**Chapter 23 Existing Detention and Correctional Occupancies**

23.1 General Requirements

23.1.1 Application

23.1.1.1 General

23.1.1.1.1

The requirements of this chapter shall apply to existing buildings or portions thereof currently occupied as detention or correctional occupancies.

23.1.1.1.2 Administration

The provisions of Chapter 1, Administration, shall apply.

23.1.1.1.3 General

The provisions of Chapter 4, General, shall apply.

23.1.1.1.4

This chapter establishes life safety requirements that shall apply to all existing detention and correctional facilities, other than the following:

Use Condition I facilities protected as residential occupancies in accordance with 23.1.2.3

\*Facilities determined to have equivalent safety provided in accordance with Section 1.4

23.1.1.1.5

Detention and correctional occupancies shall include those used for purposes such as correctional institutions, detention facilities, community residential centers, training schools, work camps, and substance abuse centers where occupants are confined or housed under some degree of restraint or security.

23.1.1.1.6\*

Detention and correctional occupancies shall include those that provide sleeping facilities for one or more residents and are occupied by persons who are generally prevented from taking self-preservation action because of security measures not under the occupants' control.

23.1.1.1.7\*

Lockups, other than approved existing lockups, in other than detention and correctional occupancies and health care occupancies shall comply with the requirements of 23.4.6.

23.1.1.2 Total Concept

23.1.1.2.1

All detention and correctional facilities shall be designed, constructed, maintained, and operated to minimize the possibility of a fire emergency.

23.1.1.2.2

Because the safety of all occupants in detention and correctional facilities cannot be adequately ensured solely 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, security, and maintenance procedures composed of the following:

Design, construction, and compartmentation

Provision for detection, alarm, and extinguishment

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

Provision of security to the degree necessary for the safety of the public and the occupants of the facility

23.1.1.3 Additions

Additions shall be separated from any existing structure not conforming with the provisions of this chapter by a fire barrier having not less than a 2-hour fire resistance rating constructed to the requirements of the addition, and the following also shall apply:

Doors in such partitions shall normally be kept closed.

Doors shall be permitted to be held open if they meet the requirements of 7.2.1.8.2.

23.1.1.4 Modernizations or Renovations

23.1.1.4.1

Modernizations and renovations shall be in accordance with 4.6.7, unless otherwise permitted by 23.1.1.4.2.

23.1.1.4.2

In nonsprinklered existing buildings, modernizations or renovations shall be permitted to comply with the nonsprinklered options contained in 22.4.5 in lieu of the sprinkler requirement of 22.3.5.2.

23.1.1.4.3

Where construction, alteration, or demolition operations are conducted, the provisions of 4.6.10.2 shall apply.

23.1.2 Classification of Occupancy

See 6.1.7.

23.1.2.1\*

For application of the life safety requirements that follow, the resident user category shall be divided into the groups specified in 23.1.2.1.1 through 23.1.2.1.5.

23.1.2.1.1 Use Condition I — Free Egress

Use Condition I shall be defined as a condition under which free movement is allowed from sleeping areas and other spaces where access or occupancy is permitted to the exterior via means of egress meeting the requirements of this Code.

23.1.2.1.2 Use Condition II — Zoned Egress

Use Condition II shall be defined as a condition under which free movement is allowed from sleeping areas and any other occupied smoke compartment to one or more other smoke compartments.

23.1.2.1.3 Use Condition III — Zoned Impeded Egress

Use Condition III shall be defined as a condition under which free movement is allowed within individual smoke compartments, such as within a residential unit comprised of individual sleeping rooms and a group activity space, with egress impeded by remote-controlled release of means of egress from such a smoke compartment to another smoke compartment.

23.1.2.1.4 Use Condition IV — Impeded Egress

Use Condition IV shall be defined as a condition under which free movement is restricted from an occupied space, and remote-controlled release is provided to allow movement from all sleeping rooms, activity spaces, and other occupied areas within the smoke compartment to another smoke compartment.

23.1.2.1.5 Use Condition V — Contained

Use Condition V shall be defined as a condition under which free movement is restricted from an occupied space, and staff-controlled manual release at each door is provided to allow movement from all sleeping rooms, activity spaces, and other occupied areas within the smoke compartment to another smoke compartment.

23.1.2.2\*

To be classified as Use Condition III or Use Condition IV, the arrangement, accessibility, and security of the release mechanism(s) used for emergency egress shall be such that the minimum available staff, at any time, can promptly release the locks.

23.1.2.3

Areas housing occupancies corresponding to Use Condition I shall conform to one of the following:

Requirements of residential occupancies under this Code

\*Requirements of this chapter for Use Condition II facilities, provided that the staffing requirements of Section 23.7 are met

23.1.3\* Multiple Occupancies

23.1.3.1

Multiple occupancies shall be in accordance with 6.1.14.

23.1.3.2

Egress provisions for areas of detention and correctional facilities that correspond to other occupancies shall meet the corresponding requirements of this Code for such occupancies as modified by 23.1.3.2.1.

23.1.3.2.1\*

Where security operations necessitate the locking of required means of egress, staff in the building shall be provided with the means for the supervised release of occupants during all times of use.

23.1.3.2.2 Reserved

23.1.3.3

Sections of detention and correctional facilities shall be permitted to be classified as other occupancies, provided that they meet both of the following conditions:

They are not intended to serve residents for sleeping purposes.

They are separated from areas of detention or correctional occupancies by construction having not less than a 2-hour fire resistance rating.

23.1.3.4

All means of egress from detention and correctional occupancies that traverse other use areas shall, as a minimum, conform to the requirements of this Code for detention and correctional occupancies, unless otherwise permitted by 23.1.3.5.

23.1.3.5

Egress through a horizontal exit into other contiguous occupancies that do not conform to detention and correctional occupancy 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 shall not contain high hazard contents.

The horizontal exit shall comply with the requirements of 23.2.2.5.

