**Chapter 19 Existing Health Care Occupancies**

19.1 General Requirements

19.1.1 Application

19.1.1.1 General

19.1.1.1.1\*

The requirements of this chapter shall apply to existing buildings or portions thereof currently occupied as health care occupancies, unless the authority having jurisdiction has determined equivalent safety has been provided in accordance with Section 1.4.

19.1.1.1.2 Administration

The provisions of Chapter 1, Administration, shall apply.

19.1.1.1.3 General

The provisions of Chapter 4, General, shall apply.

19.1.1.1.4

The requirements established by this chapter shall apply to all existing hospitals, nursing homes, and limited care facilities. The term hospital, wherever used in this Code, shall include general hospitals, psychiatric hospitals, and specialty hospitals. The term nursing home, wherever used in this Code, shall include nursing and convalescent homes, skilled nursing facilities, intermediate care facilities, and infirmaries in homes for the aged. Where requirements vary, the specific subclass of health care occupancy that shall apply is named in the paragraph pertaining thereto. The requirements established by Chapter 21 shall apply to all existing ambulatory health care facilities. The operating features requirements established by Section 19.7 shall apply to all health care occupancies.

19.1.1.1.5

The health care facilities regulated by this chapter shall be those that provide sleeping accommodations for their occupants and are occupied by persons who are mostly incapable of self-preservation because of age, because of physical or mental disability, or because of security measures not under the occupants' control.

19.1.1.1.6

Buildings, or sections of buildings, that primarily house patients who, in the opinion of the governing body of the facility and the governmental agency having jurisdiction, are capable of exercising judgment and appropriate physical action for self-preservation under emergency conditions shall be permitted to comply with chapters of the Code other than Chapter 19.

19.1.1.1.7\*

It shall be recognized that, in buildings housing certain patients, it might be necessary to lock doors and bar windows to confine and protect building inhabitants.

19.1.1.1.8

Buildings, or sections of buildings, that house older persons and that provide activities that foster continued independence but do not include services distinctive to health care occupancies (see 19.1.4.2), as defined in 3.3.198.7, shall be permitted to comply with the requirements of other chapters of this Code, such as Chapters 31 or 33.

19.1.1.1.9\*

The requirements of this chapter shall apply based on the assumption that staff is available in all patient-occupied areas to perform certain emergency control functions as required in other paragraphs of this chapter.

19.1.1.2\* Goals and Objectives

The goals and objectives of Sections 4.1 and 4.2 shall be met with due consideration for functional requirements, which are accomplished by limiting the development and spread of a fire emergency to the room of fire origin and reducing the need for occupant evacuation, except from the room of fire origin.

19.1.1.3 Total Concept

19.1.1.3.1

All health care facilities shall be designed, constructed, maintained, and operated to minimize the possibility of a fire emergency requiring the evacuation of occupants.

19.1.1.3.2

Because the safety of health care occupants cannot be ensured adequately by dependence on evacuation of the building, their protection from fire shall be provided by appropriate arrangement of facilities; adequate, trained staff; and development of operating and maintenance procedures composed of the following:

Design, construction, and compartmentation

Provision for detection, alarm, and extinguishment

Fire prevention procedures and planning, training, and drilling programs for the isolation of fire, transfer of occupants to areas of refuge, or evacuation of the building

19.1.1.4 Additions, Conversions, Modernization, Renovation, and Construction Operations

19.1.1.4.1 Additions

Additions shall be separated from any existing structure not conforming to the provisions within Chapter 19 by a fire barrier having not less than a 2-hour fire resistance rating and constructed of materials as required for the addition. (See 4.6.7 and 4.6.11.)

19.1.1.4.1.1

Communicating openings in dividing fire barriers required by 19.1.1.4.1 shall be permitted only in corridors and shall be protected by approved self-closing fire door assemblies. (See also Section 8.3.)

19.1.1.4.1.2

Doors in barriers required by 19.1.1.4.1 shall normally be kept closed, unless otherwise permitted by 19.1.1.4.1.3.

19.1.1.4.1.3

Doors shall be permitted to be held open if they meet the requirements of 19.2.2.2.8.

19.1.1.4.2 Changes of Use or Occupancy Classification

Changes of use or occupancy classification shall comply with 4.6.11, unless otherwise permitted by one of the following:

A change from a hospital to a nursing home or from a nursing home to a hospital shall not be considered a change in occupancy classification or a change in use.

A change from a hospital or nursing home to a limited care facility shall not be considered a change in occupancy classification or a change in use.

19.1.1.4.3 Rehabilitation

19.1.1.4.3.1

For purposes of the provisions of this chapter, the following shall apply:

A major rehabilitation shall involve the modification of more than 50 percent, or more than 4500 ft2 (420 m2) gross, of the area of the smoke compartment.

A minor rehabilitation shall involve the modification of not more than 50 percent, and not more than 4500 ft2 (420 m2) gross, of the area of the smoke compartment.

19.1.1.4.3.2

Work that is exclusively plumbing, mechanical, fire protection system, electrical, medical gas, or medical equipment work shall not be included in the computation of the modification area within the smoke compartment.

19.1.1.4.3.3\*

Where major rehabilitation is done in a nonsprinklered smoke compartment, the automatic sprinkler requirements of 18.3.5 shall apply to the smoke compartment undergoing the rehabilitation, and, in cases where the building is not protected throughout by an approved automatic sprinkler system, the requirements of 18.4.5.2, 18.4.5.3, and 18.4.5.8 shall also apply.

19.1.1.4.3.4\*

Where minor rehabilitation is done in a nonsprinklered smoke compartment, the requirements of 18.3.5.1 shall not apply, but, in such cases, the rehabilitation shall not reduce life safety below the level required for new buildings or below the level of the requirements of 18.4.4 for nonsprinklered smoke compartment rehabilitation. (See 4.6.7.)

19.1.1.4.4 Construction, Repair, and Improvement Operations

See 4.6.10.

19.1.2 Classification of Occupancy

See 6.1.5 and 19.1.4.2.

19.1.3 Multiple Occupancies

19.1.3.1

Multiple occupancies shall be in accordance with 6.1.14.

19.1.3.2

Atrium walls in accordance with 6.1.14.4.6 shall be permitted to serve as part of the separation required by 6.1.14.4.1 for creating separated occupancies on a story-by-story basis, provided both of the following are met:

The provision is not used for occupancy separations involving industrial and storage occupancies.

Smoke partitions serving as atrium walls are not permitted to serve as enclosures for hazardous areas.

19.1.3.3

Sections of health care facilities shall be permitted to be classified as other occupancies in accordance with the separated occupancies provisions of 6.1.14.4 and either 19.1.3.4 or 19.1.3.5.

19.1.3.4\*

Sections of health care facilities shall be permitted to be classified as other occupancies, provided that they meet all of the following conditions:

They are not intended to provide services simultaneously for four or more inpatients for purposes of housing, treatment, or customary access by inpatients incapable of self-preservation.

They are separated from areas of health care occupancies by construction having a minimum 2-hour fire resistance rating in accordance with Chapter 8.

For other than previously approved occupancy separation arrangements, the entire building is protected throughout by an approved, supervised automatic sprinkler system in accordance with Section 9.7.

19.1.3.5 Contiguous Non-Health Care Occupancies

19.1.3.5.1\*

Ambulatory care facilities, medical clinics, and similar facilities that are contiguous to health care occupancies, but are primarily intended to provide outpatient services, shall be permitted to be classified as business occupancies or ambulatory health care facilities, provided that the facilities are separated from the health care occupancy by not less than 2-hour fire-resistance-rated construction, and the facility is not intended to provide services simultaneously for four or more inpatients who are litterborne.

19.1.3.5.2

Ambulatory care facilities, medical clinics, and similar facilities that are contiguous to health care occupancies shall be permitted to be used for diagnostic and treatment services of inpatients who are capable of self-preservation.

19.1.3.6

Where separated occupancies provisions are used in accordance with either 19.1.3.4 or 19.1.3.5, the most stringent construction type shall be provided throughout the building, unless a 2-hour separation is provided in accordance with 8.2.1.3, in which case the construction type shall be determined as follows:

The construction type and supporting construction of the health care occupancy shall be based on the story on which it is located in the building in accordance with the provisions of 19.1.6 and Table 19.1.6.1.

The construction type of the areas of the building enclosing the other occupancies shall be based on the applicable occupancy chapters of this Code.

19.1.3.7

All means of egress from health care occupancies that traverse non-health care spaces shall conform to the requirements of this Code for health care occupancies, unless otherwise permitted by 19.1.3.8.

19.1.3.8

Exit through a horizontal exit into other contiguous occupancies that do not conform to health care egress provisions, but that do comply with requirements set forth in the appropriate occupancy chapter of this Code, shall be permitted, provided that both of the following criteria apply:

The occupancy does not contain high-hazard contents.

The horizontal exit complies with the requirements of 19.2.2.5.

19.1.3.9

Egress provisions for areas of health care facilities that correspond to other occupancies shall meet the corresponding requirements of this Code for such occupancies, and, where the clinical needs of the occupant necessitate the locking of means of egress, staff shall be present for the supervised release of occupants during all times of use.

19.1.3.10

Auditoriums, chapels, staff residential areas, or other occupancies provided in connection with health care facilities shall have means of egress provided in accordance with other applicable sections of this Code.

19.1.3.11

Any area with a hazard of contents classified higher than that of the health care occupancy and located in the same building shall be protected as required by 19.3.2.

19.1.3.12

Non-health-care-related occupancies classified as containing high-hazard contents shall not be permitted in buildings housing health care occupancies.

19.1.4 Definitions

19.1.4.1 General

For definitions, see Chapter 3, Definitions.

19.1.4.2 Special Definitions

The following is a list of special terms used in this chapter:

Ambulatory Health Care Occupancy. See 3.3.198.1.

Deep-Fat Frying. See 3.3.56.

Gross Floor Area (Health Care and Ambulatory Health Care Occupancies). See 3.3.22.2.3.

Hospital. See 3.3.152.

Limited Care Facility. See 3.3.93.2.

Nursing Home. See 3.3.150.2.

Self-Preservation Capability (Health Care and Ambulatory Health Care Occupancies). See 3.3.253.

19.1.5 Classification of Hazard of Contents

The classification of hazard of contents shall be as defined in Section 6.2.

19.1.6 Minimum Construction Requirements

19.1.6.1\*

Health care occupancies shall be limited to the building construction types specified in Table 19.1.6.1, unless otherwise permitted by 19.1.6.2 through 19.1.6.6. (See 8.2.1.)

Table 19.1.6.1 Construction Type Limitations

Construction Type Sprinklereda Total Number of Stories of Buildingb

1 2 3 ≥4

I (442) Yes X X X X

No X X X X

I (332) Yes X X X X

No X X X X

II (222) Yes X X X X

No X X X X

II (111) Yes X X X NPc

No X NP NP NP

II (000) Yes X X NPc NPd

No NP NP NP NP

III (211) Yes X X NPc NPc

No NP NP NP NP

III (200) Yes X NPc NPd NP

No NP NP NP NP

IV (2HH) Yes X Xe,f NPc,e NPc,e

No NP NP NP NP

V (111) Yes X X NPc NPc

No NP NP NP NP

V (000) Yes X NPc NPd NP

No NP NP NP NP

X: Permitted. NP: Not permitted.

