Three egress doors or exits required. Three means of egress doors or exits are required from rooms, areas, stories, or buildings when the number of occupants exceeds 500 persons.

1104.25.3 Four egress doors or exits required. Four means of egress doors or exits are required from rooms, areas, stories, or buildings when the number of occupants is 1,001 or more persons.

1104.25.4. Group E laboratories. Group E science laboratories containing hazardous materials shall have two exits when exceeding 1,000 square feet (93 m^2) in size.

TABLE 1104.25

TWO EGRESS DOORS OR EXITS REQUIRED[a]

Occupancy	Number of Occupants
A, B, E, F, M, S, U	> 49 occupants
H, I, R	> 10 Occupants
R (dormitories)	> 16 Occupants (see 1104.25.1.1)

[a] Two egress doors or exits shall be required when the number of occupants exceeds the number listed in the table.

Subp. 18. **IFC section 1104.26.** IFC section 1104 is amended by adding section 1104.26 and subsections to read:

1104.26 Escape windows. In Group R and Group I-1 occupancies, escape windows shall be provided, installed, and maintained in rooms used for sleeping below the fourth story. A readily accessible escape window shall be provided from basement levels occupied as a licensed family or group family child care home. Escape windows shall be in accordance with this section.

1104.26.1 Escape windows not required. Emergency escape windows are not required for the following conditions:

1. If the room has a door that leads directly to the exterior of the building.

2. In dwellings and structures constructed prior to July 1, 1972, provided they are not licensed by Minnesota or used for transient lodging.

3. If the building is protected throughout by an approved, automatic sprinkler system installed in accordance with Section 903.3.

4. From rooms of existing buildings having two separate means of escape, provided that the means of escape are independent of each other and they pass through only one adjacent nonlockable room or area.

5. In Group R hotels or motels constructed prior to April 11, 1983.

1104.26.2 Minimum size and dimensions. Escape window openings shall have a minimum net clear opening area of 4.5 square feet (648 square inches). Opening height and width dimensions shall not be less than 20 inches.

1104.26.3 Maximum height from floor. The maximum height from the floor to the window sill opening shall not exceed 48 inches.

1104.26.4 Emergency escape windows under decks and porches. Emergency escape windows are allowed to be installed under decks and porches provided the location of the deck allows the emergency escape window to be fully opened and provides a path not less than 36 inches in height to a yard or court.

1104.26.5 Window wells. An escape window opening with a finished sill height below the adjacent ground level shall be provided with a window well in accordance with Sections 1104.26.5.1 through 1104.26.5.2.

1104.26.5.1 Minimum size. The minimum horizontal area of the window well shall be 9 square feet, with a minimum dimension of 36 inches. The area of the window well shall allow the emergency escape and rescue opening to be fully opened.

1104.26.5.2 Ladders or steps. Window wells with a vertical depth of more than 44 inches shall be equipped with an approved permanently affixed ladder or steps. Ladders or rungs shall have an inside width of at least 12 inches, shall project at least 3 inches from the wall and shall be spaced not more than 18 inches on center vertically for the full height of the window well. The ladder or steps shall not encroach into the required dimensions of the window well by more than 6 inches. The ladder or steps shall not be obstructed by the emergency escape and rescue opening. Ladders or steps required by this section are exempt from the stairway requirements of Sections 1011 and 1104.10 through 1104.13.

1104.26.6 Replacement windows for emergency escape and rescue openings. The replacement of windows provided for emergency escape and egress in Group R-2 and R-3 occupancies regulated by the International Building Code or in one- and two-family dwellings and townhouses regulated by the International Residential Code shall be exempt from the minimum opening size and maximum sill height requirements of the International Building Code or International Residential Code, respectively, where all of the following conditions are met:

1. the replacement window is the manufacturer's largest standard size window that will fit within the existing frame or existing rough opening. The replacement window shall be the same operating style as the existing window or a style that provides for an equal or greater window opening area than the existing window; and

2. the replacement of the window is not part of a change of occupancy.

1104.26.6.1 Licensed facilities. Required windows in rooms of care facilities licensed or registered by the state of Minnesota shall comply with the provisions of Section 1104.26.6 or Sections 1104.26.2 and 1104.26.3, whichever is more restrictive.

1104.26.7 Operational constraints. Window opening control devices complying with ASTM F 2090 shall be permitted for use on windows required to provide emergency escape and rescue openings.

7511.1106 [Renumbered 7511.1105]

7511.1105 SECTION 1105, SEPARATION OF OCCUPANCIES AND HAZARDOUS AREAS.

IFC section 1105 and all subsections are deleted and replaced with the following:

1105.1 General. Mixed occupancies within the same building and hazardous areas shall be separated in accordance with Sections 1105.2 through 1105.3.2.1.

1105.2 Occupancy separations. Occupancy separations shall be provided in buildings containing Group I and Group R occupancies as specified in Sections 1105.2.1 through 1105.2.3.1. These separations shall be constructed and maintained in accordance with the Building Code. Existing wood lath and plaster in good condition or 1/2-inch (12.7 mm) gypsum wallboard is acceptable where one-hour occupancy separations are required.

1105.2.1 Door openings. Where one-hour fire-resistant construction is required, openings shall be protected by listed fire doors, insulated steel doors, 1-3/8-inch thick (35 mm) or 1-3/4-inch thick (45 mm) solid wood doors, or fixed wired glass set in steel frames. Doors shall be self-closing or automatic-closing by smoke detection.

1105.2.2 Group I-1 and Group I-2 occupancies. Group I-1 and Group I-2 occupancies shall be separated from other occupancies as specified in the Building Code.

1105.2.3 Group I-3 occupancies. Group I-3 occupancies shall be separated from other occupancies as specified in the Building Code.

1105.2.3.1 Group I-3 compliance options. Occupancy separations need not be provided for Group I-3 occupancies in the following conditions:

1. In buildings that are protected throughout by an approved automatic sprinkler system, one-hour fire-resistance-rated construction is permitted.

2. In buildings that are protected throughout by an approved automatic sprinkler system, openings for the passage of materials between the Group I-3 and adjacent occupancies are not required to be fire-resistance rated when such openings are not more than 4 feet (1,219 mm) above the floor and are provided with a metal cover or door.