23.1.3.6

Any area with a hazard of contents classified higher than that of the detention or correctional occupancy and located in the same building shall be protected as required in 23.3.2.

23.1.3.7

Nondetention- or noncorrectional-related occupancies classified as containing high hazard contents shall not be permitted in buildings housing detention or correctional occupancies.

23.1.3.8

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.

23.1.4 Definitions

23.1.4.1 General

For definitions, see Chapter 3, Definitions.

23.1.4.2 Special Definitions

A list of special terms used in this chapter follows:

Detention and Correctional Residential Housing Area. See 3.3.22.1.

Sally Port (Security Vestibule). See 3.3.249.

23.1.5 Classification of Hazard of Contents

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

23.1.6 Minimum Construction Requirements

23.1.6.1

Detention and correctional occupancies shall be limited to the building construction types specified in Table 23.1.6.1. (See 8.2.1.)

Table 23.1.6.1 Construction Type Limitations

Construction Type Sprinklereda Stories in Height

1 With Basement 1 Without Basement 2 3 >3 But Not High-Rise High-Rise

I (442)c, d Yes X X X X X X

No X X X X X NP

I (332)c, d Yes X X X X X X

No X X X X X NP

II (222)c, d Yes X X X X X X

No X X X X X NP

II (111)c , d Yes X X X X X X

No X1 X X1 NP NP NP

II (000)d Yes X X X X X X

No X1 X1 NP NP NP NP

III (211)d Yes X X X X X X

No X1 X X1 NP NP NP

III (200)d Yes X X X X X X

No X1 X1 NP NP NP NP

IV (2HH)d Yes X X X X X X

No X1 X X1 NP NP NP

V (111)d Yes X X X X X X

No X1 X X1 NP NP NP

V (000)d Yes X X X X X X

No X1 X1 NP NP NP NP

NP: Not permitted.

X: Permitted for Use Conditions II, III, IV, and V. (See 23.1.2.3 for Use Condition I.)

X1: Permitted for Use Conditions II, III, and IV. Use Condition V not permitted. (See 23.1.2.3 for Use Condition I.)

aEntire building is protected throughout by an approved, supervised automatic sprinkler system in accordance with 9.7.1.1(1). (See 23.3.5.)

bSee 4.6.3.

cAny building of Type I, Type II(222), or Type II(111) construction is permitted to include roofing systems involving combustible or steel supports, decking, or roofing, provided that all of the following are met:

The roof covering meets not less than 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 is separated from all occupied portions of the building by a noncombustible floor assembly that includes not less than 21/2 in. (64 mm) of concrete or gypsum fill, and the attic or other space so developed meets one of the following requirements:

It is unoccupied.

It is protected throughout by an approved automatic sprinkler system.

dIn determining building construction type, exposed steel roof members located 16 ft (4875 mm) or more above the floor of the highest cell are permitted to be disregarded.

23.1.6.2

A residential housing area complying with 23.3.1.2 shall be considered as one story in height for purposes of applying 23.1.6.1.

23.1.7 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.

23.2 Means of Egress Requirements

23.2.1 General

Means of egress shall comply with Chapter 7, unless otherwise provided or modified by Section 23.2.

23.2.2 Means of Egress Components

23.2.2.1 Components Permitted

Components of means of egress shall be limited to the types described in 23.2.2.2 through 23.2.2.11.

23.2.2.2 Doors

Doors complying with 7.2.1 shall be permitted, unless otherwise provided in 23.2.11.

23.2.2.3 Stairs

23.2.2.3.1

Stairs shall be permitted as follows:

Stairs complying with 7.2.2 shall be permitted.

Noncombustible grated stair treads and landing floors shall be permitted.

23.2.2.3.2

Spiral stairs complying with 7.2.2.2.3 shall be permitted for access to and between staff locations.

23.2.2.4 Smokeproof Enclosures

Smokeproof enclosures complying with 7.2.3 shall be permitted.

23.2.2.5 Horizontal Exits

Horizontal exits complying with 7.2.4 and the modifications of 23.2.2.5.1 through 23.2.2.5.4 shall be permitted.

23.2.2.5.1

Not less than 6 ft2 (0.55 m2) of accessible space per occupant shall be provided on each side of the horizontal exit for the total number of people in adjoining compartments.

23.2.2.5.2\*

Horizontal exits shall be permitted to comprise 100 percent of the exits required, provided that an exit, other than a horizontal exit, located in another (not necessarily adjacent) fire compartment is accessible without returning through the compartment of fire origin.

23.2.2.5.3\*

Ducts shall be permitted to penetrate horizontal exits in accordance with 7.2.4.3.5(3) if protected by combination fire dampers/smoke-leakage-rated dampers that meet the smoke damper actuation requirements of 8.5.5.

23.2.2.5.4

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

23.2.2.6 Ramps

Ramps complying with 7.2.5 shall be permitted.

23.2.2.7 Exit Passageways

Exit passageways complying with 7.2.6 shall be permitted.

23.2.2.8 Fire Escape Stairs

Fire escape stairs complying with 7.2.8 shall be permitted.

23.2.2.9 Fire Escape Ladders

Fire escape ladders complying with 7.2.9 shall be permitted.

23.2.2.10 Alternating Tread Devices

Alternating tread devices complying with 7.2.11 shall be permitted.

23.2.2.11 Areas of Refuge

Areas of refuge complying with 7.2.12 shall be permitted.

23.2.3 Capacity of Means of Egress

23.2.3.1

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

23.2.3.2

Aisles, corridors, and ramps required for egress shall be not less than 36 in. (915 mm) in width.

23.2.3.3

Residents' sleeping room door widths shall be permitted to comply with 23.2.11.1.4.

23.2.4 Number of Means of Egress

23.2.4.1

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.

23.2.4.2\*

Not less than two separate exits shall meet both of the following criteria:

They shall be provided on every story.

