

2006 EDITION

2006

NFPA 101[®] Life Safety Code[®]

NFPA 101[®] Life Safety Code[®]



An International Codes
and Standards Organization

Copyright © 2005, National Fire Protection Association, All Rights Reserved

NFPA 101®
Life Safety Code®

2006 Edition

This edition of NFPA 101®, *Life Safety Code*®, was adopted by NFPA at its June Association Technical Meeting held June 6–10, 2005, in Las Vegas, NV. It was issued by the Standards Council on July 29, 2005, with an effective date of August 18, 2005, and supersedes all previous editions.

Note: The text of 31.3.4 was revised from that published in the ROP and ROC to reflect a Tentative Interim Amendment issued by the Standards Council on July 27, 2005.

This edition of NFPA 101 was approved as an American National Standard on August 18, 2005.

Origin and Development of NFPA 101

The *Life Safety Code* had its origin in the work of the Committee on Safety to Life of the National Fire Protection Association, which was appointed in 1913. In 1912 a pamphlet titled *Exit Drills in Factories, Schools, Department Stores and Theaters* was published following its presentation by the late Committee member R. H. Newbern at the 1911 Annual Meeting of the Association. Although the pamphlet's publication antedated the organization of the Committee, it was considered a Committee publication.

For the first few years of its existence, the Committee on Safety to Life devoted its attention to a study of the notable fires involving loss of life and to analyzing the causes of this loss of life. This work led to the preparation of standards for the construction of stairways, fire escapes, and other egress routes for fire drills in various occupancies, and for the construction and arrangement of exit facilities for factories, schools, and other occupancies. These reports were adopted by the National Fire Protection Association and published in pamphlet form as *Outside Stairs for Fire Exits* (1916) and *Safeguarding Factory Workers from Fire* (1918). These pamphlets served as a groundwork for the present *Code*. These pamphlets were widely circulated and put into general use.

In 1921 the Committee on Safety to Life was enlarged to include representatives of certain interested groups not previously participating in the standard's development. The Committee then began to further develop and integrate previous Committee publications to provide a comprehensive guide to exits and related features of life safety from fire in all classes of occupancy. Known as the *Building Exits Code*, various drafts were published, circulated, and discussed over a period of years, and the first edition of the *Building Exits Code* was published by the National Fire Protection Association in 1927. Thereafter, the Committee continued its deliberations, adding new material on features not originally covered and revising various details in the light of fire experience and practical experience in the use of the *Code*. New editions were published in 1929, 1934, 1936, 1938, 1939, 1942, and 1946 to incorporate the amendments adopted by the National Fire Protection Association.

National attention was focused on the importance of adequate exits and related fire safety features after the Coconut Grove Night Club fire in Boston in 1942 in which 492 lives were lost. Public attention to exit matters was further stimulated by the series of hotel fires in 1946 (LaSalle, Chicago — 61 dead; Canfield, Dubuque — 19 dead; and the Winecoff, Atlanta — 119 dead). The *Building Exits Code*, thereafter, was used to an increasing extent for regulatory purposes. However, the *Code* was not written in language suitable for adoption into law, because it had been drafted as a reference document and contained advisory provisions that were useful to building designers but inappropriate for legal use. This led to a decision by the Committee to re-edit the entire *Code*, limiting the body of the text to requirements suitable for mandatory application and placing advisory and explanatory material in notes. The re-editing expanded *Code* provisions to cover additional occupancies and building features to produce a complete document. The *Code* expansion was carried on concurrently with development of the 1948, 1949, 1951, and 1952 editions. The results were incorporated in the 1956 edition and further refined in subsequent editions dated 1957, 1958, 1959, 1960, 1961, and 1963.

In 1955, NFPA 101B, on nursing homes and NFPA 101C, on interior finish, were published. NFPA 101C was revised in 1956. These publications have since been withdrawn.

In 1963 the Committee on Safety to Life was restructured to represent all interested factions and to include only those members with broad knowledge of fire matters. The Committee served as a review and correlating committee for seven sectional committees whose personnel included members having a special knowledge and interest in various portions of the *Code*.

Under the revised structure, the sectional committees, through the Committee on Safety to Life, prepared the 1966 edition of the *Code*, which was a complete revision of the 1963 edition. The *Code* title was changed from *Building Exits Code* to the *Code for Safety to Life from Fire in Buildings and Structures*. The *Code* text was written in enforceable "code language," and all explanatory notes were placed in an appendix.