1105.2.4 Group R occupancies. Group R occupancies and the exits therefrom shall be separated from Group A, B, M, S, and U occupancies by at least one-hour fire-resistance-rated construction. Group R occupancies shall be separated from all other occupancies as specified in the Building Code.

1105.2.4.1 Group R compliance options. Occupancy separations need not be provided for Group R occupancies in the following conditions:

1. In buildings that are protected throughout by an approved automatic sprinkler system, one-hour occupancy separations need not be provided.

2. An occupancy separation need not be provided between Group A and Group R occupancies if the building is provided with a fire alarm system having automatic smoke detection throughout the Group A occupancy.

3. Fire-resistance-rated opening protection need not be provided between Group A and Group R occupancies when such openings are designed to resist the passage of smoke and the openings are protected by an approved automatic sprinkler system.

4. An occupancy separation need not be provided where two or more occupancies occur in the same building or structure and are so intermingled that separations are impracticable provided that the exit provisions and protection requirements for the more restrictive occupancy are provided.

5. An occupancy separation need not be provided between a Group R-3 occupancy with sleeping accommodations for ten or fewer persons and Group B or Group M occupancies which are accessory if interconnected smoke alarms are provided. At least one smoke alarm shall be located in the Group B or Group M occupancy and additional alarms may be needed in accordance with manufacturer's instructions. Smoke alarms in the sleeping areas shall be

located as specified in Section 1103.8 and shall be audible in all sleeping areas.

1105.3 Incidental use areas. Incidental use areas shall be separated from the rest of the building in accordance with this section. Incidental use areas are defined as shops, laboratories containing hazardous materials, laundry rooms exceeding 100 square feet in size, and rooms containing boilers or central heating plants where the largest piece of fuel equipment exceeds 400,000 Btu per hour input.

1105.3.1 Separation required. Incidental use areas in Groups A, B, E, F, H, I, M, R-1, R-2, and S occupancies shall be separated from the rest of the building by not less than a one-hour fire barrier. Existing wood lath and plaster in good condition or 1/2-inch (12.7 mm) gypsum wallboard is acceptable where one-hour fire barriers are required. Storage rooms need not be separated in Groups F, M, or S occupancies.

1105.3.2 Sprinkler protection in lieu of separation. Incidental use areas in Groups A, B, E, F, H, M, and S occupancies need not be separated when the incidental use area is protected with automatic sprinklers.

1105.3.2.1 Groups I and R occupancies. Incidental use areas in Groups I and R occupancies need not be separated when the incidental use area is protected with automatic sprinklers and the construction of such areas is capable of resisting the passage of smoke. Doors to such areas shall be a minimum of one-hour fire-rated, solid-core wood doors or insulated steel doors. Doors shall be self-closing or automatic-closing by smoke detection.

7511.1203 SECTION 1203, EMERGENCY AND STANDBY POWER SYSTEMS.

IFC section 1203.2.14 is amended to read:

1203.2.14 Means of egress illumination. Emergency power shall be provided for means of egress illumination in accordance with Sections 1008.3 and 1104.5.3.

7511.1204 SECTION 1204, SOLAR PHOTOVOLTAIC POWER SYSTEMS.

Subpart 1. **IFC section 1204.1** IFC section 1204.1 is amended and subsections are added to read:

1204.1 General. Solar energy systems shall be installed in accordance with Sections 1204.1 through 1204.6 and the Building Code.

Exception: Buildings regulated by Minnesota Rules, chapter 1309, the Minnesota Residential Code.

1204.1.1 Minnesota Electrical Code. The electrical portion of solar PV systems shall be installed in accordance with the Minnesota Electrical Code.

1204.1.2 Roof access points. Roof access points shall meet all the following criteria.

1. Roof access points shall be located where fire departments have ground access.

2. Roof access points shall be located in areas that do not require the placement of fire department ground ladders over openings such as windows or doors.

3. Roof access points shall be located at strong points of building construction capable of supporting emergency responders.

4. Roof access points shall be in locations where the access point does not conflict with overhead obstructions such as tree limbs, wires, or signs.

5. Each roof access point shall be provided with a landing on the roof side not less than 6 feet in each direction. The landing shall be free and clear of obstructions such as vent pipes, conduit, and mechanical and electrical equipment.

6. Roof access point landings on roofs with slopes greater than 2 units vertical in 12 units horizontal (2:12) shall be positioned with direct access to a pathway to ridge.

7. Each solar array or grouping of arrays shall have not less than two roof access points spaced not closer than 1/3 the diagonal dimension of the array or arrays served.

Subp. 2. **IFC section 1204.2.** IFC section 1204.2 and its subsections are entirely deleted and replaced with the following:

1204.2 Access and pathways. Roof access, pathways, and spacing requirements shall be provided in accordance with Sections 1204.2.1 through 1204.3.3. Pathways shall be over areas capable of supporting firefighters accessing the roof. Pathways shall be located in areas without obstructions such as vent pipes, conduit, and mechanical and electrical equipment.

Exceptions:

1. Detached, nonhabitable Group U structures including, but not limited to, detached garages serving Group R-3 buildings, parking shade structures, carports, solar trellises, and similar structures.

2. Roof access, pathways, and spacing requirements need not be provided where the fire code official has determined that rooftop operations will not be employed.

1204.2.1 Solar photovoltaic system for roof slopes greater than 2 units vertical in 12 units horizontal (2:12). Solar photovoltaic systems for buildings with roof slopes greater than 2 units vertical in 12 units horizontal (2:12) shall comply with Sections 1204.2.1.1 through 1204.2.1.3.

1204.2.1.1 Pathways to ridge. Not fewer than two 36-inch wide pathways on separate roof planes, from the lowest roof edge to ridge, shall be provided on all buildings. Pathways shall be provided at intervals not greater than 150 feet throughout the length and width of the roof. Not fewer than one pathway shall be provided on the street or driveway side, or fire-department-access side of the roof.