The total number of stories of the building is to be determined as follows:

The total number of stories is to be counted starting with the level of exit discharge and ending with the highest occupiable story of the building.

Stories below the level of exit discharge are not counted as stories.

Interstitial spaces used solely for building or process systems directly related to the level above or below are not considered a separate story.

A mezzanine in accordance with 8.6.10 is not counted as a story.

aSprinklered throughout by an approved, supervised automatic sprinkler system in accordance with Section 9.7. (See 19.3.5.)

bBasements are not counted as stories.

Permitted for nursing homes where the requirements of 19.1.6.7 are met.

dPermitted for nursing homes where the requirements of 19.1.6.8 are met.

eUp to and including four stories in height permitted for buildings complying with 4.5.6.1.1 of NFPA 220.

fUp to and including two stories in height permitted for buildings complying with 4.5.6.1.2 of NFPA 220.

19.1.6.2\*

Any building of Type I(442), Type I(332), Type II(222), or Type II(111) construction shall be permitted to include roofing systems involving combustible or non-fire-rated steel supports, decking, or roofing, provided that all of the following criteria are met:

The roof covering shall meet Class C requirements in accordance with ASTM E108, Standard Test Methods for Fire Tests of Roof Coverings, or UL 790, Test Methods for Fire Tests of Roof Coverings.

The roof shall be separated from all occupied portions of the building by a noncombustible floor assembly that includes not less than 21/2 in. (63 mm) of concrete or gypsum fill.

The attic or other space shall be either unoccupied or protected throughout by an approved automatic sprinkler system.

19.1.6.3

Any building of Type I(442), Type I(332), Type II(222), or Type II(111) construction shall be permitted to include roofing systems involving combustible supports, decking, or roofing, provided that all of the following criteria are met:

The roof covering shall meet Class A requirements in accordance with ASTM E108, Standard Test Methods for Fire Tests of Roof Coverings, or UL 790, Test Methods for Fire Tests of Roof Coverings.

The roof/ceiling assembly shall be constructed with fire-retardant-treated wood meeting the requirements of NFPA 220.

The roof/ceiling assembly shall have the required fire resistance rating for the type of construction.

19.1.6.4

Interior nonbearing walls in buildings of Type I or Type II construction shall be constructed of noncombustible or limited-combustible materials, unless otherwise permitted by 19.1.6.5.

19.1.6.5

Interior nonbearing walls required to have a fire resistance rating of 2 hours or less shall be permitted to be fire-retardant-treated wood enclosed within noncombustible or limited-combustible materials, provided that such walls are not used as shaft enclosures.

19.1.6.6

Each exterior wall of frame construction and all interior stud partitions shall be firestopped to cut off all concealed draft openings, both horizontal and vertical, between any cellar or basement and the first floor, and such firestopping shall consist of wood not less than 2 in. (51 mm) (nominal) thick or shall be of noncombustible material.

19.1.6.7

Where required by footnote C in Table 19.1.6.1, nursing homes shall meet all of the following:

The building shall be protected throughout by an approved, supervised automatic sprinkler system in accordance with 9.7.1.1(1) using listed, quick-response automatic sprinklers throughout the building or listed, standard-response automatic sprinklers where approved, electrically supervised smoke detection in accordance with 19.3.4 is installed in each room occupied or used by patients.

All patients shall have a mobility status classified as mobile, limited mobility, or not mobile in accordance with 19.1.6.9.

\*Not less than one attendant per smoke compartment shall be provided.

All interior wall and ceiling finishes shall have a Class A flame spread classification.

The building shall be provided with an approved fire alarm system in accordance with Section 19.6.

Emergency forces notification shall be accomplished in accordance with 9.6.4.2.

The number of stories shall not exceed 6.

19.1.6.8

Where required by footnote D in Table 19.1.6.1, nursing homes shall meet all of the following:

The building shall be protected throughout by an approved, supervised automatic sprinkler system in accordance with 9.7.1.1(1) using listed, quick-response automatic sprinklers throughout the building or listed, standard-response automatic sprinklers where approved, electrically supervised smoke detection in accordance with 19.3.4 is installed in each room occupied or used by patients.

All patients shall have a mobility status classified as mobile, limited mobility, or not mobile in accordance with 19.1.6.9.

\*Not less than one attendant per smoke compartment shall be provided.

All interior wall and ceiling finishes shall have a Class A flame spread classification.

The building shall be provided with an approved fire alarm system in accordance with Section 9.6.

Emergency forces notification shall be accomplished in accordance with 9.6.4.2.

Corridors shall be separated from all other areas by partitions having a fire resistance rating of not less than 1/2 hour.

Corridor doors shall be constructed of at least 13/4 in. thick, solid-bonded core wood or other approved material that resists fire for a minimum of 20 minutes.

The number of stories shall not exceed 6.

19.1.6.9\*

Where required by 19.1.6.7 or 19.1.6.8, patient mobility status shall be classified as mobile, limited mobility, or not mobile in accordance with 19.1.6.9.1 through 19.1.6.9.3.

19.1.6.9.1

Patients classified as mobile shall meet all of the following:

Capable of readily rising from bed and taking self-protecting actions at approximately the same rate as a healthy adult

Capable of getting out of bed without assistance

Capable of opening a closed or locked door

Not restrained or in any other way limited in response capabilities so that the type of arousal mechanism that normally would awaken an adult is effective

19.1.6.9.2

Patients classified as having limited mobility shall meet the requirements of 19.1.6.9.1 except that their rate of travel is significantly slower than a patient classified as mobile.

19.1.6.9.3\*

Patients classified as not mobile shall be incapable of removing themselves from danger exclusively by their own efforts.

19.1.7 Occupant Load

The occupant load, in number of persons for whom means of egress and other provisions are required, either shall be determined on the basis of the occupant load factors of Table 7.3.1.2 that are characteristic of the use of the space or shall be determined as the maximum probable population of the space under consideration, whichever is greater.

19.2 Means of Egress Requirements

19.2.1 General

Every aisle, passageway, corridor, exit discharge, exit location, and access shall be in accordance with Chapter 7, unless otherwise modified by 19.2.2 through 19.2.11.

19.2.2 Means of Egress Components

19.2.2.1 Components Permitted

Components of means of egress shall be limited to the types described in 19.2.2.2 through 19.2.2.10.

19.2.2.2 Doors

19.2.2.2.1

Doors complying with 7.2.1 shall be permitted.

19.2.2.2.2

Locks shall not be permitted on patient sleeping room doors, unless otherwise permitted by one of the following:

Locking devices that restrict access to the room from the corridor and that are operable by staff from the corridor side shall be permitted, provided that such devices do not restrict egress from the room.

Locks complying with 19.2.2.2.5 shall be permitted.

19.2.2.2.3

Doors not located in a required means of egress shall be permitted to be subject to locking.

19.2.2.2.4

Doors within a required means of egress shall not be equipped with a latch or lock that requires the use of a tool or key from the egress side, unless otherwise permitted by one of the following:

Locks complying with 19.2.2.2.5 shall be permitted.

\*Delayed-egress electrical locking systems complying with 7.2.1.6.1 shall be permitted.

\*Sensor-release of electrical locking systems complying with 7.2.1.6.2 shall be permitted.

Elevator lobby exit access door locking in accordance with 7.2.1.6.4 shall be permitted.

Approved existing door-locking installations shall be permitted.

19.2.2.2.5

Door-locking arrangements shall be permitted in accordance with either 19.2.2.2.5.1 or 19.2.2.2.5.2.

19.2.2.2.5.1\*

Door-locking arrangements shall be permitted where the clinical needs of patients require specialized security measures or where patients pose a security threat, provided that staff can readily unlock doors at all times in accordance with 19.2.2.2.6.

19.2.2.2.5.2\*

Door-locking arrangements shall be permitted where patient special needs require specialized protective measures for their safety, provided that all of the following are met:

Staff can readily unlock doors at all times in accordance with 19.2.2.2.6.

A total (complete) smoke detection system is provided throughout the locked space in accordance with 9.6.2.9, or locked doors can be remotely unlocked at an approved, constantly attended location within the locked space.

\*The building is protected throughout by an approved, supervised automatic sprinkler system in accordance with 19.3.5.7.

The locks are electrical locks that fail safely so as to release upon loss of power to the device.

The locks release by independent activation of each of the following:

Activation of the smoke detection system required by 19.2.2.2.5.2(2)

Waterflow in the automatic sprinkler system required by 19.2.2.2.5.2(3)

Hardware for new electric lock installations is listed in accordance with UL 294, Access Control System Units.

19.2.2.2.6

Doors that are located in the means of egress and are permitted to be locked under other provisions of 19.2.2.2.5 shall comply with all of the following:

Provisions shall be made for the rapid removal of occupants by means of one of the following:

Remote control of locks

Keying of all locks to keys carried by staff at all times

Other such reliable means available to the staff at all times

Only one locking device shall be permitted on each door.

More than one lock shall be permitted on each door, subject to approval of the authority having jurisdiction.

19.2.2.2.7\*

Doors permitted to be locked in accordance with 19.2.2.2.5.1 shall be permitted to have murals on the egress doors to disguise the doors, provided all of the following are met:

Staff can readily unlock the doors at all times in accordance with 19.2.2.2.6.

\*The door-releasing hardware, where provided, is readily accessible for staff use.

\*Door leaves, windows, and door hardware, other than door-releasing hardware, are permitted to be covered by the murals.

The murals do not impair the operation of the doors.

The affected smoke compartments are protected throughout by an approved, supervised automatic sprinkler system in accordance with 19.3.5.7.

The location and operation of doors disguised with murals are identified in the fire safety plan and are included in staff training.

Any modification to a fire door complies with NFPA 80.

19.2.2.2.8\*

Any door in an exit passageway, stairway enclosure, horizontal exit, smoke barrier, or hazardous area enclosure shall be permitted to be held open only by an automatic release device that complies with 7.2.1.8.2. The automatic sprinkler system, if provided, and the fire alarm system, and the systems required by 7.2.1.8.2, shall be arranged to initiate the closing action of all such doors throughout the smoke compartment or throughout the entire facility.

19.2.2.2.9

Where doors in a stair enclosure are held open by an automatic release device as permitted in 19.2.2.2.8, initiation of a door-closing action on any level shall cause all doors at all levels in the stair enclosure to close.

19.2.2.2.10\*

Existing health care occupancies shall be exempt from the re-entry provisions of 7.2.1.5.7.

19.2.2.2.11

Sliding doors shall be permitted in accordance with 19.2.2.2.11.1 or 19.2.2.2.11.2.

19.2.2.2.11.1

Special-purpose horizontally sliding accordion or folding door assemblies in accordance with 7.2.1.13 that are not automatic-closing shall be limited to a single leaf and shall have a latch or other mechanism that ensures that the doors will not rebound into a partially open position if forcefully closed.

19.2.2.2.11.2

Horizontal-sliding doors serving an occupant load of fewer than 10 shall be permitted, provided that all of the following criteria are met:

The area served by the door has no high-hazard contents.

The door is readily operable from either side without special knowledge or effort.

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

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

Where corridor doors are required to latch, the doors are equipped with a latch or other mechanism that ensures that the doors will not rebound into a partially open position if forcefully closed.

19.2.2.3 Stairs

Stairs complying with 7.2.2 shall be permitted.

19.2.2.4 Smokeproof Enclosures

Smokeproof enclosures complying with 7.2.3 shall be permitted.