The *Code* was placed on a three-year revision schedule, with new editions adopted in 1967, 1970, 1973, and 1976.

In 1977 the Committee on Safety to Life was reorganized as a Technical Committee, with an Executive Committee and standing subcommittees responsible for various chapters and sections. The 1981 edition contained major editorial changes, including reorganization within the occupancy chapters, to make them parallel to each other, and the splitting of requirements for new and existing buildings into separate chapters. Chapters on detention and correctional facilities were added, as well as new sections for ambulatory health care centers.

The 1985 edition contained a new Chapter 21 on residential board and care occupancies with related Appendixes F and G, a new Appendix D on alternative calculations for stair width, and Appendix E — a Fire Safety Evaluation System (FSES) for detention and correctional facilities.

The 1988 edition contained a major change in the method of determining egress capacity with the deletion of the traditional units of exit width and the substitution of a straight linear approach to calculating egress capacity. Appendixes C through G were moved from NFPA 101 into a new document, NFPA 101M.

The 1991 edition contained numerous new requirements for mandatory sprinklers in new health care facilities, hotels, apartment buildings, lodging and room houses, and board and care facilities, as well as mandatory sprinkler requirements for existing high-rise hotels and apartment buildings. The requirements for board and care facilities were split into two chapters, Chapter 22 for new construction and Chapter 23 for existing buildings.

The 1994 edition contained new requirements for accessible means of egress, areas of refuge, and ramps, putting the *Code* in substantial agreement with the Americans with Disabilities Act Accessibility Guidelines (ADAAG).

The 1997 edition relocated the material on day-care occupancies from Chapter 10 and Chapter 11, Educational Occupancies, to new Chapter 30 and Chapter 31. The operating features requirements, previously contained in Chapter 31, were interspersed throughout the *Code*, as applicable.

The 2000 edition introduced a performance-based option via Section 4.4 and new Chapter 5. That edition also reformatted the *Code* for substantial compliance with the NFPA *Manual of Style*: (1) former Chapter 1, General, was split into Chapter 1, Administration, and Chapter 4, General; (2) the mandatory references list was moved from Chapter 33 to Chapter 2; (3) all definitions were moved in Chapter 3 and each defined term was numbered; (4) the paragraph numbering scheme that separated the chapter number from the section number by a hyphen was changed to use a decimal point as the separator; and (5) the appendixes were renamed annexes. Former Chapter 32 on special structures and high-rise buildings was moved to Chapter 11 to join the core chapters (i.e., the chapters that are not occupancy specific). The subject of interior finish, contents, and furnishings was moved from Section 6.5 into a separate new chapter, Chapter 10. The occupancy chapter numbers, formerly 8 through 32, became 12 through 42 with some repositioning of chapters. For example, the day-care occupancies chapters were renumbered from 30/31 to 16/17 so as to be positioned immediately after the chapters for educational occupancies.

The 2003 edition reformatted all exceptions into numbered or lettered paragraphs. Some reformatting of paragraphs with multiple requirements was done for additional compliance with the NFPA *Manual of Style*.

The 2006 edition repositions the inch-pound (U.S. Customary) units to appear first, followed by the metric equivalent (SI) units in parentheses. New Chapter 43, Building Rehabilitation, was added to promote the adaptive reuse of existing buildings without sacrificing needed life safety.

To the User

The following comments are offered to assist in the use of the *Life Safety Code*. Additional help on using the *Life Safety Code* can be obtained by attending one of the seminars NFPA conducts on the *Life Safety Code* or by using the *Life Safety Code Handbook* available from NFPA. Further information on these seminars is available through NFPA's Division of Continuing Education.

Essentially, the *Code* is comprised of four major parts. The first part consists of Chapter 1 through Chapter 4, Chapter 6 through Chapter 11, and Chapter 43; these are often referred to as the base chapters or fundamental chapters. The second part is Chapter 5, which details the performance-based option. The next part consists of Chapter 12 through Chapter 42, which are the occupancy chapters. The fourth and last part consists of Annex A and Annex B, which contain useful additional information.