For each roof plane with a photovoltaic array, not fewer than one 36-inch wide pathway from lowest roof edge to ridge shall be provided on the same roof plane as the photovoltaic array, on an adjacent roof plane, or straddling the same and adjacent roof planes.

1204.2.1.2 Setbacks at ridge. For photovoltaic arrays occupying 33 percent or less of the plan view total roof area, a setback of not less than 18 inches (457 mm) wide is required on both sides of a horizontal ridge. For photovoltaic arrays occupying more than 33 percent of the plan view total roof area, a setback of not less than 36 inches (914 mm) wide is required on both sides of a horizontal ridge.

1204.2.1.3 Alternative setbacks at ridge. Where an automatic sprinkler system is installed within the building, setbacks at the ridge shall conform to one of the following criteria:

1. For photovoltaic arrays occupying 66 percent or less of the plan view total roof area, a setback of not less than 18 inches (457 mm) wide is required on both sides of a horizontal ridge.

2. For photovoltaic arrays occupying more than 66 percent of the plan view total roof area, a setback of not less than 36 inches (914 mm) wide is required on both sides of a horizontal ridge.

1204.2.2 Emergency escape and rescue openings. Panels and modules installed on Group R buildings shall not be placed on the portion of a roof that is below an emergency escape and rescue opening. A pathway of not less than 36 inches (914 mm) wide shall be provided from the roof edge to the emergency escape and rescue opening.

Subp. 3. **IFC section 1204.3.** IFC section 1204.3 and its subsections are entirely deleted and replaced with the following:

1204.3 Solar photovoltaic systems for roofs with slopes of 2 units vertical in 12 units horizontal or less. Access to systems for buildings with roofs with slopes of 2 units vertical in 12 units horizontal (2:12) or less, shall be provided in accordance with Sections 1204.3.1 through 1204.3.3.

1204.3.1 Perimeter pathways. There shall be a minimum 6-foot wide (1,829 mm) clear perimeter around the edges of the roof.

Exception: Where either axis of the building is 250 feet (76,220 mm) or less, the clear perimeter around the edges of the roof shall be permitted to be reduced to a minimum width of 4 feet (1,219 mm).

1204.3.2 Interior pathways. Interior pathways shall be provided between array sections to meet the following requirements:

1. Pathways shall be provided at intervals not greater than 150 feet (45,720 mm) throughout the length and width of the roof.

2. A pathway of not less than 4 feet (1,219 mm) wide in a straight line to roof standpipes or ventilation hatches.

3. A pathway not less than 4 feet (1,219 mm) wide around roof access hatches, with not fewer than one such pathway to a parapet or roof edge.

4. A pathway not less than 4 feet (1,219 mm) wide from the perimeter pathway to an emergency escape and rescue opening located above the roof.

1204.3.3 Smoke ventilation. The solar installation shall be designed to meet the following requirements:

1. Where non-gravity-operated smoke and heat vents occur, a pathway not less than 4 feet (1,219 mm) wide shall be provided bordering all sides.

2. Smoke ventilation options between array sections shall be one of the following:

2.1 A pathway not less than 8 feet (2,438 mm) wide.

2.2 Where gravity-operated dropout smoke and heat vents occur, a pathway not less than 4 feet (1,219 mm) wide on at least one side.

2.3 A pathway not less than 4 feet (1,219 mm) wide bordering 4-foot by 8-foot (1,219 mm by 2,438 mm) venting cutouts every 20 feet (6,096 mm) on alternating sides of the pathway.

Subp. 4. **IFC section 1204.6** IFC section 1204 is amended by adding a section to read:

1204.6 Maintenance. Equipment labeling, access, pathways, and setbacks for solar photovoltaic power systems shall be continuously maintained. Existing systems shall be maintained in accordance with the code in effect at the time of installation.

7511.2007 SECTION 2007, HELISTOPS AND HELIPORTS.

IFC section 2007.5 is amended to read:

2007.5 Standpipe systems. A building with a rooftop helistop or heliport shall be provided with a Class 1 standpipe system extended to the roof level on which the helistop or heliport is located. All portions of the helistop and heliport area shall be within 150 feet (45,720 mm) of a 2.5-inch (63.5 mm) outlet on the standpipe system.

7511.2306 SECTION 2306, FLAMMABLE AND COMBUSTIBLE LIQUID MOTOR FUEL-DISPENSING FACILITIES.

Subpart 1. **IFC section 2306.2.3.** IFC section 2306.2.3 is amended by adding exceptions to Item 1 to read:

Exceptions:

1. When approved by the fire chief, other aboveground tanks that comply with Chapter 57 are allowed to be used for outside, above-grade storage and dispensing of Class I liquids, provided the tanks are located in accordance with Table 2306.2.3.

2. Existing nonprotected tanks designed, fabricated, and constructed in accordance with Section 5704.2.7 and not exceeding 6,000 gallons individual capacity and 18,000 gallons aggregate capacity are allowed to be located not less than 30 feet from the nearest dispenser and the nearest side of any public way, property line, building, or combustible storage located on the same property.

Subp. 2. **IFC section 2306.2.3.** IFC section 2306.2.3 is amended by numbering the exception to Item 2 and by adding a second exception, so that the exceptions to Item 2 read as follows:

Exceptions:

1. Other above-ground tanks that comply with Chapter 57 where approved by the fire code official.

2. Existing nonprotected tanks designed, fabricated, and constructed in accordance with Section 5704.2.7 and not exceeding 10,000 gallons individual capacity and 30,000 gallons aggregate capacity are allowed to be located not less than 30 feet from the nearest dispenser and the nearest side of any public way, property line, building, or combustible storage located on the same property.

Subp. 3. **IFC section 2306.2.3.** IFC section 2306.2.3 is amended by adding Items 6 and 7 to read:

6. For operations not open to the public and for resort operations serving registered guests only, which dispense Class I liquids from one tank having a capacity of 560 gallons (2,120 L) or less, having the dispenser located on or adjacent to the tank is permitted. Such tanks shall be located in accordance with Table 2306.2.3.

7. For operations not open to the public and for resort operations serving registered guests only, which dispense Class II liquids from two tanks having a capacity of up to 1,000 gallons (3,785 L) each, having the dispenser located on or adjacent to the tank is permitted. Such tanks shall be located in accordance with Table 2306.2.3.