They shall be accessible from every part of every story, fire compartment, or smoke compartment; however, exit access travel shall be permitted to be common for the distances permitted as common path of travel by 23.2.5.2.

23.2.4.3\*

Not less than one approved exit shall be accessible from each fire compartment and each required smoke compartment into which residents are potentially moved in a fire emergency, with the exits arranged so that egress is possible without returning through the zone of fire origin.

23.2.5 Arrangement of Means of Egress

23.2.5.1 General

Arrangement of means of egress shall comply with Section 7.5.

23.2.5.2 Common Path of Travel

A common path of travel shall not exceed 50 ft (15 m), unless otherwise permitted by one of the following:

A common path of travel shall be permitted for the first 100 ft (30 m) in smoke compartments protected throughout by an approved automatic sprinkler system in accordance with 23.3.5.3.

A common path of travel shall be permitted to exceed 50 ft (15 m) in multilevel residential housing units in which each floor level, considered separately, has not less than one-half of its individual required egress capacity accessible by exit access leading directly out of that level without traversing another communicating floor level.

\*Approved existing common paths of travel that exceed 50 ft (15 m) shall be permitted to continue to be used.

23.2.5.3\* Dead-End Corridors

Existing dead-end corridors are undesirable and shall be altered wherever possible so that exits are accessible in not less than two different directions from all points in aisles, passageways, and corridors.

23.2.5.4 Corridor Access

Every sleeping room shall have a door leading directly to an exit access corridor, unless otherwise permitted by one of the following:

The requirement of 23.2.5.4 shall not apply if there is an exit door opening directly to the outside from a room at the finished ground level.

One adjacent room, such as a day room, a group activity space, or other common space, shall be permitted to intervene, and the following also shall apply:

Where sleeping rooms directly adjoin a day room or group activity space that is used for access to an exit, such sleeping rooms shall be permitted to open directly to the day room or space.

Sleeping rooms permitted to open directly to the day room or space shall be permitted to be separated in elevation by a one-half story or full story height.

23.2.5.5 Sally Port

A sally port shall be permitted in a means of egress where there are provisions for continuous and unobstructed travel through the sally port during an emergency egress condition.

23.2.6 Travel Distance to Exits

Travel distance shall comply with 23.2.6.1 through 23.2.6.7.

23.2.6.1

Diagram

Travel distance shall be measured in accordance with Section 7.6.

Upcodes Diagrams

23.2.6.2

The travel distance between any room door required as an exit access and an exit or smoke barrier shall not exceed 100 ft (30 m), unless otherwise permitted by 23.2.6.3.

23.2.6.3

The maximum travel distance limitations of 23.2.6.2 shall be permitted to be increased by 50 ft (15 m) in buildings protected throughout by an approved automatic sprinkler system in accordance with 23.3.5.3 or a smoke control system.

23.2.6.4

The travel distance between any point in a room and an exit or smoke barrier shall not exceed 150 ft (46 m), unless otherwise permitted by 23.2.6.5.

23.2.6.5

The maximum travel distance limitations of 23.2.6.4 shall be permitted to be increased by 50 ft (15 m) in buildings protected throughout by an approved automatic sprinkler system in accordance with 23.3.5.3 or a smoke control system.

23.2.6.6

The travel distance between any point in a sleeping room to the door of that room shall not exceed 50 ft (15 m), unless otherwise permitted by 23.2.6.7.

23.2.6.7

The maximum travel distance limitations of 23.2.6.6 shall be permitted to be increased to 100 ft (30 m) in open dormitories, provided that both of the following criteria are met:

The enclosing walls of the dormitory space shall be of smoke-tight construction.

Not less than two exit access doors remotely located from each other shall be provided where travel distance to the exit access door from any point within the dormitory exceeds 50 ft (15 m).

23.2.7 Discharge From Exits

23.2.7.1

Exits shall be permitted to discharge into a fenced or walled courtyard, provided that not more than two walls of the courtyard are the building walls from which egress is being made.

23.2.7.2

Enclosed yards or courts used for exit discharge in accordance with 23.2.7.1 shall be of sufficient size to accommodate all occupants at a distance of not less than 50 ft (15 m) from the building while providing a net area of 15 ft2 (1.4 m2) per person.

23.2.7.3

All exits shall be permitted to discharge through the level of exit discharge.

23.2.7.4

The requirements of 7.7.2 shall be waived, provided that not more than 50 percent of the exits discharge into a single fire compartment separated from other compartments by construction having not less than a 1-hour fire resistance rating.

23.2.7.5

Where all exits are permitted to discharge through areas on the level of discharge, all of the following criteria shall be met:

A smoke barrier shall be provided to divide that level into not less than two compartments, with not less than one exit discharging into each compartment.

Each smoke compartment shall have an exit discharge to the building exterior.

The level of discharge shall be provided with automatic sprinkler protection.

Any other portion of the level of discharge with access to the discharge area shall be provided with automatic sprinkler protection or shall be separated from the discharge area in accordance with the requirements for the enclosure of exits. (See 7.1.3.2.1.)

23.2.8 Illumination of Means of Egress

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

23.2.9 Emergency Lighting

23.2.9.1

Emergency lighting shall be provided in accordance with Section 7.9, unless otherwise permitted by 23.2.9.2.

23.2.9.2

Emergency lighting of not less than a 1-hour duration shall be permitted to be provided.

23.2.10 Marking of Means of Egress

Exit marking shall be provided as follows:

Exit signs shall be provided in areas accessible to the public in accordance with Section 7.10.

Exit signs shall not be required in detention and correctional residential housing areas. (See 3.3.22.1.)

23.2.11 Special Features

23.2.11.1 Doors

23.2.11.1.1

Doors within means of egress shall be in accordance with Chapter 7, unless otherwise provided in 23.2.11.1.2 through 23.2.11.1.10.

23.2.11.1.2

Doors shall be permitted to be locked in accordance with the applicable use condition.

