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22.1.1.1.7* Lockups in other than detention and correctional occupancies and health care occupancies shall comply with the requirements of 22.4.5.

A.22.1.1.1.7 Lockups in which persons are detained with some degree of security imposed on them are common in many occupancies. Examples include the following:

- (1) Immigration and naturalization facilities at border crossings
- (2) Customs facilities at international airports
- (3) Prisoner holding facilities at courthouses
- (4) Local police department holding areas
- (5) Security offices at sports stadia
- (6) Security offices at shopping mall complexes

Since the 2006 edition of the *Code*, the definition of the term *detention and correctional occupancy* has applied at the threshold of one or more persons (see 3.3.196.5, 6.1.7.1, and 22/23.1.1.1.6). Formerly, the threshold was four or more persons. This change was made for correlation with the provisions for lockups in other than detention and correctional occupancies, as addressed in 22/23.1.1.1.7 and 22/23.4.5, that have appeared in the *Code* since the 2006 edition. The provisions for lockups are needed for application, even when only one person is detained,

22.1.1.2 Total Concept.

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

22.1.1.2.2 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:

- (1) Design, construction, and compartmentation
- (2) Provision for detection, alarm, and extinguishment
- (3) 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
- (4) Provision of security to the degree necessary for the safety of the public and the occupants of the facility

22.1.1.3 Additions. Additions shall be separated from any existing structure not conforming with the provisions of Chapter 23 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:

- (1) Doors in such partitions shall normally be kept closed.
- (2) Doors in such partitions shall be permitted to be held open if they meet the requirements of 7.2.1.8.2.

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A.23.1.1.1.7 Lockups in which persons are detained with some degree of security imposed on them are common in many occupancies. Examples include the following:

- (1) Immigration and naturalization facilities at border crossings
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as the locked doors characteristic of such detention deny the occupant free egress as required by 7.2.1.5. A lockup in an occupancy other than detention and correctional that detains any individual for more than 24 hours is required to be classified as a detention and correctional occupancy (see 22/23.4.5.1.2) and is subject to the provisions of Chapter 22 or Chapter 23. Thus, the provisions of Chapters 22 and 23 needed to apply to one or more residents.

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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:

- (1) Doors in such partitions shall normally be kept closed.
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22.1.1.4 Modernizations or Renovations.

22.1.1.4.1 Modernizations and renovations shall be in accordance with 4.6.7, unless otherwise permitted by 22.1.1.4.2.

22.1.1.4.2 In nonsprinklered existing buildings, modernizations or renovations shall be permitted to comply with the nonsprinklered options contained in 22.4.4 in lieu of the sprinkler requirement of 22.3.5.2.

N 22.1.1.4.3 Where construction, alteration, or demolition operations are conducted, the provisions of 4.6.10.2 shall apply.

Although 22/23.1.1.1.4 states that Chapters 22 and 23 establish life safety requirements for detention and correctional facilities, the chapters focus primarily on life safety requirements for the residential portions of these occupancies.

Paragraph 22/23.1.1.1.4(1) exempts Use Condition I facilities from the requirements of Chapters 22 and 23 if such facilities are protected as residential occupancies. In accordance with 22/23.1.2.1, which defines the five resident user category groups, Use Condition I provides residents with free movement from sleeping areas and other spaces where access or occupancy is permitted to the exterior by a means of an egress system that meets the same requirements as would be provided for occupants of hotel, dormitory, apartment, or lodging or rooming house occupancies. Because locked doors have not been imposed on the residents of a Use Condition I detention or correctional occupancy, such a facility does not require the defend-in-place strategy and associated requirements of Chapters 22 and 23. For information on the protection of Use Condition I facilities, 22/23.1.1.1.4(1) and 22/23.1.2.3(1) refer the user to the residential occupancy chapters of the *Code* in lieu of the provisions of Chapters 22 and 23.

Paragraph 22/23.1.1.1.4(2) permits use of the equivalency provisions of Section 1.4 for compliance with the intended level of life safety, rather than having to meet the requirements of Chapters 22 and 23. The 2016 edition of NFPA 101A, *Guide on Alternative Approaches to Life Safety*,¹ will provide information on one possible equivalency system for use in detention and correctional occupancies. The measurement system of the 2019 edition of NFPA 101A, which is to be published late in 2018, will be calibrated against the requirements of the 2018 edition of the *Life Safety Code*; the fire safety evaluation systems contained in the 2016 edition of NFPA 101A were calibrated against the requirements of the 2015 edition of the *Code*.