Subp. 4. **IFC Table 2306.2.3.** IFC Table 2306.2.3 is amended by modifying footnote "a" to read:

[a] When approved by the fire chief, dispensing devices are permitted to be installed on top of or adjacent to protected aboveground tanks or tanks in vaults.

7511.2404 SECTION 2404, SPRAY FINISHING.

IFC section 2404.2, Exception 2, is amended to read:

2. In buildings other than Group A, I, or R occupancies, approved limited spraying space in accordance with Section 2404.9.

7511.3308 SECTION 3308, OWNER'S RESPONSIBILITY FOR FIRE PROTECTION.

IFC section 3308 is amended by adding a section to read:

3308.9 Construction barriers. Where construction, remodeling, or demolition is taking place involving the use of cutting and welding, temporary heating with open flames, or flammable-liquid-fueled equipment, such areas shall be separated from occupied areas of a building by materials that will resist the spread of fire and smoke as specified for draft-stopping materials in the Building Code.

7511.5306 SECTION 5306, MEDICAL GASES.

IFC section 5306 is amended by adding a subsection to read:

5306.6 Domestic storage and use of medical gases. The storage and use of medical gases for personal use within a dwelling or dwelling unit shall comply with NFPA 99.

7511.5704 SECTION 5704, STORAGE.

[For text of subpart 1, see Minnesota Rules]

Subp. 2. **IFC section 5704.2.11.2.** IFC section 5704.2.11.2 is amended by adding sections to read:

5704.2.11.2.1 Burial depth. The maximum burial depth for underground storage tanks shall be specified by the tank manufacturer, marked on the tank, and in accordance with NFPA 30.

5704.2.11.2.2 Minimum depth of cover. Underground tanks shall be covered with not less than 24 inches (600 mm) of earth, or not less than 12 inches (300 mm) of earth on top of which shall be placed a slab of reinforced concrete not less than 4 inches (100 mm) thick. Where the tanks are subjected to traffic, they shall be protected against damage from vehicles passing over them by at least 36 inches (900 mm) of earth cover, or 18 inches (450 mm) of well-tamped earth plus either 6 inches (150 mm) of reinforced concrete or 8 inches (200 mm) of asphaltic concrete. When asphaltic or reinforced concrete paving is used as part of the protection, it shall extend at least 12 inches (300 mm) horizontally beyond the outline of the tank in all directions.

Subp. 3. **IFC section 5704.3.1.2.** IFC section 5704.3.1 is amended by adding a section to read:

5704.3.1.2 Rigid nonmetallic intermediate bulk containers. The design, construction and capacity of rigid nonmetallic intermediate bulk containers for the storage of flammable and combustible liquids shall be in accordance with this section and NFPA 30. When inside buildings, rigid nonmetallic intermediate bulk

containers containing flammable or combustible liquids shall be subjected to a standard fire test that demonstrates acceptable inside storage fire performance and shall be listed and labeled in accordance with UL 2368, Standard for Fire Exposure Testing of Intermediate Bulk Containers for Flammable and Combustible Liquids, 2014.

Subp. 4. **IFC section 5704.3.3.** IFC section 5704.3.3 and its subsections are amended to read:

5704.3.3 Indoor storage. Storage of flammable and combustible liquids inside buildings in containers and portable tanks shall be in accordance with Sections 5704.3.3.1 through 5704.3.3.11.

Exceptions:

1. Liquids in the fuel tanks of motor vehicles, aircraft, boats, or portable or stationary engines.

2. The storage of distilled spirits and wines in wooden barrels or casks.

(Sections 5704.3.3.1 to 5704.3.3.10 remain unchanged.)

5704.3.3.11 Fire-extinguishing systems. Automatic sprinkler and foam-water systems provided for the protection of container, intermediate bulk container and portable tank storage shall be of the wet pipe, deluge, or preaction type. If preaction systems are used, they shall be designed so that water or foam solution discharges immediately from the sprinkler opened by heat from a fire.

7511.5706 SECTION 5706, SPECIAL OPERATIONS.

[For text of subpart 1, see Minnesota Rules]

Subp. 2. **IFC section 5706.5.4.** IFC section 5706.5.4 is amended to read:

5706.5.4 Liquid transfers from tank vehicles and tank cars. Class I liquids shall be transferred from a tank vehicle or tank car only into an approved atmospheric tank or approved portable tank, except as provided in Sections 5706.5.4.1 through 5706.5.4.4. Class II and III-A liquids shall be transferred from a tank vehicle or tank car only into an approved atmospheric tank, approved container or approved portable tank, except as provided in Sections 5706.5.4.1 through 5706.5.4.5.

[For text of subpart 3, see Minnesota Rules]

Subp. 4. **IFC section 5706.6.4.** IFC section 5706.6.4 is amended to read:

5706.6.4 Portable fire extinguisher. Tank vehicles shall be equipped with a portable fire extinguisher in accordance with Code of Federal Regulations, title 49, section 393.95.

7511.5707 SECTION 5707, ON-DEMAND MOBILE FUELING OPERATIONS.

IFC section 5707.2 is amended to read:

5707.2 Mobile fueling vehicle. An on-demand mobile fueling vehicle shall be a vehicle that has chassis-mounted tanks or containers where the aggregate cargo capacity does not exceed 1,200 gallons (4,592 L). A mobile fueling vehicle with a mounted tank in excess of 110 gallons (415 L) shall comply with the requirements of Sections 5706.6 and 5707, and NFPA 385. The mobile fueling vehicle shall comply with all local, state, and federal requirements. The mobile fueling vehicle and its equipment shall be maintained in good repair.

7511.6101 CHAPTER 61, LIQUEFIED PETROLEUM GASES.

Chapter 61 is deleted in its entirety and replaced with the following:

CHAPTER 61

LIQUEFIED PETROLEUM GASES

SECTION 6101

NFPA STANDARD NO. 58 INCORPORATED

6101.1 Incorporation by reference. The storage, handling, transportation, and use of liquefied petroleum gas and the installation of all equipment pertinent to systems for such uses shall be designed, constructed, installed, operated, and maintained in accordance with the provisions of NFPA Standard No. 58, Liquefied Petroleum Gas Code (Quincy, Massachusetts, 2017). Standard No. 58, as amended by Section 6102, is incorporated by reference, is not subject to frequent change, and is available at the State Law Library, 25 Rev. Dr. Martin Luther King Jr. Blvd., St. Paul, Minnesota 55155.