23.2.11.1.3

Where egress doors are locked with key-operated locks, the provisions of 23.7.7 shall apply.

23.2.11.1.4\*

Doors to resident sleeping rooms shall be not less than 28 in. (710 mm) in clear width.

23.2.11.1.5

Existing doors to resident sleeping rooms housing four or fewer residents shall be permitted to be not less than 19 in. (485 mm) in clear width.

23.2.11.1.6

Doors in a means of egress shall be permitted to be of the horizontal-sliding type, provided that the force necessary to slide the door to its fully open position does not exceed 50 lbf (222 N) where a force of 50 lbf (222 N) is simultaneously applied perpendicular to the door.

23.2.11.1.7

Doors from areas of refuge to the exterior shall be permitted to be locked with key locks in lieu of locking methods described in 23.2.11.1.8, the keys to unlock such doors shall be maintained and available at the facility at all times, and the locks shall be operable from the outside.

23.2.11.1.8\*

Any remote-control release used in a means of egress shall be provided with a reliable means of operation to release locks on all doors and shall be remotely located from the resident living area, unless otherwise permitted by 23.2.11.1.8.2.

23.2.11.1.8.1

The remote location of a remote-control release used in a means of egress shall provide sight and sound supervision of the resident living areas.

23.2.11.1.8.2

Remote-control locking and unlocking of occupied rooms in Use Condition IV shall not be required, provided that both of the following criteria are met:

Not more than 10 locks need to be unlocked to relocate all occupants from one smoke compartment to an area of refuge as promptly as is required where remote-control unlocking is used. (See 23.3.7.9 for requirements for smoke barrier doors.)

Unlocking of all necessary locks is accomplished with not more than two separate keys.

23.2.11.1.9 Remote-Control-Release-Operated Doors

23.2.11.1.9.1

All remote-control-release-operated doors shall be provided with a redundant means of operation as follows:

Power-operated sliding doors or power-operated locks shall be constructed so that, in the event of power failure, a manual mechanical means to release and open the doors is provided at each door, and either emergency power arranged in accordance with 23.2.11.1.9.1(1) is provided for the power operation or a remote-control manual mechanical release is provided.

A combination of the emergency-power-operated release of selected individual doors and remote-control manual mechanical ganged release specified in 23.2.11.1.9(1) shall be permitted without mechanical release means at each door.

Mechanically operated sliding doors or mechanically operated locks shall be provided with a manual mechanical means at each door to release and open the door.

23.2.11.1.9.2

The emergency power required by 23.2.11.1.9.1(1) shall be arranged to provide the required power automatically in the event of any interruption of normal power due to any of the following:

Failure of a public utility or other outside electrical power supply

Opening of a circuit breaker or fuse

Manual act(s), including accidental opening of a switch controlling normal lighting facilities

23.2.11.1.10

The provisions of 7.2.1.5.7 for stairway re-entry shall not apply.

23.2.11.2 Reserved

23.2.11.3 Hazardous Materials

Where hazardous materials are present, the provisions of 7.12.2 shall apply.

23.3 Protection

23.3.1 Protection of Vertical Openings

23.3.1.1

Any vertical opening shall be enclosed or protected in accordance with Section 8.6, unless otherwise permitted by one of the following:

Unprotected vertical openings in accordance with 8.6.9.1 shall be permitted.

In residential housing area smoke compartments protected throughout by an approved automatic sprinkler system in accordance with 23.3.5.3, unprotected vertical openings shall be permitted in accordance with the conditions of 8.6.6, provided that the height between the lowest and highest finished floor levels does not exceed 23 ft (7010 mm), and the following also shall be permitted:

The number of levels shall not be restricted.

Residential housing areas subdivided in accordance with 23.3.8 shall be permitted to be considered as part of the communicating space.

The separation shall not be required to have a fire resistance rating. [See 8.6.6(4)(b).]

The requirement of 23.3.1.1 shall not apply to multilevel residential housing areas in accordance with 23.3.1.2.

Where full enclosure is impractical, 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.

Enclosures in detention and correctional occupancies shall have a minimum 1-hour fire resistance rating and shall be protected throughout by an approved automatic sprinkler system in accordance with 23.3.5.3.

23.3.1.2

Multilevel residential housing areas without enclosure protection between levels shall be permitted, provided that the conditions of 23.3.1.2.1 through 23.3.1.2.3 are met.

23.3.1.2.1\*

The entire normally occupied area, including all communicating floor levels, shall be 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.

23.3.1.2.2

Egress capacity shall simultaneously accommodate all occupants of all communicating levels and areas, with all communicating levels in the same fire area considered as a single floor area for purposes of determining required egress capacity.

23.3.1.2.3\*

The height between the highest and lowest finished floor levels shall not exceed 13 ft (3960 mm). The number of levels shall not be restricted.

23.3.1.3\*

A multitiered, open cell block shall be considered as a one-story building where one of the following criteria is met:

A smoke control system is provided to maintain the level of smoke from potential cell fires at not less than 60 in. (1525 mm) above the floor level of any occupied tier involving space that is classified as follows:

Use Condition IV or Use Condition V

Use Condition III, unless all persons housed in such space can pass through a free access smoke barrier or freely pass below the calculated smoke level with not more than 50 ft (15 m) of travel from their cells

The entire building, including cells, is provided with complete automatic sprinkler protection in accordance with 23.3.5.3.

23.3.2 Protection From Hazards

23.3.2.1\*

Any hazardous area shall be protected in accordance with Section 8.7. The areas described in Table 23.3.2.1 shall be protected as indicated.