A thorough understanding of Chapter 1 through Chapter 4, Chapter 6 through Chapter 11, and Chapter 43 is necessary to use the *Code* effectively, because these chapters provide the building blocks on which the requirements of the occupancy chapters are based. Note that many of the provisions of Chapter 1 through Chapter 4 and Chapter 6 through Chapter 11 are mandatory for all occupancies. Some provisions are mandated only when referenced by a specific occupancy, while others are exempted for specific occupancies. Often, in one of the base chapters, especially in Chapter 7, the term “where permitted by Chapter 12 through Chapter 42” appears. In this case, that provision can be used only where specifically allowed by an occupancy chapter. For example, the provisions of 7.2.1.6.1 on delayed egress locks are allowed only when permitted by Chapter 12 through Chapter 42. Permission to use the delayed egress lock is normally found in the “____.2.2” subsection of each occupancy chapter. For example, 12.2.2.2.5 specifically allows the use of delayed egress locks in new assembly occupancies. If this permission is not found in an occupancy chapter, the delayed egress lock cannot be used. Similar types of restricted permission are found for such items as security grilles, double cylinder locks, revolving doors, and so forth. In other locations in the base chapters, the term “unless prohibited by Chapter 12 through Chapter 42” is used. In this case, the provision is allowed in all occupancies unless specifically prohibited by an occupancy chapter.

Metric units of measurement in this *Code* are in accordance with the modernized metric system known as the International System of Units (SI). The unit liter, which is outside of but recognized by SI, is commonly used and is therefore used in this *Code*. In this *Code*, inch-pound units for measurements are followed by an equivalent in SI units, as noted in 1.5.2. The inch-pound value and the SI value are each acceptable for use as primary units for satisfying the requirements of this *Code*.

31.4 Special Provisions.

31.4.1 High-Rise Buildings. High-rise buildings shall comply with 31.2.11.1 and 31.3.5.12.

31.4.2 Reserved.**31.5 Building Services.**

31.5.1 Utilities. Utilities shall comply with the provisions of Section 9.1.

31.5.2 Heating, Ventilating, and Air-Conditioning.

31.5.2.1 Heating, ventilating, and air-conditioning equipment shall comply with the provisions of Section 9.2.

31.5.2.2 Unvented fuel-fired heaters, other than gas space heaters in compliance with NFPA 54, *National Fuel Gas Code*, shall not be used.

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

31.5.4 Rubbish Chutes, Incinerators, and Laundry Chutes. Rubbish chutes, incinerators, and laundry chutes shall comply with the provisions of Section 9.5.

31.6 Reserved.

31.7 Operating Features — Emergency Instructions for Residents of Apartment Buildings. Emergency instructions shall be provided annually to each dwelling unit to indicate the location of alarms, egress paths, and actions to be taken, both in response to a fire in the dwelling unit and in response to the sounding of the alarm system.

Chapter 32 New Residential Board and Care Occupancies

32.1 General Requirements.**32.1.1 Application.**

32.1.1.1 General. The requirements of this chapter shall apply to new buildings or portions thereof used as residential board and care occupancies (*see 1.3.1*).

32.1.1.2 Reserved.

32.1.1.3 Chapter Sections. This chapter is divided into five sections as follows:

- (1) Section 32.1 — General Requirements
- (2) Section 32.2 — Small Facilities (that is, sleeping accommodations for not more than 16 residents)
- (3) Section 32.3 — Large Facilities (that is, sleeping accommodations for more than 16 residents)
- (4) Section 32.4 — Suitability of an Apartment Building to House a Board and Care Occupancy (*Sections 32.5 and 32.6 are reserved.*)
- (5) Section 32.7 — Operating Features

32.1.1.4 Conversion. For the purposes of this chapter, exceptions for conversions shall apply only for a change of occupancy from an existing residential or health care occupancy to a residential board and care occupancy.

32.1.2 Multiple Occupancies.

32.1.2.1 Multiple occupancies shall comply with 6.1.14.

32.1.2.2 Reserved.

32.1.2.3 No board and care occupancy shall have its sole means of egress or means of escape pass through any nonresidential or non-health care occupancy in the same building.

32.1.2.4 No board and care occupancy shall be located above a nonresidential or non-health care occupancy, unless the board and care occupancy and exits therefrom are separated from the nonresidential or non-health care occupancy by construction having a fire resistance rating of not less than 2 hours.

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

- (1) **Personal Care.** See 3.3.181.
- (2) **Point of Safety.** See 3.3.186.
- (3) **Residential Board and Care Occupancy.** See 3.3.168.12.
- (4) **Residential Board and Care Resident.** See 3.3.203.
- (5) **Staff (Residential Board and Care).** See 3.3.232.
- (6) **Thermal Barrier.** See 3.3.24.3.