19.2.2.5 Horizontal Exits

Horizontal exits complying with 7.2.4 and the modifications of 19.2.2.5.1 through 19.2.2.5.4 shall be permitted.

19.2.2.5.1

Accumulation space shall be provided in accordance with 19.2.2.5.1.1 and 19.2.2.5.1.2.

19.2.2.5.1.1

Not less than 30 net ft2 (2.8 net m2) per patient in a hospital or nursing home, or not less than 15 net ft2 (1.4 net m2) per resident in a limited care facility, shall be provided within the aggregated area of corridors, patient rooms, treatment rooms, lounge or dining areas, and other similar areas on each side of the horizontal exit.

19.2.2.5.1.2

On stories not housing bedridden or litterborne patients, not less than 6 net ft2 (0.56 net m2) per occupant shall be provided on each side of the horizontal exit for the total number of occupants in adjoining compartments.

19.2.2.5.2

The total egress capacity of the other exits (stairs, ramps, doors leading outside the building) shall not be reduced below one-third of that required for the entire area of the building.

19.2.2.5.3\*

A door in a horizontal exit shall not be required to swing with egress travel as specified in 7.2.4.3.8(1).

19.2.2.5.4

Door openings in horizontal exits shall be protected by one of the following methods:

Such door openings shall be protected by a swinging door providing a clear width of not less than 32 in. (810 mm).

Such door openings shall be protected by a special-purpose horizontally sliding accordion or folding door assemblies that complies with 7.2.1.13 and provides a clear width of not less than 32 in. (810 mm).

Such door openings shall be protected by an existing 34 in. (865 mm) swinging door.

19.2.2.6 Ramps

19.2.2.6.1

Ramps complying with 7.2.5 shall be permitted.

19.2.2.6.2

Ramps enclosed as exits shall be of sufficient width to provide egress capacity in accordance with 19.2.3.

19.2.2.7 Exit Passageways

Exit passageways complying with 7.2.6 shall be permitted.

19.2.2.8 Fire Escape Ladders

Fire escape ladders complying with 7.2.9 shall be permitted.

19.2.2.9 Alternating Tread Devices

Alternating tread devices complying with 7.2.11 shall be permitted.

19.2.2.10 Areas of Refuge

Areas of refuge used as part of a required accessible means of egress shall comply with 7.2.12.

19.2.3 Capacity of Means of Egress

19.2.3.1

The capacity of means of egress shall be in accordance with Section 7.3.

19.2.3.2

The capacity of means of egress providing travel by means of stairs shall be 0.6 in. (15 mm) per person, and the capacity of means of egress providing horizontal travel (without stairs) by means such as doors, ramps, or horizontal exits shall be 1/2 in. (13 mm) per person, unless otherwise permitted by 19.2.3.3.

19.2.3.3

The capacity of means of egress in health care occupancies protected throughout by an approved, supervised automatic sprinkler system in accordance with 19.3.5.7 shall be 0.3 in. (7.6 mm) per person for travel by means of stairs and 0.2 in. (5 mm) per person for horizontal travel without stairs.

19.2.3.4\*

Any required aisle, corridor, or ramp required for exit access shall be not less than 48 in. (1220 mm) in clear width where serving as means of egress from patient sleeping rooms, unless otherwise permitted by one of the following:

Aisles, corridors, and ramps in adjunct areas not intended for the housing, treatment, or use of inpatients shall be not less than 44 in. (1120 mm) in clear and unobstructed width.

\*Where corridor width is at least 6 ft (1830 mm), projections from the corridor wall shall be permitted by one of the following:

Noncontinuous projections not more than 4 in. (100 mm) from the corridor wall, positioned above handrail height, are permitted.

Noncontinuous projections of more than 4 in. (100 mm) but not more than 6 in. (150 mm) from the corridor wall are permitted provided that both of the following are met:

The projecting item is positioned above handrail height.

A vertical extension is provided below the projection such that the extension has a leading edge that is within 4 in. (100 mm) of the leading edge of the projection at a point that is 27 in. (685 mm) maximum above the floor.

Exit access within a room or suite of rooms complying with the requirements of 19.2.5 shall be permitted.

Projections into the required width shall be permitted for wheeled equipment, provided that all of the following conditions are met:

The wheeled equipment does not reduce the clear, unobstructed corridor width to less than 60 in. (1525 mm).

The health care occupancy fire safety plan and training program address the relocation of the wheeled equipment during a fire or similar emergency.

\*The wheeled equipment is limited to the following:

Equipment in use and carts in use

Medical emergency equipment not in use

Patient lift and transport equipment

\*Where the corridor width is at least 8 ft (2440 mm), projections into the required width shall be permitted for fixed furniture, provided that all of the following conditions are met:

The fixed furniture is securely attached to the floor or to the wall.

The fixed furniture does not reduce the clear, unobstructed corridor width to less than 6 ft (1830 mm), except as permitted by 19.2.3.4(2).

The fixed furniture is located only on one side of the corridor.

The fixed furniture is grouped such that each grouping does not exceed an area of 50 ft2 (4.6 m2).

The fixed furniture groupings addressed in 19.2.3.4(5)(d) are separated from each other by a distance of at least 10 ft (3050 mm).

\*The fixed furniture is located so as to not obstruct access to building service and fire protection equipment.

Corridors throughout the smoke compartment are protected by an electrically supervised automatic smoke detection system in accordance with 19.3.4, or the fixed furniture spaces are arranged and located to allow direct supervision by the facility staff from a nurses' station or similar space.

The smoke compartment is protected throughout by an approved, supervised automatic sprinkler system in accordance with 19.3.5.8.

Where the corridor width is at least 8 ft (2440 mm), projections into the required width shall be permitted for emergency stair travel devices, provided that all of the following conditions are met:

These devices do not reduce the clear, unobstructed corridor width to less than 72 in. (1830 mm).

These devices are secured to the wall.

Where furniture is placed in the corridor in accordance with 19.2.3.4(5), the emergency stair travel devices are placed on the same side of the corridor as the furniture.

These devices are located so as to not obstruct access to building service and fire protection equipment.

These devices are grouped such that each grouping does not exceed a projected floor area of 12 ft2 (3.7 m2).

The groupings addressed in 19.2.3.4(6)(e) are separated from each other by a distance of at least 10 ft (3050 mm).

The smoke compartment is protected throughout by an approved, supervised automatic sprinkler system in accordance with 19.3.5.8.

Where the corridor width is at least 8 ft (2440 mm), self-retracting seats fixed to the wall shall be permitted provided all of the following are met:

The seats comply with ASTM F851, Standard Test Method for Self-Rising Seat Mechanisms.

The seats automatically return to their normally retracted position, at which time the seat projection into the means of egress complies with 7.3.2.2 and does not interfere with the means of egress.

The self-retracting seats are normally in the retracted position and project not more than 4 in. (100 mm) from the wall.

Exposed upholstery components, where provided, meet the requirements for Class I when tested in accordance with NFPA 260.

19.2.3.5

The aisle, corridor, or ramp shall be arranged to avoid any obstructions to the convenient removal of nonambulatory persons carried on stretchers or on mattresses serving as stretchers.

19.2.3.6

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 in. (810 mm) wide.

19.2.3.7

The requirement of 19.2.3.6 shall not apply where otherwise permitted by the following:

Existing 34 in. (865 mm) doors shall be permitted.

Existing 28 in. (710 mm) corridor doors in facilities where the fire plans do not require evacuation by bed, gurney, or wheelchair shall be permitted.

19.2.4 Number of Means of Egress

19.2.4.1

The number of means of egress shall be in accordance with 7.4.1.1 and 7.4.1.3 through 7.4.1.6.

19.2.4.2

Not less than two exits shall be provided on every story.

19.2.4.3

Not less than two separate exits shall be accessible from every part of every story, except where rooms are not required to have a door leading directly to the exit access corridor, as permitted by 19.2.5.6.3.

19.2.4.4\*

Not less than two exits shall be accessible from each smoke compartment, and egress shall be permitted through an adjacent compartment(s), provided that the two required egress paths are arranged so that both do not pass through the same adjacent smoke compartment.

19.2.5 Arrangement of Means of Egress

19.2.5.1 General

Arrangement of means of egress shall comply with Section 7.5.

19.2.5.2 Reserved

19.2.5.3\* Dead-End Corridors

Existing dead-end corridors not exceeding 30 ft (9.1 m) shall be permitted. Existing dead-end corridors exceeding 30 ft (9.1 m) shall be permitted to continue in use if it is impractical and unfeasible to alter them.

19.2.5.4\* Intervening Rooms or Spaces

Every corridor shall provide access to not less than two approved exits in accordance with Sections 7.4 and 7.5 without passing through any intervening rooms or spaces other than corridors or lobbies.

19.2.5.5 Two Means of Egress

19.2.5.5.1

Sleeping rooms of more than 1000 ft2 (93 m2) gross shall have not less than two exit access doors remotely located from each other.

19.2.5.5.2

Nonsleeping rooms of more than 2500 ft2 (230 m2) gross shall have not less than two exit access doors remotely located from each other.

19.2.5.6 Corridor Access

19.2.5.6.1\*

Every habitable room shall have an exit access door leading directly to an exit access corridor, unless otherwise provided in 19.2.5.6.2, 19.2.5.6.3, and 19.2.5.6.4.

19.2.5.6.2

Exit access from a patient sleeping room with not more than eight patient beds shall be permitted to pass through one intervening room to reach an exit access corridor, provided that the intervening room is equipped with an approved automatic smoke detection system in accordance with Section 9.6, or the furnishings and furniture, in combination with all other combustibles within the area, are of such minimum quantity and arrangements that a fully developed fire is unlikely to occur.

19.2.5.6.3

Rooms having an exit door opening directly to the outside from the room at the finished ground level shall not be required to have an exit access door leading directly to an exit access corridor.

19.2.5.6.4

Rooms within suites complying with 19.2.5.7 shall not be required to have an exit access door leading directly to an exit access corridor.

19.2.5.7 Health Care Suites

19.2.5.7.1 General

19.2.5.7.1.1 Suite Permission

Suites complying with 19.2.5.7 shall be permitted to be used to meet the corridor access requirements of 19.2.5.6.

19.2.5.7.1.2\* Suite Separation

Suites shall be separated from the remainder of the building, and from other suites, by one of the following:

Walls and doors meeting the requirements of 19.3.6.2 through 19.3.6.5

Existing approved barriers and doors that limit the transfer of smoke

19.2.5.7.1.3 Suite Hazardous Contents Areas

(A)\*

Intervening rooms shall not be hazardous areas as defined by 19.3.2.

(B)

Hazardous areas within a suite shall be separated from the remainder of the suite in accordance with 19.3.2.1, unless otherwise provided in 19.2.5.7.1.3(C) or 19.2.5.7.1.3(D).

(C)\*

Hazardous areas within a suite shall not be required to be separated from the remainder of the suite where complying with both of the following:

The suite is primarily a hazardous area.

The suite is separated from the rest of the health care facility as required for a hazardous area by 19.3.2.1.

(D)\*

Spaces containing sterile surgical materials limited to a one-day supply in operating suites or similar spaces that are sprinklered in accordance with 19.3.5.7 shall be permitted to be open to the remainder of the suite without separation.

19.2.5.7.1.4 Suite Subdivision

The subdivision of suites shall be by means of noncombustible or limited-combustible partitions or partitions constructed with fire-retardant-treated wood enclosed with noncombustible or limited-combustible materials, and such partitions shall not be required to be fire rated.