Table 23.3.2.1 Hazardous Area Protection

Hazardous Area Description Separation/Protection\*

Areas not incidental to resident housing 2 hours

Boiler and fuel-fired heater rooms 1 hour or sprinklers

Central or bulk laundries >100 ft2 (>9.3 m2) 1 hour or sprinklers

Commercial cooking equipment In accordance with 9.2.3

Commissaries 1 hour or sprinklers

Employee locker rooms 1 hour or sprinklers

Hobby/handicraft shops 1 hour or sprinklers

Maintenance shops 1 hour or sprinklers

Padded cells 1 hour and sprinklers

Soiled linen rooms 1 hour or sprinklers

Storage rooms >50 ft2 (>4.6 m2) storing combustible material 1 hour or sprinklers

Trash collection rooms 1 hour or sprinklers

\*Minimum fire resistance rating.

23.3.2.2 Reserved

23.3.2.3

Hazardous areas determined by the authority having jurisdiction as not incidental to residents' housing shall be separated by 2-hour fire resistance-rated barriers in conjunction with automatic sprinkler protection.

23.3.2.4

Where cooking facilities are protected in accordance with 9.2.3, kitchens shall not be required to be provided with roomwide protection.

23.3.2.5

Waste chutes, incinerators, and linen chutes shall be protected in accordance with Section 9.5.

23.3.2.6 Hazardous Materials

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

23.3.3 Interior Finish

23.3.3.1 General

Interior finish shall be in accordance with Section 10.2.

23.3.3.2 Interior Wall and Ceiling Finish

Interior wall and ceiling finish materials complying with Section 10.2 shall be Class A or Class B in corridors, in exits, and in any space not separated from corridors and exits by partitions capable of retarding the passage of smoke; and Class A, Class B, or Class C in all other areas.

23.3.3.3 Interior Floor Finish

23.3.3.3.1

Interior floor finish complying with Section 10.2 shall be Class I or Class II in corridors and exits.

23.3.3.3.2

Existing floor finish material of Class A or Class B in nonsprinklered smoke compartments and Class A, Class B, or Class C in sprinklered smoke compartments shall be permitted to be continued to be used, provided that it has been evaluated based on tests performed in accordance with 10.2.3.

23.3.4 Detection, Alarm, and Communications Systems

23.3.4.1 General

Detention and correctional occupancies shall be provided with a fire alarm system in accordance with Section 9.6, except as modified by 23.3.4.2 through 23.3.4.4.4.

23.3.4.2 Initiation

Initiation of the required fire alarm system shall be by manual means in accordance with 9.6.2 and by means of any required detection devices or detection systems, unless otherwise permitted by the following:

Manual fire alarm boxes shall be permitted to be locked, provided that staff is present within the area when it is occupied and staff has keys readily available to unlock the boxes.

Manual fire alarm boxes shall be permitted to be located in a staff location, provided that both of the following criteria are met:

The staff location is attended when the building is occupied.

The staff attendant has direct supervision of the sleeping area.

23.3.4.3 Notification

23.3.4.3.1 Occupant Notification

Occupant notification shall be accomplished automatically in accordance with 9.6.3, and the following also shall apply:

A positive alarm sequence shall be permitted in accordance with 9.6.3.5.

\*Any smoke detectors required by this chapter shall be permitted to be arranged to alarm at a constantly attended location only and shall not be required to accomplish general occupant notification.

23.3.4.3.2 Emergency Forces Notification

23.3.4.3.2.1

Fire department notification shall be accomplished in accordance with 9.6.4, unless otherwise permitted by one of the following:

A positive alarm sequence shall be permitted in accordance with 9.6.3.5.

Any smoke detectors required by this chapter shall not be required to transmit an alarm to the fire department.

This requirement shall not apply where staff is provided at a constantly attended location that meets one of the following criteria:

It has the capability to promptly notify the fire department.

It has direct communication with a control room having direct access to the fire department.

23.3.4.3.2.2

Where the provision of 23.3.4.3.2.1(3) is utilized, the fire plan, as required by 23.7.1.3, shall include procedures for logging of alarms and immediate notification of the fire department.

23.3.4.4 Detection

An approved automatic smoke detection system shall be in accordance with Section 9.6, as modified by 23.3.4.4.1 through 23.3.4.4.4, throughout all resident housing areas.

23.3.4.4.1

Smoke detectors shall not be required in sleeping rooms with four or fewer occupants in Use Condition II or Use Condition III.

23.3.4.4.2

Other arrangements and positioning of smoke detectors shall be permitted to prevent damage or tampering, or for other purposes.

23.3.4.4.2.1

Other arrangements, as specified in 23.3.4.4.2, shall be capable of detecting any fire, and the placement of detectors shall be such that the speed of detection is equivalent to that provided by the spacing and arrangements required by the installation standards referenced in Section 9.6.

23.3.4.4.2.2

Detectors shall be permitted to be located in exhaust ducts from cells, behind grilles, or in other locations.

23.3.4.4.2.3

The equivalent performance of the design permitted by 23.3.4.4.2.2 shall be acceptable to the authority having jurisdiction in accordance with the equivalency concepts specified in Section 1.4.

23.3.4.4.3\*

Smoke detectors shall not be required in Use Condition II open dormitories where staff is present within the dormitory whenever the dormitory is occupied and the building is protected throughout by an approved, supervised automatic sprinkler system in accordance with 23.3.5.3.

23.3.4.4.4

In smoke compartments protected throughout by an approved automatic sprinkler system in accordance with 23.3.5.3, smoke detectors shall not be required, except in corridors, common spaces, and sleeping rooms with more than four occupants.

23.3.5 Extinguishment Requirements

23.3.5.1

High-rise buildings shall comply with 23.4.4.

23.3.5.2\*

Where required by Table 23.1.6.1, facilities shall be protected throughout by an approved, supervised automatic sprinkler system in accordance with 23.3.5.3.

23.3.5.3

Where this Code permits exceptions for fully sprinklered detention and correctional occupancies or sprinklered 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).

It shall be electrically connected to the fire alarm system.

It shall be fully supervised.