The fire safety evaluation system (FSES) for detention and correctional occupancies contained in NFPA 101A provides a method in which the user assigns numerical values to various building parameters. The individual values are totaled and compared with established values. Using this system, alternative designs can be evaluated as options to literal *Code* compliance. The *Code* does not intend to limit acceptable equivalency evaluations solely to those based on the FSES in NFPA 101A. The

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authority having jurisdiction (AHJ) retains the discretion — in accordance with Section 1.4 — to evaluate and approve alternative designs on the basis of appropriate supporting data. Also, Section 4.4 of the *Code* permits the use of the performance-based option for the design of a complete life safety system in accordance with Chapter 5.

Both A.6.1.7.1 and 22/23.1.1.1.5 reflect the current terminology for various forms of detention and correctional occupancies. The terms *adult correctional institutions*, *adult local detention facilities*, *adult community residential centers*, *juvenile detention facilities*, *juvenile training schools*, *adult and juvenile work camps*, and *adult and juvenile substance abuse centers* are used in place of terms such as *reformatories* and *houses of correction*.

Residents of detention and correctional occupancies and patients in health care occupancies are judged to be incapable of self-preservation during a fire emergency. In the case of a health care occupancy patient, incapability is due to physical or mental illness or infirmity. The detention and correctional occupancy resident, although most likely ambulatory or able-bodied, is incapable of self-preservation due to imposed security measures that are beyond the resident's control. In both cases, the occupants might have to await staff action before moving to an exit, another fire compartment, or another smoke compartment. Impediments to adequate egress are further compounded in detention and correctional occupancies by the reluctance of staff to unlock doors leading to the outside. Thus, horizontal movement within the facility to another fire compartment or smoke compartment might be the only means of egress system that the resident is allowed to use in a fire emergency, regardless of how many exit doors to the outside are installed. Therefore, use of the "total concept" described in 22/23.1.1.2 is critical.

The total concept, as used in 22/23.1.1.2, establishes a protect-in-place or defend-in-place strategy. This strategy mandates requirements that minimize the need for building evacuation by restricting the development and spread of a fire emergency to the room of fire origin. The total concept is desirable because safety cannot be ensured by relying on a means of egress system that is predicated on the use of evacuation but for which locks either cannot or will not be unlocked in a timely manner. The requirements (e.g., see Section 22/23.7) first try to prevent ignition and, when fires do occur, set out to detect them

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(e.g., see 22/23.3.4.4). Other requirements aim to control the speed with which a fire will develop (e.g., see 22/23.3.3), and still others serve to confine the effects of fire. Sprinkler, standpipe, and portable fire extinguisher requirements facilitate the extinguishment of fire. Provisions are made for refuge areas by encouraging the use of horizontal exits and by requiring smoke barriers. Heavy reliance is placed on staff reaction. All these requirements fit together to minimize the need for evacuation and constitute the “total concept.”

Additions to existing facilities are addressed in 22/23.1.1.3. Buildings that comply with the requirements for existing detention and correctional occupancies in accordance with Chapter 23 do not require separation from new additions used as detention and correctional occupancies.

Note that, unlike similar requirements that apply to health care occupancies (see 18/19.1.1.4.1.1), the positioning of doors in the separating fire barriers is not restricted to cross-corridor locations. Doors must be kept closed, unless they meet the requirements for automatic closing found in 7.2.1.8.2.

Exhibit 22/23.2 illustrates the requirements of 22/23.1.1.3. If the existing portion of the building meets the requirements of Chapter 23, the new addition could be open to the existing building.

The provisions of 22/23.1.1.4.3 are new to the 2018 edition of the *Code*. They require compliance with NFPA 241, *Standard for Safeguarding Construction, Alteration, and Demolition Operations*,² via the reference to 4.6.10.2, wherever such activities are conducted in detention and correctional occupancies.

22.1.2 Classification of Occupancy. See 6.1.7.

22.1.2.1* For application of the life safety requirements of this chapter, the resident user category shall be divided into the groups specified in 22.1.2.1.1 through 22.1.2.1.5.