SECTION 6102

AMENDMENTS TO NFPA STANDARD NO. 58

6102.1 Amendments. NFPA 58 shall apply to the storage, handling, transportation, and use of liquefied petroleum gas and the installation of all equipment pertinent to systems for such uses, except as amended by this section.

1. Section 6.5.3.8 of NFPA Standard No. 58 is amended to read:

6.5.3.8. No horizontal separation shall be required between aboveground LP-Gas containers and underground tanks containing flammable or combustible liquids installed in accordance with Chapter 57 of the International Fire Code.

2. Section 6.5.3.11 of NFPA Standard No. 58 is amended to read:

6.5.3.11 The minimum separation between LP-Gas containers and liquefied hydrogen containers shall be in accordance with Chapter 55 of the International Fire Code.

3. Footnote "b" of Table 6.7.2.1 of NFPA Standard No. 58 is amended to read:

b. Walls constructed of noncombustible materials having a fire rating of at least one hour as determined by the Building Code.

4. Section 6.8.7.1 of NFPA Standard No. 58 is amended to read:

6.8.7.1. Installation of containers on roofs of buildings shall be prohibited.

5. Section 6.8.7.2 of NFPA Standard No. 58 is deleted.

6. Section 6.22.11.1 of NFPA Standard No. 58 is deleted.

7. Section 6.25.2.1 of NFPA Standard No. 58 is amended to read:

6.25.2.1 Electrical equipment and wiring shall be of a type specified by and shall be installed in accordance with the Minnesota Electrical Code for ordinary locations except that fixed electrical equipment in classified areas shall comply with Section 6.25.2.2.

8. The first sentence of Section 6.25.2.2 of NFPA Standard No. 58 is amended to read:

6.25.2.2 Fixed electrical equipment and wiring installed within the classified areas specified in Table 6.25.2.2 shall comply with Table 6.25.2.2 and shall be installed in accordance with the Minnesota Electrical Code.

9. Section 10.2.3 of NFPA Standard No. 58 is amended to read:

10.2.3 Structure or building heating. Heating shall be by steam or hot water radiation or other heating transfer medium with the heat source located outside the building or structure (see Section 6.25, Ignition Source Control), or by electrical appliances listed for Class I, Group D, Division 2 locations, in accordance with the Minnesota Electrical Code.

7511.7900 AMENDMENTS TO APPENDICES OF INTERNATIONAL FIRE CODE.

Subpart 1. [Repealed, 40 SR 1437]

Subp. 2. **IFC Appendix O.** The IFC is amended by adding an Appendix O to read:

The provisions contained in this appendix are not mandatory unless specifically referenced in the local adopting ordinance.

APPENDIX O

FIRES OR BARBECUES ON BALCONIES OR PATIOS

SECTION 1 - OPEN FLAME AND FUEL STORAGE PROHIBITED

1.1 Open flame prohibited. In any structure containing three or more dwelling units, no person shall kindle, maintain, or cause any fire or open flame on any balcony above ground level, or on any ground floor patio within 15 feet (4,572 mm) of the structure.

1.2 Fuel storage prohibited. No person shall store or use any fuel, barbecue, torch, or other similar heating or lighting chemical or device in the locations designated in Section 1.1.

Exception: Listed electric or gas-fired barbecue grills that are permanently mounted and wired or plumbed to the building's gas supply or electrical system and that maintain a minimum clearance of 18 inches (457 mm) on all sides, unless listed for lesser clearances, may be installed on balconies and patios when approved by the fire chief.

Subp. 3. [Repealed, 40 SR 1437]

Subp. 4. [Repealed, 40 SR 1437]

Subp. 5. **IFC Appendix P.** The IFC is amended by adding an appendix to read as follows:

The provisions contained in this appendix are not mandatory unless specifically referenced in the local adopting ordinance.

APPENDIX P

EMERGENCY RESPONDER RADIO COVERAGE

P101 Emergency responder radio coverage in existing buildings. Existing buildings that do not have approved radio coverage for emergency responders within the building based upon the existing coverage levels of the public safety communication systems of the

jurisdiction at the exterior of the building, shall be equipped with such coverage according to one of the following:

1. Whenever an existing wired communication system cannot be repaired or is being replaced, or where not approved.

2. Within a time frame established by the adopting authority.

Exception: Where it is determined by the fire code official that the radio coverage system is not needed.

P102 Emergency responder radio coverage in new buildings. All new buildings shall have approved radio coverage for emergency responders within the building based upon the existing coverage levels of the public safety communication systems of the jurisdiction at the exterior of the building. This section shall not require improvement of the existing public safety communication systems.

Exceptions:

1. Where approved by the building official and the fire code official, a wired communication system in accordance with Section 907.2.12.2 shall be permitted to be installed or maintained in lieu of an approved radio coverage system.

2. Where it is determined by the fire code official that the radio coverage system is not needed.

3. In facilities where emergency responder radio coverage is required and such systems, components, or equipment required could have a negative impact on the normal operations of that facility, the fire code official shall have the authority to accept an automatically activated emergency responder radio coverage system.

4. Where it is determined to be unreasonably burdensome to implement an approved radio coverage system.

P103 Permit required. A construction permit for the installation of or modification to emergency responder radio coverage systems and related equipment is required. Maintenance performed in accordance with this code is not considered a modification and does not require a permit.

P104 Technical requirements. Systems, components, and equipment required to provide emergency responder radio coverage system shall comply with Sections P104.1 through P104.2.6.

P104.1 Radio signal strength. The building shall be considered to have acceptable emergency responder radio coverage when signal strength measurements in 95 percent of all areas on each floor of the building meet the signal strength requirements in Sections P104.1.1 and P104.1.2.

P104.1.1 Minimum signal strength into the building. A minimum signal strength of -95 dBm shall be receivable within the building at a hip-worn device.