23.3.5.4

Portable fire extinguishers shall be provided in accordance with Section 9.9, unless otherwise permitted by the following:

\*Permitted to be locked.

\*Portable fire extinguishers shall be permitted to be located at staff locations only.

23.3.5.5

Standpipe and hose systems shall be provided in accordance with Section 9.10 as follows, unless otherwise permitted by 23.3.5.6:

Class I standpipe systems shall be provided for any building three or more stories in height.

Class III standpipe and hose systems shall be provided for all nonsprinklered buildings three or more stories in height.

23.3.5.6

The requirements of 23.3.5.5 shall not apply where otherwise permitted by the following:

Formed hose, 1 in. (25 mm) in diameter, on hose reels shall be permitted to provide Class II service.

Separate Class I and Class II systems shall be permitted in lieu of a Class III system.

23.3.6 Corridors

See 23.3.8.

23.3.7 Subdivision of Building Spaces

23.3.7.1\*

Smoke barriers shall be provided to divide every story used for sleeping by 10 or more residents, or any other story having an occupant load of 50 or more persons, into not less than two compartments, unless otherwise permitted by one of the following:

Protection shall be permitted to be accomplished using horizontal exits. (See 7.2.4.)

\*The requirement for subdivision of building space shall be permitted to be fulfilled by one of the following:

Smoke compartments having exit to a public way, where such exit serves only one area and has no openings to other areas

Building separated from the resident housing area by a 2-hour fire resistance rating or 50 ft (15 m) of open space

Secured, open area having a holding space located 50 ft (15 m) from the housing area that provides 15 ft2 (1.4 m2) or more of refuge area for each person (resident, staff, visitors) potentially present at the time of a fire

23.3.7.2

Doors used to access the areas specified in 23.3.7.1(2)(a), (b), and (c) shall meet the requirements for doors at smoke barriers for the applicable use condition.

23.3.7.3

Where smoke barriers are required by 23.3.7.1, they shall be provided in accordance with both of the following criteria:

They shall limit the occupant load to not more than 200 residents in any smoke compartment.

\*They shall limit the travel distance to a door in a smoke barrier, unless otherwise permitted by 23.3.7.4, in accordance with both of the following criteria:

The distance from any room door required as exit access shall not exceed 100 ft (30 m).

The distance from any point in a room shall not exceed 150 ft (46 m).

23.3.7.4

The maximum travel distance to a door in a smoke barrier shall be permitted to be increased by 50 ft (15 m) in smoke compartments protected throughout by an approved automatic sprinkler system in accordance with 23.3.5.3 or an automatic smoke control system.

23.3.7.5\*

Any required smoke barrier shall be constructed in accordance with Section 8.5, shall be of substantial construction, and shall have structural fire resistance.

23.3.7.6

Openings in smoke barriers shall be protected in accordance with Section 8.5, unless otherwise permitted by the following:

\*The total number of vision panels in any barrier shall not be restricted.

Sliding doors in smoke barriers that are designed to normally be kept closed and are remotely operated from a continuously attended location shall not be required to be self-closing.

23.3.7.7

Not less than 6 net ft2 (0.55 net m2) per occupant shall be provided on each side of the smoke barrier for the total number of occupants in adjoining compartments, and this space shall be readily available wherever occupants are moved across the smoke barrier in a fire emergency.

23.3.7.8

Doors in smoke barriers shall meet all of the following criteria:

The doors shall provide resistance to the passage of smoke.

Swinging doors shall be self-latching, or the opening resistance of the door shall be not less than 5 lbf (22 N).

Sliding doors shall be exempt from the latching requirement of 8.5.4.3.

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

23.3.7.9

Doors in smoke barriers shall conform with the requirements for doors in means of egress as specified in Section 23.2 and shall have locking and release arrangements according to the applicable use condition. The provisions of 23.2.11.1.8.2 shall not be used for smoke barrier doors serving a smoke compartment containing more than 20 persons.

23.3.7.10

Vision panels shall be provided in smoke barriers at points where the barrier crosses an exit access corridor.

23.3.7.11

Smoke dampers shall be provided in accordance with 8.5.5, unless otherwise permitted by 23.3.7.12.

23.3.7.12

Arrangements and positioning of smoke detectors required by 23.3.7.11 shall be permitted to prevent damage or tampering, or for other purposes, provided that both of the following criteria are met:

Such arrangements shall be capable of detecting any fire.

The placement of detectors shall be such that the speed of detection is equivalent to that provided by the spacing and arrangement required by NFPA 72 as referenced in 8.5.5.7.1.

23.3.8\* Special Protection Features— Subdivision of Resident Housing Spaces

Subdivision of facility spaces shall comply with Table 23.3.8.

Table 23.3.8 Subdivision of Resident Housing Spaces

Feature Use Condition

II III IV V

NS AS NS AS NS AS NS AS

Room to room separation NR NR NR NR SR NR SR SRa

Room face to corridor separation NR NR SRb NR SRb NR FRb SRa

Room face to common space separation NR NR NR ≤50 ft (≤15 m)c SRb >50 ft (>15 m)c NR ≤50 ft (≤15 m)c SRb >50 ft (>15 m)c SRb NR ≤50 ft (≤ 15 m)c SRa >50 ft (>15 m)c SRb SRa

Common space to corridor separation SR NR SR NR SR NR FR SRa

Total openings in solid room face where room face is required to be smoke resistant or fire ratedd 0.85 ft2 (0.08 m2) 0.85 ft2 (0.08 m2) 0.85 ft2 (0.08 m2)

0.85 ft2 (0.08 m2)

where meeting one of the following:

(1) Kept in closed position, except when in use by staff

(2) Closable from the inside

(3) Provided with smoke control

NS: Not protected by automatic sprinklers. AS: Protected by automatic sprinklers. NR: No requirement. SR: Smoke resistant. FR: Minimum 1-hour fire resistance rating.