A.22.1.2.1 Users and occupants of detention and correctional facilities at various times can be expected to include staff, visitors, and residents. The extent and nature of facility utilization vary according to the type of facility, its function, and its programs.

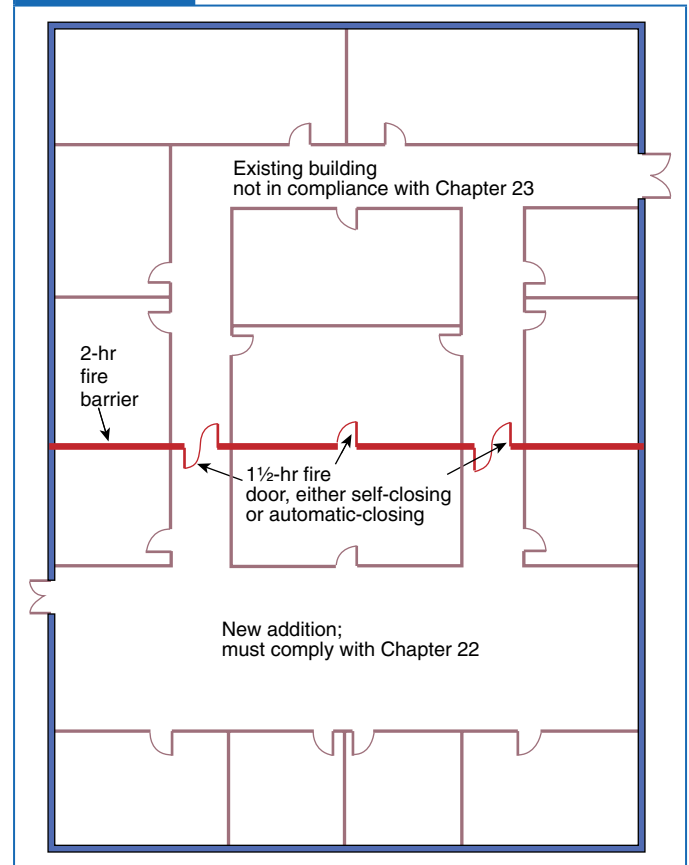
Figure A.22.1.2.1 illustrates the five use conditions.

22.1.2.1.1 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 that meet the requirements of the *Code*.

22.1.2.1.2 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.

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Exhibit 22/23.2



Separation required between new addition complying with Chapter 22 and existing building not complying with requirements of Chapter 23.

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.

A.23.1.2.1 Users and occupants of detention and correctional facilities at various times can be expected to include staff, visitors, and residents. The extent and nature of facility utilization will vary according to the type of facility, its function, and its programs.

Figure A.23.1.2.1 illustrates the five use conditions.

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.

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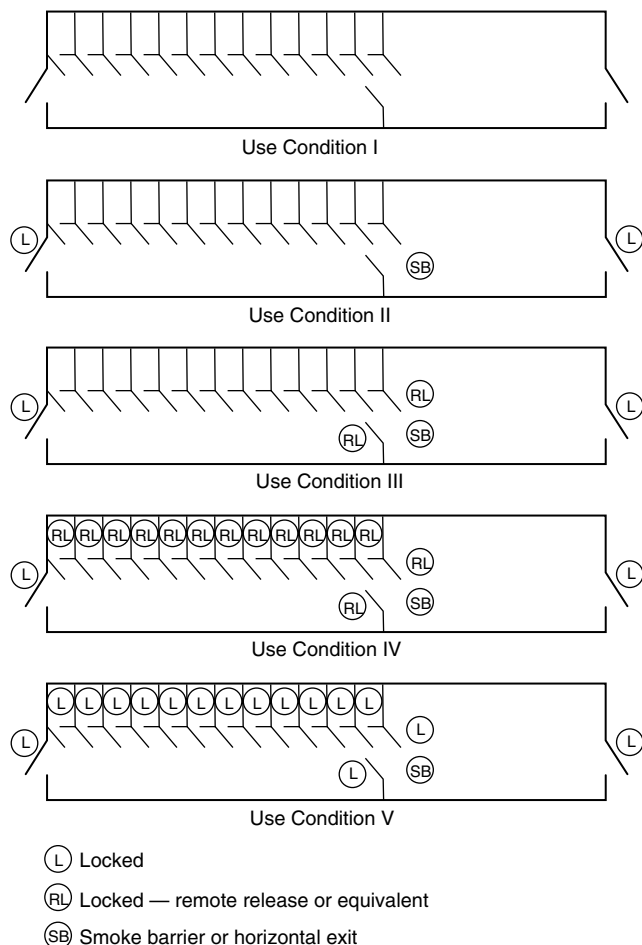


Figure A.22.1.2.1 Detention and Correctional Use Conditions.