P104.1.2 Minimum signal strength out of the building. A minimum signal strength of -95 dBm shall be received by the agency's radio system when transmitted from within the building from a hip-worn device.

P104.2 System design. The emergency responder radio coverage system shall be designed in accordance with Sections P104.2.1 through P104.2.6.

P104.2.1 In-building coverage systems allowed. Buildings and structures which cannot support the required level of radio coverage shall be equipped with a radiating cable system, a distributed antenna system with Federal Communications Commission (FCC) certified repeaters, bi-directional amplifiers, picocells or their equivalents, or other system approved by the fire code official in order to achieve the required adequate radio coverage.

P104.2.2 Technical criteria. The fire code official shall maintain a document providing the specific technical information and requirements for the emergency responder radio coverage system. This document shall contain the various frequencies required, the location of radio sites, effective radiated power of radio sites, and other supporting technical information.

P104.2.3 Standby power. Emergency responder radio coverage systems shall be provided with dedicated standby batteries or provided with 2-hour standby batteries and connected to the facility generator power system accordance with Section 1203. The standby power supply shall be capable of operating the emergency responder radio coverage system at 100 percent system capacity for a duration of not less than 12 hours.

P104.2.4 In-building coverage system requirements. If used, in-building coverage systems shall meet the following requirements:

1. All in-building coverage system components shall be contained in a National Electrical Manufacturer's Association (NEMA) 4-type waterproof cabinet.

2. Battery systems used for the emergency power source shall be contained in a NEMA 4-type waterproof cabinet.

3. The in-building coverage system and battery system shall be electrically supervised and monitored by a supervisory service, or when approved by the fire code official, shall sound an audible signal at a constantly attended location.

4. Equipment shall have FCC certification prior to installation.

P104.2.5 Additional frequencies and change of frequencies. The emergency responder radio coverage system shall be capable of modification or expansion in the event frequency changes are required by the FCC or additional frequencies are

made available by the FCC, or public safety entities operating in a given jurisdiction make modifications, changes, or upgrades to their communication system(s) that change the frequencies such systems utilize.

P104.2.6 Availability. The in-building coverage system, in general, shall operate according to its intended specification with "5-9s" availability of 99.999 percent of each year; i.e., no critical component of the system shall be out of normal operation for more than 5.26 minutes of each year.

P105 Installation requirements. The installation of the public safety radio coverage system shall be in accordance with Sections P105.1 through P105.5.

P105.1 Approval prior to installation. Amplification systems capable of operating on frequencies licensed to any public safety agency by the FCC shall not be installed without prior coordination and approval of the fire code official.

P105.2 Minimum qualifications of personnel. The minimum qualifications of the system designer and lead installation personnel shall include at least one of the following:

1. Certification of in-building system training issued by a nationally recognized organization or school.

2. A certificate issued by the manufacturer of the equipment being installed.

These qualifications shall not be required where demonstration of adequate skills and experience satisfactory to the fire code official is provided.

P105.3 Acceptance test procedure. When an emergency responder radio coverage system is required, and upon completion of installation, the building owner shall have the radio system tested to ensure that two-way coverage on each floor of the building is a minimum of 95 percent. The test procedure shall be conducted as follows:

1. Each floor of the building shall be divided into a grid of 20 approximately equal test areas.

2. The test shall be conducted using a calibrated handheld or hip-worn device of the latest brand and model used by the agency talking through the agency's radio communications system.

3. Failure of a maximum of two nonadjacent test areas shall not result in failure of the test.

4. In the event that three of the test areas fail the test, in order to be more statistically accurate, the floor shall be permitted to be divided into 40 equal test areas. Failure of a maximum of four nonadjacent test areas shall not result in failure of the test. If the system fails the 40-area test, the system shall be altered to meet the 95 percent coverage requirement.

5. A test location approximately in the center of each test area shall be selected for the test, with the radio enabled to verify two-way communications to and from the outside of the building through the public agency's radio communications system. Once the test location has been selected, that location shall represent the entire test area. Failure in the selected test location shall be considered failure of that test area. Additional test locations shall not be permitted.

6. The gain values of all amplifiers, if applicable, shall be measured and the test measurement results shall be kept on file with the building owner so that the measurements can be verified during annual tests. In the event that the measurement results become lost, the building owner shall be required to rerun the acceptance test to reestablish the gain values.

7. As part of the installation, a spectrum analyzer or other suitable test equipment shall be utilized to ensure spurious oscillations are not being generated by the

subject in-building coverage system. This test shall be conducted at time of installation and subsequent annual inspections.

8. A test shall be considered a "failure" when a transmission from the test device within the building fails to deliver intelligible audio or data to the appropriate public safety dispatch center or equivalent as would be expected during normal operation; and/or when a transmission from a public safety dispatch center or equivalent fails to deliver intelligible audio or data to the test device within the building as would be expected during normal operation.

P105.5 FCC compliance. The emergency responder radio coverage system installation and components shall also comply with all applicable federal regulations including FCC 47 CFR Part 90.219.

P106 Maintenance. The emergency responder radio coverage system shall be maintained operational at all times in accordance with Sections P106.1 through P106.4.

P106.1 Testing and proof of compliance. The emergency responder radio coverage system shall be inspected and tested annually or whenever structural changes occur including additions or remodels that could materially change the original field performance tests. Testing shall consist of the following:

1. In-building coverage test as described in Section P105.3.

2. Signal boosters in-building coverage systems shall be tested to ensure that the gain is the same as it was upon initial installation and acceptance.

3. Backup batteries and power supplies shall be tested under load of a period of one hour to verify that they will properly operate during an actual power outage. If, within the one-hour test period, the battery exhibits symptoms of failure, the test shall be extended for additional one hour periods until the integrity of the battery can be determined.

4. All other active components shall be checked to verify operation within the manufacturer's specifications.

5. At the conclusion of the testing, a report, which shall verify compliance with Section P105.3, shall be submitted to the fire code official.