Notes:

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

(2) Doors in openings in partitions required to be smoke resistant (SR) in accordance with Table 23.3.8 are required to be substantial doors of construction that resists the passage of smoke. Latches and door closers are not required on cell doors.

(3) Under Use Condition II, Use Condition III, or Use Condition IV, a space subdivided by open construction (any combination of grating doors and grating walls or solid walls) is permitted to be considered one room if housing not more than 16 persons. The perimeter walls of such space are required to be of smoke-resistant construction. Smoke detection is required to be provided in such space. Under Use Condition IV, common walls between sleeping areas within the space are required to be smoke resistant, and grating doors and fronts are permitted to be used. Under Use Condition II and Use Condition III, open dormitories are permitted to house more than 16 persons, as permitted by other sections of this chapter.

(4) Where barriers are required to be smoke resistant (SR), the provisions of Sections 8.4 and 8.5 do not apply.

aMight be no requirement (NR) where one of the following is provided:

(1) Approved automatic smoke detection system installed in all corridors and common spaces

(2) Multitiered cell blocks meeting the requirements of 23.3.1.3

bMight be no requirement (NR) in multitiered, open cell blocks meeting the requirements of 23.3.1.3.

cTravel distance through the common space to the exit access corridor.

d"Total openings in solid room face" include all openings (e.g., undercuts, food passes, grilles), the total of which is not to exceed 0.85 ft2 (0.08 m2).

All openings are required to be 36 in. (915 mm) or less above the floor.

23.4 Special Provisions

23.4.1 General

Detention and correctional occupancies shall comply with Chapter 11 where located in a special structure.

23.4.2 Limited Access Structures

23.4.2.1

Limited access structures used as detention and correctional occupancies shall comply with 23.4.2.2, unless otherwise permitted by one of the following:

The provisions of Section 11.7 for limited access structures shall not apply.

The requirement of 23.4.2.1 shall not apply to buildings protected throughout by an approved automatic sprinkler system in accordance with 23.3.5.3.

23.4.2.2

Any one of the following means shall be provided to evacuate smoke from the smoke compartment of fire origin:

Operable windows on not less than two sides of the building, spaced not more than 30 ft (9.1 m) apart, that provide openings with dimensions of not less than 22 in. (560 mm) in width and 24 in. (610 mm) in height

\*Manual or automatic smoke vents

Engineered smoke control system

Mechanical exhaust system providing not less than six air changes per hour

Other method acceptable to the authority having jurisdiction

23.4.3 Underground Buildings

See Section 11.7 for requirements for underground buildings.

23.4.4 High-Rise Buildings

Existing high-rise buildings shall be protected throughout by an approved, supervised automatic sprinkler system in accordance with 23.3.5.3. A sprinkler control valve and a waterflow device shall be provided for each floor.

23.4.5 Reserved

23.4.6 Lockups

23.4.6.1 General

23.4.6.1.1

Lockups in occupancies, other than detention and correctional occupancies and health care occupancies, where the holding area has capacity for more than 50 detainees shall be classified as detention and correctional occupancies and shall comply with the requirements of Chapter 23.

23.4.6.1.2

Lockups in occupancies, other than detention and correctional occupancies and health care occupancies, where any individual is detained for 24 or more hours shall be classified as detention and correctional occupancies and shall comply with the requirements of Chapter 23.

23.4.6.1.3

Lockups in occupancies, other than detention and correctional occupancies and health care occupancies, where the holding area has capacity for not more than 50 detainees, and where no individual is detained for 24 hours or more, shall comply with 23.4.6.1.4 or 23.4.6.1.5.

23.4.6.1.4

The lockup shall be permitted to comply with the requirements for the predominant occupancy in which the lockup is placed, provided that all of the following criteria are met:

\*Doors and other physical restraints to free egress by detainees can be readily released by staff within 2 minutes of the onset of a fire or similar emergency.

Staff is in sufficient proximity to the lockup so as to be able to effect the 2-minute release required by 23.4.6.1.4(1) whenever detainees occupy the lockup.

Staff is authorized to effect the release required by 23.4.6.1.4(1).

Staff is trained and practiced in effecting the release required by 23.4.6.1.4(1).

Where the release required by 23.4.6.1.4(1) is effected by means of remote release, detainees are not to be restrained from evacuating without the assistance of others.

23.4.6.1.5

Where the lockup does not comply with all the criteria of 23.4.6.1.4, the requirements of 23.4.6.2 shall be met.

23.4.6.1.6

The fire department with responsibility for responding to a building that contains a lockup shall be notified of the presence of the lockup.

23.4.6.2 Alternate Provisions

23.4.6.2.1

The requirements applicable to the predominant occupancy in which the lockup is placed shall be met.

23.4.6.2.2

Where security operations necessitate the locking of required means of egress, the following shall apply:

Detention-grade hardware meeting the requirements of ASTM F1577, Standard Test Methods for Detention Locks for Swinging Doors, shall be provided on swinging doors within the required means of egress.

Sliding doors within the required means of egress shall be designed and engineered for detention and correctional use, and lock cylinders shall meet the cylinder test requirements of ASTM F1577.

23.4.6.2.3

The lockup shall be provided with a complete smoke detection system in accordance with 9.6.2.9.

23.4.6.2.4

Diagram

Where the requirements applicable to the predominant occupancy do not require a fire alarm system, the lockup shall be provided with a fire alarm system meeting all of the following criteria:

The alarm system shall be in accordance with Section 9.6.

Initiation of the alarm system shall be accomplished by all of the following:

Manual fire alarm boxes in accordance with 9.6.2

Smoke detection system required by 23.4.6.2.3

Automatic sprinkler system required by the provisions applicable to the predominant occupancy

Staff and occupant notification shall be provided automatically in accordance with 9.6.3.

Emergency force notification shall be provided in accordance with 9.6.4.