22.1.2.1.3 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.

22.1.2.1.4 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.

22.1.2.1.5 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.

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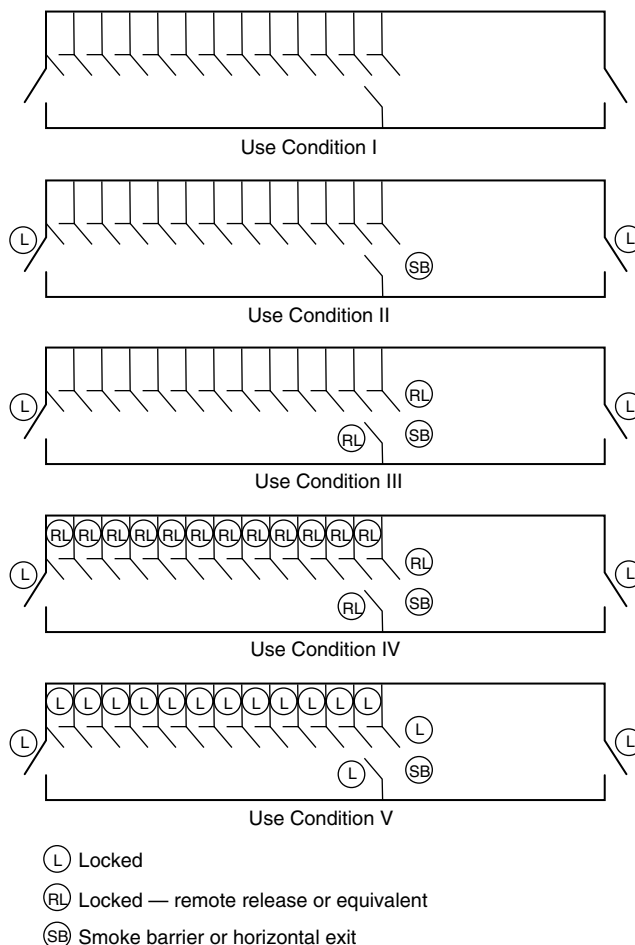


Figure A.23.1.2.1 Detention and Correctional Use Conditions.

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.

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22.1.2.2* 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.

A.22.1.2.2 Prompt operation is intended to be accomplished in the period of time between detection of fire, either by the smoke detector(s) required by 22.3.4.4 or by other means, whichever occurs first, and the advent of intolerable conditions forcing emergency evacuation. Fire tests have indicated that the time available is a function of the volume and height of the space involved and the rate of fire development. In traditional one-story corridor arrangements, the time between detection by smoke detectors and the advent of lethal conditions down to head height can be as short as approximately 3 minutes. In addition, it should be expected that approximately 1 minute will be required to evacuate all the occupants of a threatened smoke compartment once the locks are released. In such a case, a prompt release time would be 2 minutes.

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

- (1) Requirements of residential occupancies under this *Code*
- (2)* Requirements of this chapter for Use Condition II facilities, provided that the staffing requirements of Section 22.7 are met

A.22.1.2.3(2) If the Use Condition I facility conforms to the requirements of residential occupancies under this *Code*, there are no staffing requirements. If the Use Condition I facility conforms to the requirements of Use Condition II facilities as permitted by this provision, staffing is required in accordance with 22.7.1.

Use Condition I facilities have no physical restrictions, such as locks, on the means of egress. The occupants are capable of self-preservation. An example is a work release center in which the doors are not locked. See Figure A.22/A.23.1.2.1. Because the means of egress system is kept unlocked, occupants are as free to escape a fire emergency as occupants of any other residential type of occupancy. Therefore, Use Condition I detention and correctional occupancies are exempted from the requirements of Chapters 22 and 23 if they meet the requirements of some other occupancy chapter, such as Chapter 28 or Chapter 29 for hotels and dormitories. See 22/23.1.2.3 and 22/23.1.1.1.4(1).