P106.2 Additional frequencies. The building owner shall modify or expand the emergency responder radio coverage system at their expense in the event frequency changes are required by the FCC or additional frequencies are made available by the FCC, or public safety entities operating in a given jurisdiction make modifications, changes, or upgrades to their communication system(s) that change the frequencies such systems utilize. Prior approval of a public safety radio coverage system on previous frequencies does not exempt this section.

~~106.3~~ P106.3 **Field testing.** Agency personnel shall have the right to enter onto the property at any reasonable time to conduct field testing to verify the required level of radio coverage.

P106.4 Planned outages. Any planned outages of the in-building coverage system, such as for replacement or upgrade of the system, shall be done with the written approval of an entity legitimately representing public safety agencies operating within the jurisdiction, such as a county sheriff.

7511.8000 REFERENCED STANDARDS.

Subpart 1. **NFPA 13.** Standard NFPA 13 as listed in chapter 80 is amended to read as follows:

13 - 16: Standard for the Installation of Sprinkler Systems.

315.3.1, Table 507.3, 901.11.1, 901.11.2, 903.2.8.4, 903.3.1.1, 903.3.1.1.1, 903.3.1.6.2, 903.3.1.6.4, 903.3.2, 903.3.8.2, 903.3.8.5, 904.12, 905.2.1.4, 907.6.4, 914.3.2, 1019.3, Table 1103.4, 1206.2.11.1, 1206.3.5.1, 3201.1, 3204.2, Table 3206.2, 3206.4.1, 3206.10,

3207.2, 3207.2.1, 3208.2.2, 3208.2.2.1, 3208.4, 3210.1, 3401.1, 5104.1, 5104.1.1, 5106.5.7, 5704.3.3.9, Table 5704.3.6.3(7), 5704.3.7.5.1, 5704.3.8.4.

Subp. 2. **NFPA 13D.** Standard NFPA 13D as listed in chapter 80 is amended to read as follows:

13D - 16: Standard for the Installation of Sprinkler Systems in One- and Two-family Dwellings and Manufactured Homes.

903.3.1.3, 903.3.1.6.6.

Subp. 3. **NFPA 14.** Standard NFPA 14 as listed in chapter 80 is amended to read as follows:

14 - 16: Standard for the Installation of Standpipe and Hose Systems.

905.2, 905.4.2, 905.6.2, 905.8.

Subp. 4. **NFPA 30.** Standard NFPA 30 as listed in chapter 80 is amended to read as follows:

30 - 18: Flammable and Combustible Liquids Code.

608.1, 5701.2, 5703.6.2, 5703.6.2.1, 5704.2.7, 5704.2.7.1, 5704.2.7.2, 5704.2.7.3.2, 5704.2.7.4, 5704.2.7.6, 5704.2.7.7, 5704.2.7.8, 5704.2.7.9, 5704.2.9.3, 5704.2.9.4, 5704.2.9.6.1.1, 5704.2.9.6.1.2, 5704.2.9.6.1.3, 5704.2.9.6.1.4, 5704.2.9.6.1.5, 5704.2.9.6.2, 5704.2.9.7.3, 5704.2.10.2, 5704.2.11.2.1, 5704.2.11.3, 5704.2.11.4.2, 5704.2.12.1, 5704.3.1, 5704.3.1.2, 5704.3.6, Table 5704.3.6.3(1), Table 5704.3.6.3(2), Table 5704.3.6.3(3), 5704.3.7.2.3, 5704.3.8.4, 5706.8.3.

Subp. 5. **NFPA 58.** Standard NFPA 58 as listed in chapter 80 is amended to read as follows:

58 - 17: Liquefied Petroleum Gas Code.

319.8.3, 603.4.2.1.1, 2311.5, 3903.6, 6101.1, 6102.1.

Subp. 6. **NFPA 72.** Standard NFPA 72 as listed in Chapter 80 is amended to read as follows:

72 - 16: National Fire Alarm and Signaling Code.

508.1.6, Table 901.6.1, 903.4.1, 904.3.5, 907.2, 907.2.10, 907.2.1.2, 907.2.1.3, 907.2.12.2, 907.5.2.1.2, 907.5.2.2, 907.5.2.2.5, 907.6, 907.6.1, 907.6.2, 907.7, 907.7.1, 907.7.2, 907.8, 907.8.2, 907.8.5, 917.1, 1103.7.1.3, 1103.7.6, 1103.7.6.1, 1203.2.4, 2810.11.

Subp. 7. **NFPA 96.** Standard NFPA 96 as listed in chapter 80 is amended to read as follows:

96 - 2017: Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations.

607.2, 607.3, 904.12.

Subp. 8. **NFPA 99.** Standard NFPA 99 as listed in chapter 80 is amended to read as follows:

99 - 2012: Health Care Facilities Code.

609.1, 1203.4.1, 1203.5.1, 5306.4, 5306.5, 5306.6.

Subp. 9. **NFPA 101.** Standard NFPA 101 as listed in chapter 80 is amended to read as follows:

101 - 2012: Life Safety Code.

102.13, 102.13.1, 1029.6.2, 1101.5, 1104.17.2.3.

Subp. 10. **NFPA 204.** Standard NFPA 204 as listed in chapter 80 is amended to read as follows:

204 - 15: Standard for Smoke and Heat Venting.

Table 901.6.1, 910.5.1, 910.5.2, 910.7.

Subp. 11. **NFPA 289.** Standard NFPA 289 as listed in chapter 80 is amended to read as follows:

289 - 18: Standard Method of Fire Test for Individual Fuel Packages.

807.3, 807.4.1, 807.5.1.1, 807.5.3.4, 808.3.

Subp. 12. **NFPA 701.** Standard NFPA 701 as listed in chapter 80 is amended to read as follows:

701 - 15: Standard Methods of Fire Tests for Flame-propagation of Textiles and Films.

807.3, 807.4.1, 807.5.1.2, 807.5.3.4, 2603.5, 3104.2.

7511.8100 CHAPTER 81 - ADULT DAY SERVICES CENTERS, RESIDENTIAL HOSPICE FACILITIES AND SUPERVISED LIVING FACILITIES.

The IFC is amended by adding Chapter 81 to read:

CHAPTER 81

ADULT DAY SERVICES CENTERS, RESIDENTIAL HOSPICE FACILITIES AND SUPERVISED LIVING FACILITIES

SECTION 8101

GENERAL

8101.1 Requirements. Adult day services centers, residential hospice facilities and supervised living facilities shall meet the requirements of this chapter.