Upcodes Diagrams

23.4.7\* Alcohol-Based Hand-Rub Dispensers

Alcohol-based hand-rub dispensers shall be permitted where both of the following criteria are met:

The detention and correction facility permits their use.

The installation meets the requirements in 8.7.3.3.

23.5 Building Services

23.5.1 Utilities

23.5.1.1

Utilities shall comply with the provisions of Section 9.1.

23.5.1.2

Alarms, emergency communications systems, and the illumination of generator set installations shall be provided with emergency power in accordance with NFPA 70 unless otherwise permitted by 23.5.1.3.

23.5.1.3

Systems complying with earlier editions of NFPA 70 and not presenting a life safety hazard shall be permitted to continue to be used.

23.5.2 Heating, Ventilating, and Air-Conditioning

23.5.2.1

Heating, ventilating, and air-conditioning equipment shall comply with the provisions of Section 9.2 and shall be installed in accordance with the manufacturer's specifications, unless otherwise permitted by one of the following:

The requirement of 23.5.2.1 shall not apply where otherwise modified by 23.5.2.2.

Systems complying with earlier editions of the applicable codes and not presenting a life safety hazard shall be permitted to continue to be used.

23.5.2.2

Portable space-heating devices shall be prohibited, unless otherwise permitted by 23.5.2.4.

23.5.2.3

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 both of the following requirements also shall apply:

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

They shall be chimney connected or vent connected.

They shall take air for combustion directly from outside.

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

The heating system shall have safety devices to immediately stop the flow of fuel and shut down the equipment in case of either excessive temperatures or ignition failure.

23.5.2.4

Approved, suspended unit heaters shall be permitted in locations other than means of egress and 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 vent connected and equipped with the safety devices required by 23.5.2.3(2).

23.5.2.5

Combustion and ventilation air for boiler, incinerator, or heater rooms shall be taken directly from, and discharged directly to, the outside.

23.5.3 Elevators, Escalators, and Conveyors

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

23.5.4 Waste Chutes, Incinerators, and Laundry Chutes

23.5.4.1

Waste chutes, incinerators, and laundry chutes shall comply with the provisions of Section 9.5.

23.5.4.2

Waste chutes and linen chutes, including pneumatic waste and linen systems, shall be provided with automatic extinguishing protection in accordance with Section 9.7.

23.5.4.3

Waste chutes shall discharge into a chute discharge room used for no purpose other than collection of waste and protected in accordance with Sections 8.7 and 9.5.

23.5.4.4

Incinerators shall not be directly flue-fed, and floor chutes shall not directly connect with the combustion chamber.

23.6 Reserved

23.7 Operating Features

23.7.1 Attendants, Evacuation Plan, and Fire Drills

23.7.1.1

Detention and correctional facilities, or those portions of facilities having such occupancy, shall be provided with 24-hour staffing, and the following requirements also shall apply:

Staff shall be within three floors or a 300 ft (91 m) horizontal distance of the access door of each resident housing area.

For Use Condition III, Use Condition IV, and Use Condition V, the arrangement shall be such that the staff involved starts the release of locks necessary for emergency evacuation or rescue and initiates other necessary emergency actions within 2 minutes of alarm.

The following shall apply to areas in which all locks are unlocked remotely in compliance with 23.2.11.1.8:

Staff shall not be required to be within three floors or 300 ft (91 m) of the access door.

The 10-lock, manual key exemption of 23.2.11.1.8.2 shall not be permitted to be used in conjunction with the alternative requirement of 23.7.1.1(3)(a).

23.7.1.2\*

Provisions shall be made so that residents in Use Condition III, Use Condition IV, and Use Condition V shall be able to notify staff of an emergency.

23.7.1.3\*

The administration of every detention or correctional facility 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 evacuation from the building when necessary.

23.7.1.3.1

All employees shall be instructed and drilled with respect to their duties under the plan.

23.7.1.3.2

The plan shall be coordinated with, and reviewed by, the fire department legally committed to serve the facility.

23.7.1.4

Employees of detention and correctional occupancies shall be instructed in the proper use of portable fire extinguishers and other manual fire suppression equipment.

23.7.1.4.1

The training specified in 23.7.1.4 shall be provided to new staff promptly upon commencement of duty.

23.7.1.4.2

Refresher training shall be provided to existing staff at not less than annual intervals.

23.7.2\* Combustible Personal Property

Books, clothing, and other combustible personal property allowed in sleeping rooms shall be stored in closable metal lockers or an approved fire-resistant container.

23.7.3 Heat-Producing Appliances

The number of heat-producing appliances, such as toasters and hot plates, and the overall use of electrical power within a sleeping room shall be controlled by facility administration.

23.7.4 Furnishings, Mattresses, and Decorations

23.7.4.1

Draperies and curtains, including privacy curtains, in detention and correctional occupancies shall be in accordance with the provisions of 10.3.1.

23.7.4.2

Newly introduced upholstered furniture within detention and correctional occupancies shall meet the criteria specified in 10.3.2.1(2) and 10.3.2.2.

23.7.4.3\*

Newly introduced mattresses within detention and correctional occupancies shall meet the criteria specified in 10.3.3 and 10.3.3.2.

23.7.4.4

Combustible decorations shall be prohibited in any detention or correctional unless they are flame retardant and approved.

23.7.4.5

Wastebaskets and other waste containers shall be of noncombustible or other approved materials. Waste containers with a capacity exceeding 20 gal (76 L) shall be provided with a noncombustible lid or lid of other approved material.

23.7.5 Keys

All keys necessary for unlocking doors installed in a means of egress shall be individually identified by both touch and sight.

23.7.6 Portable Space-Heating Devices

Portable space-heating devices shall be prohibited in all detention and correctional occupancies.

23.7.7 Door Inspection

Doors and door hardware in means of egress shall be inspected annually by an appropriately trained person. The inspection shall be documented.

23.7.8 Integrated Fire Protection and Life Safety Systems

23.7.8.1

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

23.7.8.2

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