The residents of a Use Condition II facility have the freedom to move within the building, including the freedom to move from their rooms, across the smoke barrier, and into a separate smoke compartment. Locked doors that are permitted to be unlocked manually at the door impede movement through the exit door in the exterior wall to the outside. See Figure A.22/A.23.1.2.1.

The residents of a Use Condition III facility are free to move outside their rooms but are confined to the smoke compartment that contains their rooms. Locked doors within the smoke barrier that are equipped with remote-control release impede movement to an adjoining smoke compartment. Locked doors that are permitted to be unlocked manually at the door impede

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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.

A.23.1.2.2 Prompt operation is intended to be accomplished in the period of time between detection of fire, either by the smoke detector(s) required by 23.3.4.4 or by other means, whichever occurs first, and the advent of intolerable conditions forcing emergency evacuation. Fire tests have indicated that the time available is a function of the volume and height of the space involved and the rate of fire development. In traditional one-story corridor arrangements, the time between detection by smoke detectors and the advent of lethal conditions down to head height can be as short as approximately 3 minutes. In addition, it should be expected that approximately 1 minute will be required to evacuate all the occupants of a threatened smoke compartment once the locks are released. In such a case, a prompt release time would be 2 minutes.

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

- (1) Requirements of residential occupancies under this *Code*
- (2)* Requirements of this chapter for Use Condition II facilities, provided that the staffing requirements of Section 23.7 are met

A.23.1.2.3(2) If the Use Condition I facility conforms to the requirements of residential occupancies under this *Code*, there are no staffing requirements. If the Use Condition I facility conforms to the requirements of Use Condition II facilities as permitted by this exception, staffing is required in accordance with 23.7.1.

movement through the exit door in the exterior wall to the outside. See Figure A.22/A.23.1.2.1.

The residents of Use Condition IV facilities are locked in their sleeping rooms. Locks on sleeping room doors must be equipped with remote-control release. Locked doors within the smoke barrier that are equipped with remote-control release impede movement to an adjoining smoke compartment. Locked doors that are permitted to be unlocked manually at the door impede movement through the exit door in the exterior wall to the outside. See Figure A.22/A.23.1.2.1.

In Use Condition V facilities, all locks are manually operated at the individual door. See Figure A.22/A.23.1.2.1. The unlocking process places a heavy demand on staff to open doors in an emergency and severely restricts the movement of residents of Use Condition V facilities. Therefore, the most stringent requirements of Chapters 22 and 23 are applied to such facilities.

As part of the definitions of Use Condition II through Use Condition V, reference is made to smoke compartments and the type of locking (none, remote release, or manual operation) used for smoke barrier doors. A facility without a smoke barrier can still qualify as meeting the requirements for one of these use conditions by providing for movement to a location judged to be equivalent to a smoke compartment, such as (1) a public way, (2) a building separated from the space in question by either

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adequate fire resistance-rated construction or distance, or (3) an adequately sized outside holding area located at a safe distance. The locking operation of the door to this alternative location cannot be more stringent than that permitted for the smoke barrier door of the corresponding use condition — no locking for Use Condition II, remote release for Use Condition III and Use Condition IV, and manual operation for Use Condition V. See also 22/23.3.7.

Note that, in Figure A.22/A.23.1.2.1, “locked” designates that such doors are arranged to require a manual unlocking operation at the door.

The major requirements of 22/23.1.2.2, applicable to Use Condition III and Use Condition IV facilities, are that the area must be under continuous supervision and a sufficient number of staff must be present and have the necessary keys readily available to release the locks.

The intent of 22/23.1.2.3 is that detention and correctional occupancies in which the occupants are not locked in at any time are permitted to be classified as residential occupancies if they meet the requirements of Chapter 26, Chapter 28, Chapter 29, Chapter 30, or Chapter 31, as appropriate. Those buildings that permit free egress, although used as detention and correctional occupancies, are not classified as detention and correctional occupancies under this *Code*. A facility equipped with locking devices on its doors cannot be classified as Use Condition I, because the locks could be used in the future.

22.1.3* Multiple Occupancies.

A.22.1.3 Detention and correctional facilities are a complex of structures, each serving a definite and usually different purpose. In many institutions, all, or almost all, the occupancy-type classifications found in this *Code* are represented. Means of egress and other features are governed by the type of occupancy classification and the hazard of occupancy, unless specific exemptions are made.