19.2.5.7.2 Sleeping Suites

Sleeping suites shall be in accordance with the following:

Patient care sleeping suites shall comply with the provisions of 19.2.5.7 2.1 through 19.2.5.7.2.4.

Sleeping suites not for patient care shall comply with the provisions of 19.2.5.7.4.

19.2.5.7.2.1 Patient Care Sleeping Suite Supervision

(A)

Patient care sleeping suites shall be provided with constant staff supervision within the suite.

(B)\*

Patient care sleeping suites shall be arranged in accordance with one of the following:

\*Patient sleeping rooms within patient care sleeping suites shall provide one of the following:

The patient sleeping rooms shall be arranged to allow for direct supervision from a normally attended location within the suite, such as is provided by glass walls, and cubicle curtains shall be permitted.

Any patient sleeping rooms without the direct supervision required by 19.2.5.7.2.1(B)(1)(a) shall be provided with smoke detection in accordance with Section 9.6 and 19.3.4.

Patient care sleeping suites shall be provided with a total (complete) coverage automatic smoke detection system in accordance with 9.6.2.9 and 19.3.4.

19.2.5.7.2.2 Patient Care Sleeping Suite Means of Egress

(A)

Patient care sleeping suites shall have exit access to a corridor complying with 19.3.6 or to a horizontal exit, directly from the suite.

(B)

Patient care sleeping suites of more than 1000 ft2 (93 m2) gross floor area shall have not less than two exit access doors remotely located from each other.

(C)\*

For suites requiring two exit access doors, one of the exit access doors from the suite shall be permitted to be to one of the following:

An exit stair

An exit passageway

An exit door to the exterior

Another suite, provided that the separation between the suites complies with the corridor requirements of 19.3.6.2 through 19.3.6.5

19.2.5.7.2.3 Patient Care Sleeping Suite Maximum Size

(A)

Patient care sleeping suites shall not exceed 5000 ft2 (460 m2) gross floor area, unless otherwise provided in 19.2.5.7.2.3(B) or 19.2.5.7.2.3(C).

(B)

Patient care sleeping suites shall not exceed 7500 ft2 (700 m2) gross floor area where the smoke compartment is protected throughout by one of the following:

Approved electrically supervised sprinkler system in accordance with 19.3.5.7 and total (complete) coverage automatic smoke detection in accordance with 9.6.2.9 and 19.3.4

Approved electrically supervised sprinkler system protection complying with 19.3.5.8

(C)

Patient care sleeping suites greater than 7500 ft2 (700 m2) gross floor area, and not exceeding 10,000 ft2 (930 m2) gross floor area, shall be permitted where all of the following are provided in the suite:

\*Direct visual supervision in accordance with 19.2.5.7.2.1(B)(1)(a)

Total (complete) coverage automatic smoke detection in accordance with 9.6.2.9 and 19.3.4

Approved electrically supervised sprinkler system protection complying with 19.3.5.8

19.2.5.7.2.4 Patient Care Sleeping Suite Travel Distance

(A)

Travel distance between any point in a sleeping suite and an exit access door to another suite, an exit access corridor door, or a horizontal exit door from that suite shall not exceed 100 ft (30 m).

(B)

Travel distance between any point in a sleeping suite and an exit shall not exceed the following:

150 ft (46 m) if the building is not protected throughout by an approved electrically supervised sprinkler system complying with 19.3.5.7

200 ft (61 m) if the building is protected throughout by an approved electrically supervised sprinkler system complying with 19.3.5.7

19.2.5.7.3 Patient Care Nonsleeping Suites

Nonsleeping suites shall be in accordance with the following:

Nonsleeping suites for patient care shall comply with the provisions of 19.2.5.7.3.1 through 19.2.5.7.3.3.

Nonsleeping suites not for patient care shall comply with the provisions of 19.2.5.7.4.

19.2.5.7.3.1 Patient Care Nonsleeping Suite Means of Egress

(A)

Patient care nonsleeping suites shall have exit access to a corridor complying with 19.3.6 or to a horizontal exit, directly from the suite.

(B)

Patient care nonsleeping suites of more than 2500 ft2 (230 m2) gross floor area shall have not less than two exit access doors remotely located from each other.

(C)\*

For suites requiring two exit access doors, one of the exit access doors shall be permitted to be to one of the following:

An exit stair

An exit passageway

An exit door to the exterior

Another suite, provided that the separation between the suites complies with the corridor requirements of 19.3.6.2 through 19.3.6.5

19.2.5.7.3.2 Patient Care Nonsleeping Suite Maximum Size

Patient care nonsleeping suites shall not exceed 10,000 ft2 (930 m2) gross floor area, unless otherwise provided in 19.2.5.7.3.2(A) or 19.2.5.7.3.2(B).

(A)

Patient care nonsleeping suites greater than 10,000 ft2 (930 m2) gross floor area and not exceeding 12,500 ft2 (1161 m2) gross floor area shall be permitted where the smoke compartment is protected throughout by one of the following:

Approved electrically supervised sprinkler system in accordance with 19.3.5.7 and total (complete) coverage automatic smoke detection in accordance with 9.6.2.9 and 19.3.4

Approved electrically supervised sprinkler system protection complying with 19.3.5.8

(B)

Patient care nonsleeping suites greater than 12,500 ft2 (1161 m2) gross floor area and not exceeding 15,000 ft2 (1394 m2) gross floor area shall be permitted where both of the following are provided in the suite:<

Total (complete) coverage automatic smoke detection in accordance with 9.6.2.9 and 19.3.4

Approved electrically supervised sprinkler system protection complying with 19.3.5.8

19.2.5.7.3.3 Patient Care Nonsleeping Suite Travel Distance

(A)

(B)

Travel distance between any point in a nonsleeping suite and an exit shall not exceed the following:

150 ft (46 m) if the building is not protected throughout by an approved electrically supervised sprinkler system complying with 19.3.5.7

200 ft (61 m) if the building is protected throughout by an approved electrically supervised sprinkler system complying with 19.3.5.7

19.2.5.7.4 Non-Patient-Care Suites

The egress provisions for non-patient-care suites shall be in accordance with the primary use and occupancy of the space.

19.2.6 Travel Distance to Exits

19.2.6.1

Diagram

Travel distance shall be measured in accordance with Section 7.6.

UpCodes Diagrams

P

Measurement of Travel Distance (NFPA 101)

19.2.6.2

Travel distance shall comply with 19.2.6.2.1 through 19.2.6.2.4.

19.2.6.2.1

The travel distance between any point in a room and an exit shall not exceed 150 ft (46 m), unless otherwise permitted by 19.2.6.2.2.

19.2.6.2.2

The maximum travel distance specified in 19.2.6.2.1 shall be permitted to be increased by 50 ft (15 m) in buildings protected throughout by an approved, supervised automatic sprinkler system in accordance with 19.3.5.7.

19.2.6.2.3

The travel distance between any point in a health care sleeping room and an exit access door in that room shall not exceed 50 ft (15 m).

19.2.6.2.4

The travel distance within suites shall be in accordance with 19.2.5.7.

19.2.7 Discharge From Exits

Discharge from exits shall be arranged in accordance with Section 7.7.

19.2.8 Illumination of Means of Egress

Means of egress shall be illuminated in accordance with Section 7.8.

19.2.9 Emergency Lighting

19.2.9.1

Emergency lighting shall be provided in accordance with Section 7.9.

19.2.9.2 Reserved

19.2.10 Marking of Means of Egress

19.2.10.1

Means of egress shall have signs in accordance with Section 7.10, unless otherwise permitted by 19.2.10.2, 19.2.10.3, or 19.2.10.4.

19.2.10.2

Where the path of egress travel is obvious, signs shall not be required in one-story buildings with an occupant load of fewer than 30 persons.

19.2.10.3

Where the path of egress travel is obvious, signs shall not be required at gates in outside secured areas.

19.2.10.4

Access to exits within rooms or sleeping suites shall not be required to be marked where staff is responsible for relocating or evacuating occupants.

19.2.11 Special Means of Egress Features. (Reserved)

19.3 Protection

19.3.1 Protection of Vertical Openings

Any vertical opening shall be enclosed or protected in accordance with Section 8.6, unless otherwise modified by 19.3.1.1 through 19.3.1.9.

19.3.1.1

Where enclosure is provided, the construction shall have not less than a 1-hour fire resistance rating.

19.3.1.2

Unprotected vertical openings in accordance with 8.6.9.1 shall be permitted.

19.3.1.3

Unenclosed vertical openings in accordance with 8.6.9.2 connecting not more than two contiguous stories shall be permitted.

19.3.1.4

Subparagraph 8.6.7(1)(b) shall not apply to patient sleeping and treatment rooms.

19.3.1.5

Multilevel patient sleeping areas in psychiatric facilities shall be permitted without enclosure protection between levels, provided that all of the following conditions are met:

The entire normally occupied area, including all communicating floor levels, is sufficiently open and unobstructed so that a fire or other dangerous condition in any part is obvious to the occupants or supervisory personnel in the area.

The egress capacity provides simultaneously for all the occupants of all communicating levels and areas, with all communicating levels in the same fire area being considered as a single floor area for purposes of determination of required egress capacity.

The height between the highest and lowest finished floor levels does not exceed 13 ft (3960 mm), and the number of levels is permitted to be unrestricted.

19.3.1.6

Unprotected openings in accordance with 8.6.6 shall not be permitted.

19.3.1.7

Where a full enclosure of a stairway that is not a required exit is impracticable, the required enclosure shall be permitted to be limited to that necessary to prevent a fire originating in any story from spreading to any other story.

19.3.1.8

A door in a stair enclosure shall be self-closing and shall normally be kept in the closed position, unless otherwise permitted by 19.3.1.9.

19.3.1.9

Doors in stair enclosures shall be permitted to be held open under the conditions specified by 19.2.2.2.7 and 19.2.2.2.8.

19.3.2 Protection From Hazards

19.3.2.1 Hazardous Areas

Any hazardous areas shall be safeguarded by a fire barrier having a 1-hour fire resistance rating or shall be provided with an automatic extinguishing system in accordance with 8.7.1.

19.3.2.1.1

An automatic extinguishing system, where used in hazardous areas, shall be permitted to be in accordance with 19.3.5.9.

19.3.2.1.2\*

Where the sprinkler option of 19.3.2.1 is used, the areas shall be separated from other spaces by smoke partitions in accordance with Section 8.4.

19.3.2.1.3

The doors shall be self-closing or automatic-closing.

19.3.2.1.4

Doors in rated enclosures shall be permitted to have nonrated, factory- or field-applied protective plates extending not more than 48 in. (1220 mm) above the bottom of the door.

19.3.2.1.5

Hazardous areas shall include, but shall not be restricted to, the following:

Boiler and fuel-fired heater rooms

Central/bulk laundries larger than 100 ft2 (9.3 m2)

Paint shops

Repair shops

Rooms with soiled linen in volume exceeding 64 gal (242 L)

Rooms with collected trash in volume exceeding 64 gal (242 L)

Rooms or spaces larger than 50 ft2 (4.6 m2), including repair shops, used for storage of combustible supplies and equipment in quantities deemed hazardous by the authority having jurisdiction

Laboratories employing flammable or combustible materials in quantities less than those that would be considered a severe hazard

19.3.2.2 Laboratories

19.3.2.2.1

Laboratories in which chemicals are handled or stored shall comply with the operational requirements of NFPA 45.