SECTION 8102

ADULT DAY SERVICES CENTERS

8102.1 Classification of adult day services centers. Adult day services centers are classified in accordance with the following and must meet the fire safety requirements for the designated occupancy classification.

8102.1.1 Serving only participants capable of self-preservation. Centers serving only participants who are capable of taking appropriate action for self-preservation under emergency conditions shall meet all applicable requirements for Group E occupancies.

8102.1.2 Serving only participants not capable of self-preservation. Centers serving only participants who are not capable of taking appropriate action for self-preservation under emergency conditions shall meet all applicable requirements for Group I-4 occupancies.

8102.1.3 Serving both participants capable and participants not capable of self-preservation. Centers serving a population that includes both participants who are capable and participants who are not capable of taking appropriate action for self-preservation under emergency conditions shall meet the occupancy requirements for Group I-4 or Group E occupancies. In addition to the requirements for Group E occupancies, the center shall meet the requirements set forth in Sections 8102.1.3.1 through 8102.1.3.4.

8102.1.3.1 Population. Not more than 50 percent of the center's licensed capacity shall be made up of participants who are not capable of taking appropriate action for self-preservation under emergency conditions.

8102.1.3.2 Location. The center must be located on a floor level with all exits directly to grade without any intervening stairs.

8102.1.3.3 Fire alarm and detection. The center shall be protected with a complete automatic fire alarm system consisting of automatic smoke detection in all corridors

and at the top of all stairways and automatic detection in boiler and furnace rooms, kitchens, storage rooms, custodial closets, laundries, and other hazardous areas.

8102.1.3.4 Evacuation time. The center shall demonstrate the ability to evacuate the entire population of the center within three minutes.

SECTION 8103

RESIDENTIAL HOSPICE FACILITIES

8103.1 Classification of residential hospice facilities. Residential hospice facilities meeting the fire-protection provisions of Chapter 32 of NFPA Standard No. 101 (Quincy, Massachusetts, 2012) for impractical evacuation capabilities shall be classified as Group R-4 occupancies, if serving six to 12 persons, or as Group R-3 occupancies, if serving five or fewer persons. For purposes of this section, Standard No. 101 (2012) Chapter 32 is incorporated by reference, is not subject to frequent change and is available at the State Law Library, 25 Rev. Dr. Martin Luther King Jr. Blvd., St. Paul, Minnesota 55155.

SECTION 8104

SUPERVISED LIVING FACILITIES

8104.1 Classification of supervised living facilities. Supervised living facilities are classified in accordance with Chapter 2 and must meet the fire safety requirements for the designated occupancy classification.

8104.1.1 Class A-1 supervised living facilities. Class A-1 supervised living facilities must meet Group R-3 occupancy requirements.

8104.1.2 Class A-2 supervised living facilities. Class A-2 supervised living facilities housing not more than 16 persons, excluding staff, must meet Group R-4 occupancy requirements. Class A-2 supervised living facilities housing more than 16 persons, excluding staff, must meet Group I-1 occupancy requirements.

8104.1.3 Class B-1 supervised living facilities. Class B-1 supervised living facilities meeting the fire-protection provisions of Chapter 32 of NFPA Standard No. 101 (Quincy, Massachusetts, 2012) for impractical evacuation capabilities shall be classified as Group R-3 occupancies. For the purposes of Sections 8104.1.3 and 8104.1.4, Standard No. 101 (2012) Chapter 32 is incorporated by reference, is not subject to frequent change and is available at the State Law Library, 25 Rev. Dr. Martin Luther King Jr. Blvd., Saint Paul, Minnesota 55155.

8104.1.4 Class B-2 supervised living facilities. Class B-2 supervised living facilities meeting the fire-protection provisions of Chapter 32 of NFPA Standard No. 101 (Quincy, Massachusetts, 2012) for impractical evacuation capabilities shall be classified as Group R-4 occupancies.

8104.1.5 Class B-3 supervised living facilities. Class B-3 supervised living facilities must meet Group I-2 occupancy requirements.

REPEALER. Minnesota Rules, parts 7511.0308, subpart 2; 7511.0408, subparts 1 and 2; 7511.0604, subparts 2 and 3; 7511.0605; 7511.0807, subpart 2; 7511.0903, subpart 5; 7511.0907, subpart 13; 7511.0908; 7511.1001, subpart 1a; 7511.1007; 7511.1015; 7511.1029, subparts 2 and 3; 7511.1103, subpart 5; 7511.2307; 7511.5001; and 7511.5501, are repealed.

EFFECTIVE DATE. The amendments to this chapter are effective March 31, 2020, or five business days after publication of the notice of adoption appears in the State Register, whichever is later.

MINNESOTA
OFFICE OF
ADMINISTRATIVE
HEARINGS

PO Box 64620
Saint Paul, MN 55164-0620
mn.gov/oah

PH (651) 361-7900
TTY (651) 361-7878
FAX (651) 539-0310

November 7, 2019

VIA EMAIL ONLY
Nancy Breems
Secretary of State, Elections Division
180 State Office Building
100 Rev Dr Martin Luther King Jr Blvd
St. Paul, Minnesota 55155-1299
official.documents@state.mn.us

Re: ***In the Matter of the Proposed Rules Relating to Chapter 7511 - State Fire Code***
OAH 60-9001-35631; Revisor R-4516

Dear Ms. Breems:

Enclosed for filing is an electronic copy of the above-entitled adopted rules.

Please send the agency copy of the rules to:

Wendy Wilson Legge
General Counsel
443 Lafayette Ave N
Saint Paul, MN 55155
wendy.legge@state.mn.us

If you have any questions regarding this matter, please contact Sheena Denny at (651) 361-7881, sheena.denny@state.mn.us or via facsimile at (651) 539-0310.

Sincerely,

Lisa Armstrong

Lisa Armstrong
Legal Assistant

Enclosures
cc: Wendy Wilson Legge (via email)