All buildings and structures are to be classified using Chapter 22 and Section 6.1 as a guide, subject to the ruling of the authority having jurisdiction where a question arises concerning the proper classification of any individual building or structure.

Use condition classification of the institution, as well as of individual areas within the complex, is always to be considered by the authority having jurisdiction.

22.1.3.1 Multiple occupancies shall be in accordance with 6.1.14.

22.1.3.2 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 22.1.3.2.1 and 22.1.3.2.2.

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

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Instead, depending on the locks' mode of operation — remote or manual — the corresponding use condition should be assigned and the requirements of Chapter 22 or Chapter 23 followed. A facility should be classified as Use Condition I only if the locking devices are physically removed.

In lieu of following the requirements for a normal residential occupancy, as detailed in Chapter 26, Chapter 28, Chapter 29, Chapter 30, or Chapter 31, a Use Condition I facility is permitted to comply with the Chapter 22 or Chapter 23 provisions applicable to a Use Condition II facility. This exemption permits the entire facility, which might employ a variety of use conditions, to be measured against the requirements of Chapter 22 or Chapter 23 without having to make special use of the residential occupancy chapters. However, as A.22/A.23.1.2.3(2) advises, if the requirements applicable to Use Condition II are used, staffing is required. Proper protection would not be ensured by mixing the provisions of a residential occupancy chapter — Chapter 28 or Chapter 29, for example, for which the hotel provisions do not rely on staff action — with those of Chapters 22 and 23 applicable to Use Condition II facilities, for which heavy reliance is placed on staff action. In other words, the *Code* requires full compliance with either the requirements applicable to a residential occupancy or those applicable to a detention and correctional occupancy — not a self-prescribed mixing of options.

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

- (1) 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.
- (2) 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.

A.22.1.3.2.2 Key-operated locking hardware of a lesser grade than institutional grade hardware might not be suitable for the heavy use to which such locks are expected to be subjected.

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

- (1) They are not intended to serve residents for sleeping purposes.
- (2) They are separated from areas of detention or correctional occupancies by construction having not less than a 2-hour fire resistance rating.

22.1.3.4 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 22.1.3.5.

22.1.3.5 Egress through a horizontal exit into other contiguous occupancies that do not conform with 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:

- (1) The occupancy shall not contain high hazard contents.
- (2) The horizontal exit shall comply with the requirements of 22.2.2.5.

22.1.3.6 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 22.3.2.

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

22.1.3.8 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.

Paragraph 22/23.1.3.1 directs the user to the multiple occupancies provisions of 6.1.14, which permit protecting multiple occupancies either as mixed occupancies or as separated occupancies. Where the multiple occupancy is protected via the provisions of 6.1.14.4 for separated occupancies, the required number of

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A.23.1.3.2.1 Key-operated locking hardware should be of institutional grade. Lesser grade hardware might not be suitable for the heavy use to which such locks are expected to be subjected.

23.1.3.2.2 Reserved.

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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.

hours of fire-rated separation is specified by Table 6.1.14.4.1(a) or Table 6.1.14.4.1(b). Note that, per Table 6.1.14.4.1(a) and Table 6.1.14.4.1(b), the 2-hour separation required between detention/correctional occupancies and other occupancies is not permitted to be reduced to a 1-hour separation due to the

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presence of sprinklers. The protect-in-place strategy being used needs to help ensure tenable conditions for more than 1 hour under fire conditions.

The provisions of 22/23.1.3.2 through 22/23.1.3.8 have the effect of modifying those of 6.1.14 for the very specific situations described.

Paragraph 22/23.1.3.2 addresses areas of detention and correctional facilities that correspond to other occupancies. Yet, the detailed provisions of Chapters 22 and 23 apply mainly to the sleeping and living areas of the detention and correctional facility. Similarly, the provisions of 22/23.1.1.6 mandate that detention and correctional occupancies provide sleeping facilities. Exhibit 22/23.3 shows an aerial view of a 400,000 ft² (37,160 m²) detention facility where the six multi-sided pods comprise the sleeping and living areas addressed specifically by the provisions of Chapters 22 and 23.