19.3.2.2.2

Laboratories employing quantities of flammable, combustible, or hazardous materials that are considered a severe hazard shall be protected in accordance with 8.7.1.1.

19.3.2.3 Hyperbaric Chambers

Health care occupancies housing hyperbaric chambers shall comply with 8.7.5.

19.3.2.4 Medical Gas

Medical gas storage shall be in accordance with Section 8.7 and the provisions of NFPA 99 applicable to operation, maintenance, and testing.

19.3.2.5 Cooking Facilities

19.3.2.5.1

Cooking facilities shall be protected in accordance with 9.2.3, unless otherwise permitted by 19.3.2.5.2, 19.3.2.5.3, or 19.3.2.5.4.

19.3.2.5.2\*

Where residential cooking equipment is used for food warming or limited cooking, the equipment shall not be required to be protected in accordance with 9.2.3, and the presence of the equipment shall not require the area to be protected as a hazardous area.

19.3.2.5.3\*

Within a smoke compartment, where residential or commercial cooking equipment is used to prepare meals for 30 or fewer persons, one cooking facility shall be permitted to be open to the corridor, provided that all of the following conditions are met:

The portion of the health care facility served by the cooking facility is limited to 30 beds and is separated from other portions of the health care facility by a smoke barrier constructed in accordance with 19.3.7.3, 19.3.7.6, and 19.3.7.8.

The cooktop or range is equipped with a range hood of a width at least equal to the width of the cooking surface, with grease baffles or other grease-collecting and clean-out capability.

\*The hood systems have a minimum airflow of 500 cfm (14,000 L/min).

The hood systems that are not ducted to the exterior additionally have a charcoal filter to remove smoke and odor.

The cooktop or range complies with all of the following:

The cooktop or range is protected with a fire suppression system listed in accordance with UL 300, Fire Testing of Fire Extinguishing Systems for Protection of Commercial Cooking Equipment, or is tested and meets all requirements of UL 300A, Extinguishing System Units for Residential Range Top Cooking Surfaces, in accordance with the applicable testing document's scope.

A manual release of the extinguishing system is provided in accordance with Section 10.5 of NFPA 96.

An interlock is provided to turn off all sources of fuel and electrical power to the cooktop or range when the suppression system is activated.

\*The use of solid fuel for cooking is prohibited.

Deep-fat frying is prohibited.

Portable fire extinguishers in accordance with NFPA 96 are located in all kitchen areas.

\*A switch meeting all of the following is provided:

A locked switch, or a switch located in a restricted location, is provided within the cooking facility that deactivates the cooktop or range.

The switch is used to deactivate the cooktop or range whenever the kitchen is not under staff supervision.

The switch is on a timer, not exceeding a 120-minute capacity, that automatically deactivates the cooktop or range, independent of staff action.

Procedures for the use, inspection, testing, and maintenance of the cooking equipment are in accordance with Chapter 11 of NFPA 96 and the manufacturer's instructions are followed.

\*Not less than two AC-powered photoelectric smoke alarms with battery backup, interconnected in accordance with 9.6.2.10.4, and equipped with a silence feature are located not closer than 20 ft (6.1 m) and not further than 25 ft (7.6 m) from the cooktop or range.

\*The smoke alarms required by 19.3.2.5.3(11) are permitted to be located outside the kitchen area where such placement is necessary for compliance with the 20 ft (7.6 m) minimum distance criterion.

\*A single system smoke detector is permitted to be installed in lieu of the smoke alarms required in 19.3.2.5.3(11) provided the following criteria are met:

The detector is located not closer than 20 ft (6.1 m) and not further than 25 ft (7.6 m) from the cooktop or range.

The detector is permitted to initiate a local audible alarm signal only.

The detector is not required to initiate a building-wide occupant notification signal.

The detector is not required to notify the emergency forces.

The local audible signal initiated by the detector is permitted to be silenced and reset by a button on the detector or by a switch installed within 10 ft (3.0 m) of the system smoke detector.

System smoke detectors that are required to be installed in corridors or spaces open to the corridor by other sections of this chapter are not used to meet the requirements of 19.3.2.5.3(11) and are located not closer than 25 ft (7.6 m) to the cooktop or range.

The smoke compartment is protected throughout by an approved, supervised automatic sprinkler system in accordance with Section 9.7.

19.3.2.5.4\*

Within a smoke compartment, residential or commercial cooking equipment that is used to prepare meals for 30 or fewer persons shall be permitted, provided that the cooking facility complies with all of the following conditions:

The space containing the cooking equipment is not a sleeping room.

The space containing the cooking equipment shall be separated from the corridor by partitions complying with 19.3.6.2 through 19.3.6.5.

The requirements of 19.3.2.5.3(1) through 19.3.2.5.3(10) and 19.3.2.5.3(13) are met.

19.3.2.5.5\*

Where cooking facilities are protected in accordance with 9.2.3, the presence of the cooking equipment shall not cause the room or space housing the equipment to be classified as a hazardous area with respect to the requirements of 19.3.2.1, and the room or space shall not be permitted to be open to the corridor.

19.3.2.6 Reserved

19.3.2.7 Hazardous Materials

Where hazardous materials are stored, used, or handled, the provisions of 8.7.3.1 shall apply.

19.3.3 Interior Finish

19.3.3.1 General

Interior finish shall be in accordance with Section 10.2.

19.3.3.2\* Interior Wall and Ceiling Finish

Existing interior wall and ceiling finish materials complying with Section 10.2 shall be permitted to be Class A or Class B.

19.3.3.3 Interior Floor Finish

No restrictions shall apply to existing interior floor finish.

19.3.4 Detection, Alarm, and Communications Systems

19.3.4.1 General

Health care occupancies shall be provided with a fire alarm system in accordance with Section 9.6.

19.3.4.2\* Initiation

19.3.4.2.1

Initiation of the required fire alarm systems shall be by manual means in accordance with 9.6.2 and by means of any required sprinkler system waterflow alarms, detection devices, or detection systems, unless otherwise permitted by 19.3.4.2.2 through 19.3.4.2.5.

19.3.4.2.2

Manual fire alarm boxes in patient sleeping areas shall not be required at exits if located at all nurses' control stations or other continuously attended staff location, provided that both of the following criteria are met:

Such manual fire alarm boxes are visible and continuously accessible.

Travel distances required by 9.6.2.5 are not exceeded.

19.3.4.2.3

The system smoke detector installed in accordance with 19.3.2.5.3(13) shall not be required to initiate the fire alarm system.

19.3.4.2.4

Fixed extinguishing systems protecting commercial cooking equipment in kitchens that are protected by a complete automatic sprinkler system shall not be required to initiate the fire alarm system.

19.3.4.2.5

Detectors required by 19.7.5.3 and 19.7.5.5 shall not be required to initiate the fire alarm system.

19.3.4.3 Notification

Positive alarm sequence in accordance with 9.6.3.5 shall be permitted in health care occupancies protected throughout by an approved, supervised automatic sprinkler system in accordance with 9.7.1.1(1).

19.3.4.3.1 Occupant Notification

Occupant notification shall be accomplished automatically in accordance with 9.6.3, unless otherwise modified by the following:

\*In lieu of audible alarm signals, visible alarm-indicating appliances shall be permitted to be used in critical care areas.

Where visual devices have been installed in patient sleeping areas in place of an audible alarm, they shall be permitted where approved by the authority having jurisdiction.

The provision of 19.3.2.5.3(13)(c) shall be permitted to be used.

\*Where the private operating mode in accordance with NFPA 72 is used, alarm notification appliances shall not be required in patient care spaces where alarm notification adversely affects patient care.

19.3.4.3.2 Emergency Forces Notification

19.3.4.3.2.1

Emergency forces notification shall be accomplished in accordance with 9.6.4, except that the provision of 19.3.2.5.3(13)(d) shall be permitted to be used.

19.3.4.3.2.2

Smoke detection devices or smoke detection systems equipped with reconfirmation features shall not be required to automatically notify the fire department, unless the alarm condition is reconfirmed after a period not exceeding 120 seconds.

19.3.4.3.3 Reserved

19.3.4.4 Emergency Control Functions

Operation of any activating device in the required fire alarm system shall be arranged to accomplish automatically any control functions to be performed by that device. (See 9.6.6.)

19.3.4.5 Detection

19.3.4.5.1 Corridors

An approved automatic smoke detection system in accordance with Section 9.6 shall be installed in all corridors of limited care facilities, unless otherwise permitted by one of the following:

Where each patient sleeping room is protected by an approved smoke detection system, and a smoke detector is provided at smoke barriers and horizontal exits in accordance with Section 9.6, the corridor smoke detection system shall not be required on the patient sleeping room floors.

Smoke compartments protected throughout by an approved, supervised automatic sprinkler system in accordance with 19.3.5.7 shall be permitted.

19.3.4.5.2 Detection in Spaces Open to Corridors

See 19.3.6.1.

19.3.5 Extinguishment Requirements

19.3.5.1

Buildings containing nursing homes shall be protected throughout by an approved, supervised automatic sprinkler system in accordance with Section 9.7, unless otherwise permitted by 19.3.5.5.

19.3.5.2

High-rise buildings shall comply with 19.4.3.

19.3.5.3

Where required by 19.1.6, buildings containing hospitals or limited care facilities shall be protected throughout by an approved, supervised automatic sprinkler system in accordance with Section 9.7, unless otherwise permitted by 19.3.5.5.

19.3.5.4\*

The sprinkler system required by 19.3.5.1 or 19.3.5.3 shall be installed in accordance with 9.7.1.1(1).

19.3.5.5

In Type I and Type II construction, alternative protection measures shall be permitted to be substituted for sprinkler protection in specified areas where the authority having jurisdiction has prohibited sprinklers, without causing a building to be classified as nonsprinklered.

19.3.5.6 Reserved

19.3.5.7\*

Where this Code permits exceptions for fully sprinklered buildings or smoke compartments, the sprinkler system shall meet all of the following criteria:

It shall be in accordance with Section 9.7.

It shall be installed in accordance with 9.7.1.1(1), unless it is an approved existing system.

It shall be electrically connected to the fire alarm system.

It shall be fully supervised.

In Type I and Type II construction, where the authority having jurisdiction has prohibited sprinklers, approved alternative protection measures shall be permitted to be substituted for sprinkler protection in specified areas without causing a building to be classified as nonsprinklered.

19.3.5.8\*

Where this Code permits exceptions for fully sprinklered buildings, suites, or smoke compartments and specifically references this paragraph, the sprinkler system shall meet all of the following criteria:

It shall be installed throughout the building, suite, or smoke compartment in accordance with Section 9.7.

It shall be installed in accordance with 9.7.1.1(1), unless it is an approved existing system.

It shall be electrically connected to the fire alarm system.

It shall be fully supervised.

It shall be equipped with listed quick-response or listed residential sprinklers throughout all smoke compartments containing patient sleeping rooms.

\*Standard-response sprinklers shall be permitted to be continued to be used in approved existing sprinkler systems where quick-response and residential sprinklers were not listed for use in such locations at the time of installation.

Standard-response sprinklers shall be permitted for use in hazardous areas protected in accordance with 19.3.2.1.

19.3.5.9

Isolated hazardous areas shall be permitted to be protected in accordance with 9.7.1.2. For new installations in existing health care occupancies, where more than two sprinklers are installed in a single area, waterflow detection shall be provided to sound the building fire alarm or to notify, by a signal, any constantly attended location, such as PBX, security, or emergency room, at which the necessary corrective action shall be taken.

19.3.5.10\*

Sprinklers shall not be required in clothes closets of patient sleeping rooms in hospitals where the area of the closet does not exceed 6 ft2 (0.55 m2), provided that the distance from the sprinkler in the patient sleeping room to the back wall of the closet does not exceed the maximum distance permitted by NFPA 13.

19.3.5.11\*

Newly introduced cubicle curtains in sprinklered areas shall be installed in accordance with NFPA 13.

19.3.5.12

Portable fire extinguishers shall be provided in all health care occupancies in accordance with Section 9.9.

19.3.6 Corridors

19.3.6.1 Corridor Separation

Corridors shall be separated from all other areas by partitions complying with 19.3.6.2 through 19.3.6.5 (see also 19.2.5.4), unless otherwise permitted by one of the following:

\*Smoke compartments protected throughout by an approved, supervised automatic sprinkler system in accordance with 19.3.5.8 shall be permitted to have spaces that are unlimited in size and open to the corridor, provided that all of the following criteria are met:

\*The spaces are not used for patient sleeping rooms, treatment rooms, or hazardous areas.

The corridors onto which the spaces open in the same smoke compartment are protected by an electrically supervised automatic smoke detection system in accordance with 19.3.4, or the smoke compartment in which the space is located is protected throughout by quick-response sprinklers.

\*The open space is protected by an electrically supervised automatic smoke detection system in accordance with 19.3.4, or the entire space is arranged and located to allow direct supervision by the facility staff from a nurses' station or similar space.

The space does not obstruct access to required exits.

In smoke compartments protected throughout by an approved, supervised automatic sprinkler system in accordance with 19.3.5.8, waiting areas shall be permitted to be open to the corridor, provided that all of the following criteria are met:

The aggregate waiting area in each smoke compartment does not exceed 600 ft2 (55.7 m2).

\*Each area is protected by an electrically supervised automatic smoke detection system in accordance with 19.3.4, or each area is arranged and located to allow direct supervision by the facility staff from a nursing station or similar space.

The area does not obstruct access to required exits.

\*This requirement shall not apply to spaces for nurses' stations.

Gift shops not exceeding 500 ft2 (46.4 m2) shall be permitted to be open to the corridor or lobby, provided that one of the following criteria is met:

The building is protected throughout by an approved automatic sprinkler system in accordance with Section 9.7.

The gift shop is protected throughout by an approved automatic sprinkler system in accordance with Section 9.7, and storage is separately protected.

Limited care facilities in smoke compartments protected throughout by an approved, supervised automatic sprinkler system in accordance with 19.3.5.8 shall be permitted to have group meeting or multipurpose therapeutic spaces open to the corridor, provided that all of the following criteria are met:

The space is not a hazardous area.

\*The space is protected by an electrically supervised automatic smoke detection system in accordance with 19.3.4, or the space is arranged and located to allow direct supervision by the facility staff from the nurses' station or similar location.

The space does not obstruct access to required exits.

Cooking facilities in accordance with 19.3.2.5.3 shall be permitted to be open to the corridor.

Spaces, other than patient sleeping rooms, treatment rooms, and hazardous areas, shall be permitted to be open to the corridor and unlimited in area, provided that all of the following criteria are met:

The space and the corridors onto which it opens, where located in the same smoke compartment, are protected by an electrically supervised automatic smoke detection system in accordance with 19.3.4.

\*Each space is protected by automatic sprinklers, or the furnishings and furniture, in combination with all other combustibles within the area, are of such minimum quantity and arrangement that a fully developed fire is unlikely to occur.

The space does not obstruct access to required exits.

\*Waiting areas shall be permitted to be open to the corridor, provided that all of the following criteria are met:

Each area does not exceed 600 ft2 (55.7 m2).

The area is equipped with an electrically supervised automatic smoke detection system in accordance with 19.3.4.

The area does not obstruct any access to required exits.

Group meeting or multipurpose therapeutic spaces, other than hazardous areas, that are under continuous supervision by facility staff shall be permitted to be open to the corridor, provided that all of the following criteria are met:

Each area does not exceed 1500 ft2 (139 m2).

Not more than one such space is permitted per smoke compartment.

The area is equipped with an electrically supervised automatic smoke detection system in accordance with 19.3.4.

The area does not obstruct access to required exits.

19.3.6.2 Construction of Corridor Walls

19.3.6.2.1

Corridor walls shall be continuous from the floor to the underside of the floor or roof deck above; through any concealed spaces, such as those above suspended ceilings; and through interstitial structural and mechanical spaces, unless otherwise permitted by 19.3.6.2.4 through 19.3.6.2.8.

19.3.6.2.2\*

Corridor walls shall have a minimum 1/2-hour fire resistance rating.

19.3.6.2.3\*

Corridor walls shall form a barrier to limit the transfer of smoke.

19.3.6.2.4\*

In smoke compartments protected throughout by an approved, supervised automatic sprinkler system in accordance with 19.3.5.7, a corridor shall be permitted to be separated from all other areas by non-fire-rated partitions and shall be permitted to terminate at or above the ceiling, but shall not be required to extend to the deck above, where the ceiling is constructed to limit the transfer of smoke.

19.3.6.2.5

Existing corridor partitions shall be permitted to terminate at ceilings that are not an integral part of a floor construction if 60 in. (1525 mm) or more of space exists between the top of the ceiling subsystem and the bottom of the floor or roof above, provided that all the following criteria are met:

The ceiling is part of a fire-rated assembly tested to have a minimum 1-hour fire resistance rating in compliance with the provisions of Section 8.3.

The corridor partitions form smoketight joints with the ceilings, and joint filler, if used, is noncombustible.

Each compartment of interstitial space that constitutes a separate smoke area is vented, in a smoke emergency, to the outside by mechanical means having the capacity to provide not less than two air changes per hour but, in no case, a capacity less than 5000 ft3/min (2.35 m3/s).

The interstitial space is not used for storage.

The space is not used as a plenum for supply, exhaust, or return air, except as noted in 19.3.6.2.5(3).

19.3.6.2.6\*

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

19.3.6.2.7

Fixed fire window assemblies in accordance with Section 8.3 shall be permitted in corridor walls, unless otherwise permitted in 19.3.6.2.8.

19.3.6.2.8

There shall be no restrictions in area and fire resistance of glass and frames in smoke compartments protected throughout by an approved, supervised automatic sprinkler system in accordance with 19.3.5.7.

19.3.6.3\* Corridor Doors

19.3.6.3.1\*

Doors, including doors or panels to nurse servers and pass-through openings, protecting corridor openings in other than required enclosures of vertical openings, exits, or hazardous areas shall be doors constructed to resist the passage of smoke and shall be constructed of materials such as the following:

13/4 in. thick, solid-bonded wood core

Material that resists fire for a minimum of 20 minutes.

19.3.6.3.2

The requirements of 19.3.6.3.1 shall not apply where otherwise permitted by either of the following:

Doors to toilet rooms, bathrooms, shower rooms, sink closets, and similar auxiliary spaces that do not contain flammable or combustible materials shall not be required to comply with 19.3.6.3.1.

In smoke compartments protected throughout by an approved, supervised automatic sprinkler system in accordance with 19.3.5.7, the door construction materials requirements of 19.3.6.3.1 shall not be mandatory, but the doors shall be constructed to resist the passage of smoke.

19.3.6.3.3

Compliance with NFPA 80 shall not be required.

19.3.6.3.4

A clearance between the bottom of the door and the floor covering not exceeding 1 in. (25 mm) shall be permitted for corridor doors.

19.3.6.3.5\*

Doors shall be provided with a means for keeping the door closed, and the following requirements also shall apply:

The device used shall be capable of keeping the door fully closed if a force of 5 lbf (22 N) is applied at the latch edge of the door.

Roller latches shall be prohibited on corridor doors in buildings not fully protected by an approved automatic sprinkler system in accordance with 19.3.5.7.

19.3.6.3.6

The requirements of 19.3.6.3.5 shall not apply where otherwise permitted by either of the following:

Doors to toilet rooms, bathrooms, shower rooms, sink closets, and similar auxiliary spaces that do not contain flammable or combustible materials shall not be required to comply with 19.3.6.3.5.

Existing roller latches demonstrated to keep the door closed against a force of 5 lbf (22 N) shall be permitted to be kept in service.

19.3.6.3.7

Powered doors that comply with the requirements of 7.2.1.9 shall be considered as complying with the requirements of 19.3.6.3.5, provided that all of the following criteria are met:

The door is equipped with a means for keeping the door closed that is acceptable to the authority having jurisdiction.

The device used is capable of keeping the door fully closed if a force of 5 lbf (22 N) is applied at the latch edge of a swinging door and applied in any direction to a sliding or folding door, whether or not power is applied.

Where door leaves are operated by power by any automatic mechanism, the automatic opening of the doors shall cease to function upon operation of approved smoke detectors installed in accordance with the provisions of NFPA 72 for door release service.

19.3.6.3.8 Reserved

19.3.6.3.9 Reserved

19.3.6.3.10\*

Doors shall not be held open by devices other than those that release when the door is pushed or pulled.

19.3.6.3.11

Door-closing devices shall not be required on doors in corridor wall openings other than those serving required exits, smoke barriers, or enclosures of vertical openings and hazardous areas.

19.3.6.3.12\*

Nonrated, factory- or field-applied protective plates, unlimited in height, shall be permitted.

19.3.6.3.13

Dutch doors shall be permitted where they conform to 19.3.6.3 and meet all of the following criteria:

Both the upper leaf and lower leaf are equipped with a latching device.

The meeting edges of the upper and lower leaves are equipped with an astragal, a rabbet, or a bevel.

Where protecting openings in enclosures around hazardous areas, the doors comply with NFPA 80.

19.3.6.3.14

Door frames shall be labeled, shall be of steel construction, or shall be of other materials in compliance with the provisions of Section 8.3, unless otherwise permitted by 19.3.6.3.15.

19.3.6.3.15

Door frames in smoke compartments protected throughout by an approved, supervised automatic sprinkler system in accordance with 19.3.5.7 shall not be required to comply with 19.3.6.3.14.

19.3.6.3.16

Fixed fire window assemblies in accordance with Section 8.3 shall be permitted in corridor doors.

19.3.6.3.17

Restrictions in area and fire resistance of glass and frames required by Section 8.3 shall not apply in smoke compartments protected throughout by an approved, supervised automatic sprinkler system in accordance with 19.3.5.7.

19.3.6.4 Transfer Grilles

19.3.6.4.1

Transfer grilles shall not be used in corridor walls or doors, unless otherwise permitted by 19.3.6.4.2.

19.3.6.4.2

Doors to toilet rooms, bathrooms, shower rooms, sink closets, and similar auxiliary spaces that do not contain flammable or combustible materials shall be permitted to have ventilating louvers or to be undercut.

19.3.6.5 Openings

19.3.6.5.1\*

Miscellaneous openings, such as mail slots, pharmacy pass-through windows, laboratory pass-through windows, and cashier pass-through windows, shall be permitted to be installed in vision panels or doors without special protection, provided that both of the following criteria are met:

The aggregate area of openings per room does not exceed 20 in.2 (0.015 m2).