Exhibit 22/23.3 shows areas of the detention facility at the center of the building that line up so as to bisect the building such that three living units are to the left and three are to the right. The area at the center of the building includes spaces that are candidates for classification as occupancies other than detention and correctional, as they are not part of the sleeping and living areas. Exhibit 22/23.4 shows an auditorium used only by staff or guests. Exhibit 22/23.5 shows an arraignment room, and Exhibit 22/23.6 shows a visitation area.

Although the work areas related to a detention and correctional occupancy resemble a typical industrial occupancy, the requirements of Chapter 40, Industrial Occupancies, cannot be applied by themselves, because doors within the required means of egress of a detention and correctional occupancy are locked for security. Therefore, the concepts of Chapters 22 and 23 should be implemented in locked industrial work areas to ensure that the necessary trained staff who control locks are present to

Exhibit 22/23.3

Detention facility aerial view with six distinct sleeping and living pods.

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Exhibit 22/23.4

Auditorium not located within resident sleeping and living area.

Exhibit 22/23.5

Arraignment room not located within resident sleeping and living area.

Exhibit 22/23.6

Visitation area not located within resident sleeping and living area.

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facilitate immediate, supervised release of occupants in the event of fire or a similar emergency.

In addition, some areas of a large facility might correspond to another occupancy classification. For example, a gymnasium would be considered an assembly occupancy (Chapters 12 and 13). If locked doors are required, prompt unlocking and release are critical. Additionally, the requirement of 22.1.3.2.2 for detention-grade hardware increases the reliability of the hardware over that which would normally be installed in nondetention occupancies.

Release of locked doors is permitted to be achieved by a remotely activated system capable of unlocking all doors in the means of egress or by a sufficient number of attendants who are continuously on duty, provided with keys, and stationed in the immediate area of all locked means of egress doors. Continuous staff supervision is essential.

Paragraph 22/23.1.3.3 permits portions of a detention and correctional occupancy to be classified as some other occupancy, provided that certain safeguards are implemented. For example, administrative offices or maintenance areas that are not customarily used by residents as sleeping areas and are separated by 2-hour fire resistance-rated construction could be classified as business or industrial occupancies. In many cases, “trustees” (e.g., inmate workers) might be employed in these areas. Their presence in these areas would be permitted, provided that they have the freedom of egress found in an unlocked environment.

Paragraph 22/23.1.3.3(2) requires that, if a detention or correctional occupancy is located in a building of another classification, the detention or correctional occupancy must be separated from the other occupancy by construction having a fire resistance rating of 2 hours. This requirement would apply to a small detention facility in which detainees sleep that is located in a combination county courthouse/office/police building. In accordance with 22/23.7.1.1, the detention area must be staffed 24 hours per day. The remainder of the building, especially office areas, might not be occupied at night. A fire that originates and develops in an unoccupied area will not threaten the occupants

22.1.4 Definitions.

22.1.4.1 General. For definitions, see Chapter 3, Definitions.

22.1.4.2 Special Definitions. A list of special terms used in this chapter follows:

- (1) **Detention and Correctional Residential Housing Area.** See 3.3.22.1.
- (2) **Sally Port (Security Vestibule).** See 3.3.247.

22.1.5 Classification of Hazard of Contents. The classification of hazard of contents shall be as defined in Section 6.2.

22.1.6 Minimum Construction Requirements.

- ▲ **22.1.6.1** Detention and correctional occupancies shall be limited to the building construction types specified in Table 22.1.6.1 (See 8.2.1.)

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of the detention facility as readily, due to the protection provided by the required 2-hour fire resistance-rated barrier.

Paragraph 22/23.1.3.4 addresses detention and correctional occupancy egress paths that traverse other use areas. The means of egress from detention and correctional occupancies that traverse other types of spaces must conform to the requirements for detention and correctional occupancies. However, if a 2-hour fire barrier and the associated opening protectives located between a detention or correctional occupancy and another occupancy (e.g., business) qualify as a horizontal exit (see 22/23.2.2.5 and 7.2.4), the means of egress system in the business occupancy needs to comply only with the appropriate requirements contained in Chapters 38 and 39. See 22/23.1.3.5.

Paragraph 22/23.1.3.6 regulates those spaces that have more hazardous contents — in quantity or type — than are usually found in a detention and correctional occupancy. Spaces, such as rooms used for the storage of highly combustible materials, trash collection rooms, and paint shops, must be protected in accordance with 22/23.3.2.