The openings are installed at or below half the distance from the floor to the room ceiling.

19.3.6.5.2

The alternative requirements of 19.3.6.5.1 shall not apply where otherwise modified by the following:

Openings in smoke compartments containing patient bedrooms shall not be permitted to be installed in vision panels or doors without special protection.

For rooms protected throughout by an approved, supervised automatic sprinkler system in accordance with 19.3.5.7, the aggregate area of openings per room shall not exceed 80 in.2 (0.05 m2).

19.3.7\* Subdivision of Building Spaces

19.3.7.1\*

Smoke barriers shall be provided to divide every story used for sleeping rooms for more than 30 patients into not less than two smoke compartments (see 19.2.4.4), and the following also shall apply:

The size of any such smoke compartment shall comply with one of the following:

Smoke compartments shall not exceed 22,500 ft2 (2100 m2) gross floor area.

Where the building is sprinklered in accordance with 19.3.5.8, hospital smoke compartments shall not exceed 40,000 ft2 (3720 m2) gross floor area where all sleeping rooms are configured for only one patient. Suites in accordance with 19.2.5.7 shall be permitted where every occupiable sleeping room within the suite is configured for only one patient.

Where the building is sprinklered in accordance with 19.3.5.8, hospital smoke compartments shall not exceed 40,000 ft2 (3720 m2) gross floor area where the smoke compartment contains no patient sleeping rooms.

The travel distance from any point to reach a door in the required smoke barrier shall not exceed 200 ft (61 m).

Where neither the length nor width of the smoke compartment exceeds 150 ft (46 m), the travel distance to reach the smoke barrier door shall not be limited.

The area of an atrium separated in accordance with 19.3.7.3 shall not be limited in size.

19.3.7.2

For purposes of the requirements of 19.3.7, the number of health care occupants shall be determined by actual count of patient bed capacity.

19.3.7.3

Any required smoke barrier shall be constructed in accordance with Section 8.5 and shall have a minimum 1/2-hour fire resistance rating, unless otherwise permitted by one of the following:

This requirement shall not apply where an atrium is used, in which case both of the following criteria also shall apply:

Smoke barriers shall be permitted to terminate at an atrium wall constructed in accordance with 8.6.7(1)(c).

Not less than two separate smoke compartments shall be provided on each floor.

\*Smoke dampers shall not be required in duct penetrations of smoke barriers in fully ducted heating, ventilating, and air-conditioning systems where an approved, supervised automatic sprinkler system in accordance with 19.3.5.8 has been provided for smoke compartments adjacent to the smoke barrier.

19.3.7.4 Reserved

19.3.7.5

Accumulation space shall be provided in accordance with 19.3.7.5.1 and 19.3.7.5.2.

19.3.7.5.1

Not less than 30 net ft2 (2.8 net m2) per patient in a hospital or nursing home, or not less than 15 net ft2 (1.4 net m2) per resident in a limited care facility, shall be provided within the aggregate area of corridors, patient rooms, treatment rooms, lounge or dining areas, and other low hazard areas on each side of the smoke barrier.

19.3.7.5.2

On stories not housing bedridden or litterborne patients, not less than 6 net ft2 (0.56 net m2) per occupant shall be provided on each side of the smoke barrier for the total number of occupants in adjoining compartments.

19.3.7.6

Openings in smoke barriers shall be protected using one of the following methods:

Fire-rated glazing

Existing wired glass panels in steel frames

Doors, such as 13/4 in. (44 mm) thick, solid-bonded wood-core doors

Construction that resists fire for a minimum of 20 minutes

19.3.7.6.1\*

Nonrated factory- or field-applied protective plates, unlimited in height, shall be permitted.

19.3.7.6.2

Vision panels, if provided, in doors shall be protected using one of the following methods:

Fixed fire window assemblies in accordance with Section 8.5

Existing wired glass panels in steel frames

19.3.7.7 Reserved

19.3.7.8\*

Doors in smoke barriers shall comply with 8.5.4 and all of the following:

The doors shall be self-closing or automatic-closing in accordance with 19.2.2.2.8.

Latching hardware shall not be required.

The doors shall not be required to swing in the direction of egress travel.

19.3.7.9

Door openings in smoke barriers shall be protected using one of the following methods:

Swinging door providing a clear width of not less than 32 in. (810 mm)

Special-purpose horizontally sliding accordion or folding door assemblies complying with 7.2.1.13 and providing a clear width of not less than 32 in. (810 mm)

19.3.7.10

The requirement of 19.3.7.9 shall not apply to existing 34 in. (865 mm) doors.

19.3.8 Special Protection Features. (Reserved)

19.4 Special Provisions

19.4.1 Special Structures

Health care occupancies shall comply with Chapter 11 where located in special structures.

19.4.2 Underground Structures and Limited Access Structures

Underground structures and limited access structures shall comply with Section 11.7.

19.4.3 High-Rise Buildings

19.4.3.1

All high-rise buildings containing health care occupancies shall be protected throughout by an approved, supervised automatic sprinkler system installed in accordance with Section 9.7 within 12 years of the adoption of this Code, except as otherwise provided in 19.4.3.3, 19.4.3.4, or 19.4.3.4.

19.4.3.2\*

Where a jurisdiction adopts this edition of the Code and previously adopted the 2018 edition, the sprinklering required by 19.4.3.1 shall be installed within 9 years of the adoption of this Code.

19.4.3.3\*

Where a jurisdiction adopts this edition of the Code and previously adopted the 2015 edition, the sprinklering required by 19.4.3.1 shall be installed within 6 years of the adoption of this Code.

19.4.3.4\*

Where a jurisdiction adopts this edition of the Code and previously adopted the 2012 edition, the sprinklering required by 19.4.3.1 shall be installed within 3 years of the adoption of this Code.

19.4.4\* Alcohol-Based Hand-Rub Dispensers

Alcohol-based hand-rub dispensers shall be protected in accordance with 8.7.3.1, unless all of the following conditions are met:

Where dispensers are installed in a corridor, the corridor shall have a minimum width of 6 ft (1830 mm).

The maximum individual dispenser fluid capacity shall be as follows:

0.32 gal (1.2 L) for dispensers in rooms, corridors, and areas open to corridors

0.53 gal (2.0 L) for dispensers in suites of rooms

Where aerosol containers are used, the maximum capacity of the aerosol dispenser shall be 18 oz (0.51 kg) and shall be limited to Level 1 aerosols as defined in NFPA 30B.

Dispensers shall be separated from each other by horizontal spacing of not less than 48 in. (1220 mm).

Not more than an aggregate 10 gal (37.8 L) of alcohol-based hand-rub solution or 1135 oz (32.2 kg) of Level 1 aerosols, or a combination of liquids and Level 1 aerosols not to exceed, in total, the equivalent of 10 gal (37.8 L) or 1135 oz (32.2 kg), shall be in use outside of a storage cabinet in a single smoke compartment, except as otherwise provided in 19.4.4(6).

One dispenser complying with 18.4.4(2) or 18.4.4(3) per room and located in that room shall not be included in the aggregated quantity addressed in 19.4.4(5).

Storage of quantities greater than 5 gal (18.9 L) in a single smoke compartment shall meet the requirements of NFPA 30.

Dispensers shall not be installed in the following locations:

Above an ignition source within a 1 in. (25 mm) horizontal distance from each side of the ignition source

To the side of an ignition source within a 1 in. (25 mm) horizontal distance from the ignition source

Beneath an ignition source within a 1 in. (25 mm) vertical distance from the ignition source

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

The alcohol-based hand-rub solution shall not exceed 95 percent alcohol content by volume.

Operation of the dispenser shall comply with the following criteria:

The dispenser shall not release its contents except when the dispenser is activated, either manually or automatically by touch-free activation.

Any activation of the dispenser shall occur only when an object is placed within 4 in. (100 mm) of the sensing device.

An object placed within the activation zone and left in place shall not cause more than one activation.

The dispenser shall not dispense more solution than the amount required for hand hygiene consistent with label instructions.

The dispenser shall be designed, constructed, and operated in a manner that ensures that accidental or malicious activation of the dispensing device is minimized.

19.5 Building Services

19.5.1 Utilities

19.5.1.1

Utilities shall comply with the provisions of Section 9.1.

19.5.1.2

Existing installations shall be permitted to be continued in service, provided that the systems do not present a serious hazard to life.

19.5.1.3

Design, installation, testing, and maintenance of essential electrical systems shall be in accordance with NFPA 99.

19.5.2 Heating, Ventilating, and Air-Conditioning

19.5.2.1

Heating, ventilating, and air-conditioning shall comply with the provisions of Section 9.2 and shall be installed in accordance with the manufacturer's specifications, unless otherwise modified by 19.5.2.2.

19.5.2.2\*

Any heating device, other than a central heating plant, shall be designed and installed so that combustible material cannot be ignited by the device or its appurtenances, and the following requirements also shall apply:

If fuel-fired, such heating devices shall comply with the following:

They shall be chimney connected or vent connected.

They shall take air for combustion directly from the outside.

They shall be designed and installed to provide for complete separation of the combustion system from the atmosphere of the occupied area.

Any heating device shall have safety features to immediately stop the flow of fuel and shut down the equipment in case of either excessive temperature or ignition failure.

19.5.2.3

The requirements of 19.5.2.2 shall not apply where otherwise permitted by the following:

Approved, suspended unit heaters shall be permitted in locations other than means of egress and patient sleeping areas, provided that both of the following criteria are met:

Such heaters are located high enough to be out of the reach of persons using the area.

Such heaters are equipped with the safety features required by 19.5.2.2(2).

Direct-vent gas fireplaces, as defined in NFPA 54 shall be permitted inside of smoke compartments containing patient sleeping areas, provided that all of the following criteria are met:

All such devices shall be installed, maintained, and used in accordance with 9.2.2.

No such device shall be located inside of a patient sleeping room.

The smoke compartment in which the direct-vent gas fireplace is located shall be protected throughout by an approved, supervised automatic sprinkler system in accordance with 9.7.1.1(1) with listed quick-response or listed residential sprinklers.

\*The direct-vent fireplace shall include a sealed glass front with a wire mesh panel or screen.

\*The controls for the direct-vent gas fireplace shall be locked or located in a restricted location.

Electrically supervised carbon monoxide detection in accordance with Section 9.12 shall be provided in the room where the fireplace is located.

Solid-fuel-burning fireplaces shall be permitted and used only in areas other than patient sleeping areas, provided that all of the following criteria are met:

Such areas are separated from patient sleeping spaces by construction having not less than a 1-hour fire resistance rating.

The fireplace complies with the provisions of 9.2.2.

The fireplace is equipped with a fireplace enclosure guaranteed against breakage up to a temperature of 650°F (343°C) and constructed of heat-tempered glass or other approved material.

Electrically supervised carbon monoxide detection in accordance with Section 9.12 is provided in the room where the fireplace is located.

If, in the opinion of the authority having jurisdiction, special hazards are present, a lock on the enclosure specified in 19.5.2.3(3)(c) and other safety precautions shall be permitted to be required.

19.5.3 Elevators, Escalators, and Conveyors

Elevators, escalators, and conveyors shall comply with the provisions of Section 9.4.

19.5.4 Waste Chutes, Incinerators, and Laundry Chutes

19.5.4.1

Existing chutes or linen chutes, including pneumatic waste and linen systems, that open directly onto any corridor shall be sealed by fire-resistive construction to prevent further use or shall be provided with a fire door assembly having a minimum 1-hour fire protection rating. All new chutes shall comply with Section 9.5.

19.5.4.2 Reserved

19.5.4.3

Any waste chute or linen chute, including pneumatic waste and linen systems, shall be provided with automatic extinguishing protection in accordance with Section 9.7. (See Section 9.5.)

19.5.4.4

Any chute shall discharge into a chute discharge room used for no other purpose and shall be protected in accordance with Section 8.7 unless otherwise provided in 19.5.4.5.

19.5.4.5

Existing laundry chutes shall be permitted to discharge into the same room as rubbish discharge chutes, provided that the room is protected by automatic sprinklers in accordance with 19.3.5.9 or 19.3.5.7.

19.5.4.6

Existing flue-fed incinerators shall be sealed by fire-resistive construction to prevent further use.

19.6 Reserved

19.7\* Operating Features

19.7.1 Evacuation and Relocation Plan and Fire Drills

19.7.1.1

The administration of every health care occupancy shall have, in effect and available to all supervisory personnel, written copies of a plan for the protection of all persons in the event of fire, for their evacuation to areas of refuge, and for their evacuation from the building when necessary.

19.7.1.2

All employees shall be periodically instructed and kept informed with respect to their duties under the plan required by 19.7.1.1.

19.7.1.3

A copy of the plan required by 19.7.1.1 shall be readily available at all times in the telephone operator's location or at the security center.

19.7.1.4\*

Fire drills in health care occupancies shall include the simulation of emergency fire conditions and, except as indicated in 19.7.1.7, include activation of the fire alarm system notification appliances.

19.7.1.5

Infirm or bedridden patients shall not be required to be moved during drills to safe areas or to the exterior of the building.

19.7.1.6

Drills shall be conducted quarterly on each shift to familiarize facility personnel (nurses, interns, maintenance engineers, and administrative staff) with the signals and emergency action required under varied conditions.

19.7.1.7

When drills are conducted between 9:00 p.m. and 6:00 a.m. (2100 hours and 0600 hours), a coded announcement shall be permitted to be used instead of activating the fire alarm system notification appliances.

19.7.1.8

Employees of health care occupancies shall be instructed in life safety procedures and devices.

19.7.2 Procedure in Case of Fire

19.7.2.1\* Protection of Patients

19.7.2.1.1

For health care occupancies, the proper protection of patients shall require the prompt and effective response of health care personnel.

19.7.2.1.2

The basic response required of staff shall include the following:

Removal of all occupants directly involved with the fire emergency

Transmission of an appropriate fire alarm signal to warn other building occupants and summon staff

Confinement of the effects of the fire by closing doors to isolate the fire area

Relocation of patients as detailed in the health care occupancy's fire safety plan

19.7.2.2 Fire Safety Plan

A written health care occupancy fire safety plan shall provide for all of the following:

Use of alarms

Transmission of alarms to fire department

Emergency phone call to fire department

Response to alarms

Isolation of fire

Evacuation of immediate area

Evacuation of smoke compartment

Preparation of floors and building for evacuation

Extinguishment of fire

Location and operation of doors disguised with murals as permitted by 19.2.2.2.7

19.7.2.3 Staff Response

19.7.2.3.1

All health care occupancy personnel shall be instructed in the use of and response to fire alarms.

19.7.2.3.2

All health care occupancy personnel shall be instructed in the use of the code phrase to ensure transmission of an alarm under any of the following conditions:

When the individual who discovers a fire must immediately go to the aid of an endangered person

During a malfunction of the building fire alarm system

19.7.2.3.3

Personnel hearing the code announced shall first activate the building fire alarm using the nearest manual fire alarm box and then shall execute immediately their duties as outlined in the fire safety plan.

19.7.3 Maintenance of Means of Egress

19.7.3.1

Proper maintenance shall be provided to ensure the dependability of the method of evacuation selected.

19.7.3.2

Health care occupancies that find it necessary to lock means of egress doors shall, at all times, maintain an adequate staff qualified to release locks and direct occupants from the immediate danger area to a place of safety in case of fire or other emergency.

19.7.3.3\*

Where required by the authority having jurisdiction, a floor plan shall be provided to indicate the location of all required means of egress corridors in smoke compartments having spaces not separated from the corridor by partitions.

19.7.4\* Smoking

Smoking regulations shall be adopted and shall include not less than the following provisions:

Smoking shall be prohibited in any room, ward, or individual enclosed space where flammable liquids, combustible gases, or oxygen is used or stored and in any other hazardous location, and such areas shall be posted with signs that read NO SMOKING or shall be posted with the international symbol for no smoking.

In health care occupancies where smoking is prohibited and signs are prominently placed at all major entrances, secondary signs with language that prohibits smoking shall not be required.

Smoking by patients classified as not responsible shall be prohibited.

The requirement of 19.7.4(3) shall not apply where the patient is under direct supervision.

Ashtrays of noncombustible material and safe design shall be provided in all areas inside the building where smoking is permitted.

Metal containers with self-closing cover devices into which ashtrays can be emptied shall be readily available to all areas where smoking is permitted inside the building.

19.7.5 Furnishings, Mattresses, and Decorations

19.7.5.1\*

Draperies, curtains, and other loosely hanging fabrics and films serving as furnishings or decorations in health care occupancies shall be in accordance with the provisions of 10.3.1 (see 19.3.5.11), and the following also shall apply:

Such curtains shall include cubicle curtains.

Such curtains shall not include curtains at showers and baths.

Such draperies and curtains shall not include draperies and curtains at windows in patient sleeping rooms in smoke compartments sprinklered in accordance with 19.3.5.

Such draperies and curtains shall not include draperies and curtains in other rooms or areas where the draperies and curtains comply with all of the following:

Individual drapery or curtain panel area does not exceed 48 ft2 (4.5 m2).

Total area of drapery and curtain panels per room or area does not exceed 20 percent of the aggregate area of the wall on which they are located.

Smoke compartment in which draperies or curtains are located is sprinklered in accordance with 19.3.5.

19.7.5.2

Newly introduced upholstered furniture within health care occupancies shall comply with one of the following provisions, unless otherwise provided in 19.7.5.3:

The furniture shall meet the criteria specified in 10.3.2.1 and 10.3.2.2.

The furniture shall be in a building protected throughout by an approved, supervised automatic sprinkler system in accordance with 9.7.1.1(1).

19.7.5.3

The requirements of 19.7.5.2, 10.3.2.1, and 10.3.2.2 shall not apply to upholstered furniture belonging to the patient in sleeping rooms of nursing homes where the following criteria are met:

A smoke detector shall be installed where the patient sleeping room is not protected by automatic sprinklers.

Battery-powered single-station smoke detectors shall be permitted.

19.7.5.4

Newly introduced mattresses within health care occupancies shall comply with one of the following provisions, unless otherwise provided in 19.7.5.5:

The mattresses shall meet the criteria specified in 10.3.3 and 10.3.3.2.

The mattresses shall be in a building protected throughout by an approved, supervised automatic sprinkler system in accordance with 9.7.1.1(1).

19.7.5.5

The requirements of 19.7.5.4, 10.3.3, and 10.3.3.2 shall not apply to mattresses belonging to the patient in sleeping rooms of nursing homes where the following criteria are met:

A smoke detector shall be installed where the patient sleeping room is not protected by automatic sprinklers.

Battery-powered single-station smoke detectors shall be permitted.

19.7.5.6

Combustible decorations shall be prohibited in any health care occupancy, unless one of the following criteria is met:

They are flame-retardant or are treated with approved fire-retardant coating that is listed and labeled for application to the material to which it is applied.

\*The decorations meet the flame propagation performance criteria contained in Test Method 1 or Test Method 2, as appropriate, of NFPA 701.

The decorations exhibit a heat release rate not exceeding 100 kW when tested in accordance with NFPA 289 using the 20 kW ignition source.

\*The decorations, such as photographs, paintings, and other art, are attached directly to the walls, ceiling, and non-fire-rated doors in accordance with the following:

Decorations on non-fire-rated doors do not interfere with the operation or any required latching of the door and do not exceed the area limitations of 19.7.5.6(b), 19.7.5.6(c), or 19.7.5.6(d).

Decorations do not exceed 20 percent of the wall, ceiling, and door areas inside any room or space of a smoke compartment that is not protected throughout by an approved automatic sprinkler system in accordance with Section 9.7.

Decorations do not exceed 30 percent of the wall, ceiling, and door areas inside any room or space of a smoke compartment that is protected throughout by an approved, supervised automatic sprinkler system in accordance with Section 9.7.

Decorations do not exceed 50 percent of the wall, ceiling, and door areas inside patient sleeping rooms, having a capacity not exceeding four persons, in a smoke compartment that is protected throughout by an approved, supervised automatic sprinkler system in accordance with Section 9.7.

\*They are decorations, such as photographs and paintings, in such limited quantities that a hazard of fire development or spread is not present.

19.7.5.7 Soiled Linen and Trash Receptacles

19.7.5.7.1\*

Soiled linen or trash collection receptacles with capacities greater than 64 gal (242 L) shall be located in a hazardous area when not attended.

19.7.5.7.2\*

Containers greater than 64 gal (242 L) used solely for recycling clean waste or for patient records awaiting destruction shall be permitted to be excluded from the requirements of 19.7.5.7.1 where all the following conditions are met:

Each container shall be limited to a maximum capacity of 96 gal (363 L).

Containers for combustibles shall be labeled and listed as meeting the requirements of FM Approval 6921, Approval Standard for Containers for Combustible Waste; however, such testing, listing, and labeling shall not be limited to FM Approvals.

19.7.5.7.3

The provisions of 10.3.8, applicable to containers for waste or linen, shall not apply.

19.7.6 Maintenance and Testing

See 4.6.12.

19.7.7\* Engineered Smoke Control Systems

19.7.7.1

Existing engineered smoke control systems, unless specifically exempted by the authority having jurisdiction, shall be tested in accordance with established engineering principles.

19.7.7.2

Systems not meeting the performance requirements of the testing specified in 19.7.7.1 shall be continued in operation only with the specific approval of the authority having jurisdiction.

19.7.8\* Portable Space-Heating Devices

Portable space-heating devices shall be prohibited in all health care occupancies, unless both of the following criteria are met:

Such devices are used only in nonsleeping staff and employee areas.

Such devices are listed and labeled for use as a freestanding, movable heater in accordance with UL 1278 Movable and Wall- or Ceiling-Hung Electric Room Heaters.

19.7.9 Construction, Repair, and Improvement Operations

19.7.9.1

Construction, repair, and improvement operations shall comply with 4.6.10.

19.7.9.2

The means of egress in any area undergoing construction, repair, or improvements shall be inspected daily for compliance with 7.1.10.1 and shall also comply with NFPA 241.

19.7.9.3

For rehabilitation activities or preparation for rehabilitation activities of a duration not greater than 30 days that do not cause the classification of the construction area as a hazardous area as identified in 19.3.2, flame-resistant plastic in accordance with NFPA 701, or equivalent, shall be permitted to be used to separate the construction area from the other spaces.

19.7.10.1

Integrated fire protection and life safety systems shall be tested in accordance with 9.11.4.1.

19.7.10.2

Integrated fire protection and life safety systems in high-rise buildings shall be tested in accordance with 9.11.4.2.