Paragraph 22/23.1.3.7 prohibits another occupancy with highly hazardous contents — such as flammable liquids storage — from being located in a building housing detention and correctional occupancies. The intent of this paragraph is not to exclude normal storage but to prevent the conversion of a portion of a detention and correctional facility into a warehouse that contains a larger quantity (or a more hazardous type) of combustible material than normally would be expected in a detention and correctional occupancy. This requirement applies principally to residential areas. For example, industrial areas that are part of the overall detention and correctional facility but are located in a nonresidential-use building can have flammable liquids as part of the industrial process.

Paragraph 22/23.1.3.8 permits use of the provision of 6.1.14.4.6 relative to atrium walls being part of the separation that creates separated occupancies on a floor-by-floor, but not side-to-side, basis. See the commentary following 6.1.14.4.6.

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:

- (1) **Detention and Correctional Residential Housing Area.** See 3.3.22.1.
- (2) **Sally Port (Security Vestibule).** See 3.3.247.

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.)

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▲ **Table 22.1.6.1 Construction Type Limitations**

Construction Type	Sprinklered [†]	Stories in Height [‡]					
		1 With Basement	1 Without Basement	2	3	>3 But Not High-Rise	High-Rise
I (442)	Yes	X	X	X	X	X	X
	No	NP	NP	NP	NP	NP	NP
I (332)	Yes	X	X	X	X	X	X
	No	NP	NP	NP	NP	NP	NP
II (222)	Yes	X	X	X	X	X	X
	No	NP	NP	NP	NP	NP	NP
II (111)	Yes	X	X	X	NP	NP	NP
	No	NP	NP	NP	NP	NP	NP
II (000)	Yes	X	X	X	NP	NP	NP
	No	NP	NP	NP	NP	NP	NP
III (211)	Yes	X	X	X	NP	NP	NP
	No	NP	NP	NP	NP	NP	NP
III (200)	Yes	X	X	X	NP	NP	NP
	No	NP	NP	NP	NP	NP	NP
IV (2HH)	Yes	X	X	X	NP	NP	NP
	No	NP	NP	NP	NP	NP	NP
V (111)	Yes	X	X	X	NP	NP	NP
	No	NP	NP	NP	NP	NP	NP
V (000)	Yes	X	X	X	NP	NP	NP
	No	NP	NP	NP	NP	NP	NP

X: Permitted for Use Conditions II, III, IV, and V. (See 22.1.2.3 for Use Condition I.)

NP: Not permitted.

[†]Sprinklered throughout by an approved, supervised automatic sprinkler system in accordance with 9.7.1.1(I). (See 22.3.5.)

[‡]See 4.6.3.

22.1.6.2 All interior walls and partitions in Type I or Type II construction shall be of noncombustible or limited-combustible materials.

Table 22/23.1.6.1 is applied relative to building construction types. See NFPA 220, *Standard on Types of Building Construction*,³ and NFPA 5000®, *Building Construction and Safety Code*®,⁴ for definitions of construction types. Table A.8.2.1.2 summarizes the details associated with Type I through Type V construction.

Table 22/23.1.6.1 establishes building construction type limitations based on the number of stories in height, as established by 4.6.3. Table 22/23.1.6.1 is applied to detention and

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.

correctional occupancies by starting the story count with the level of exit discharge and ending with the highest story used as a detention and correctional occupancy. (Note that a building can have only one level of exit discharge, as defined in 3.3.88.1.)

Table 22/23.1.6.1 prohibits certain building construction types from being constructed and occupied for detention and correctional occupancy use, even if protected by automatic sprinklers. The automatic sprinkler requirements contained in

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Table 23.1.6.1 Construction Type Limitations

Construction Type	Sprinklered ^a	Stories in Height ^b					
		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:(1) The roof covering meets not less than Class C requirements in accordance with ASTM E 108, *Standard Test Methods for Fire Tests of Roof Coverings*, or ANSI/UL 790, *Test Methods for Fire Tests of Roof Coverings*.

(2) The roof is separated from all occupied portions of the building by a noncombustible floor assembly that includes not less than 2½ in. (64 mm) of concrete or gypsum fill, and the attic or other space so developed meets one of the following requirements:

(a) It is unoccupied.

(b) 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.