32.1.4 Acceptability of Means of Egress or Escape. No means of escape or means of egress shall be considered as complying with the minimum criteria for acceptance, unless emergency evacuation drills are regularly conducted using that route in accordance with the requirements of 32.7.3.

32.1.5* Fire Resistance-Rated Assemblies. Fire resistance-rated assemblies shall comply with Section 8.3.

32.1.6 Reserved.**32.1.7 Reserved.****32.2 Small Facilities.****32.2.1 General.****32.2.1.1 Scope.**

32.2.1.1.1 Section 32.2 shall apply to residential board and care occupancies providing sleeping accommodations for not more than 16 residents.

32.2.1.1.2 Where there are sleeping accommodations for more than 16 residents, the occupancy shall be classified as a large facility in accordance with Section 32.3.

32.2.1.2 Reserved.

32.2.1.3 Minimum Construction Requirements. (No requirements)

32.2.2 Means of Escape. Designated means of escape shall be continuously maintained free of all obstructions or impediments to full instant use in the case of fire or emergency.

32.2.2.1 Reserved.**32.2.2.2 Primary Means of Escape.**

32.2.2.2.1 Every sleeping room and living area shall have access to a primary means of escape located to provide a safe path of travel to the outside.

32.2.2.2.2 Where sleeping rooms or living areas are above or below the level of exit discharge, the primary means of escape shall be an interior stair in accordance with 32.2.2.4, an exterior stair, a horizontal exit, or a fire escape stair.

32.2.2.3 Secondary Means of Escape.

32.2.2.3.1 Sleeping rooms, other than those complying with 32.2.2.3.2, and living areas in facilities without a sprinkler system installed in accordance with 32.2.3.5 shall have a second means of escape consisting of one of the following:

- (1) Door, stairway, passage, or hall providing a way of unobstructed travel to the outside of the dwelling at street or ground level that is independent of, and remotely located from, the primary means of escape
- (2) Passage through an adjacent nonlockable space independent of, and remotely located from, the primary means of escape to any approved means of escape
- (3)*Outside window or door operable from the inside, without the use of tools, keys, or special effort, that provides a clear opening of not less than 5.7 ft² (0.53 m²), with the width not less than 20 in. (510 mm), the height not less than 24 in. (610 mm), and the bottom of the opening not more than 44 in. (1120 mm) above the floor, with such means of escape acceptable, provided that one of the following criteria is met:
 - (a) The window is within 20 ft (6100 mm) of grade.
 - (b) The window is directly accessible to fire department rescue apparatus, as approved by the authority having jurisdiction.
 - (c) The window or door opens onto an exterior balcony.
- (4) Windows having a sill height below the adjacent ground level provided with a window well meeting the following criteria:
 - (a) The window well has horizontal dimensions that allow the window to be fully opened.
 - (b) The window well has an accessible net clear opening of not less than 9 ft² (0.82 m²), with a length and width of not less than 36 in. (915 mm).
 - (c) A window well with a vertical depth of more than 44 in. (1120 mm) is equipped with an approved permanently affixed ladder or with steps meeting the following criteria:
 - i. The ladder or steps do not encroach more than 6 in. (150 mm) into the required dimensions of the window well.
 - ii. The ladder or steps are not obstructed by the window.

32.2.2.3.2 Sleeping rooms that have a door leading directly to the outside of the building with access to grade or to an exterior stairway meeting the requirements of 32.2.2.6.3 shall be considered as meeting all the requirements for a second means of escape.

32.2.2.4 Interior Stairs Used for Primary Means of Escape. Interior stairs shall be protected in accordance with 32.2.2.4.1 through 32.2.2.4.4, unless they meet the requirement of 32.2.2.4.5, 32.2.2.4.6, or 32.2.2.4.7.

32.2.2.4.1 Interior stairs shall be enclosed with ½-hour fire barriers in accordance with Section 8.3.

32.2.2.4.2 Stairs shall comply with 7.2.2.5.3.

32.2.2.4.3 The entire primary means of escape shall be arranged so that occupants are not required to pass through a portion of a lower story, unless that route is separated from all spaces on that story by construction having a minimum ½-hour fire resistance rating.

32.2.2.4.4 In buildings of construction other than Type II(000), Type III(200), or Type V(000), the supporting construction shall be protected to afford the required fire resistance rating of the supported wall.

32.2.2.4.5 Stairs that connect a story at street level to only one other story shall be permitted to be open to the story that is not at street level.

32.2.2.4.6 In buildings not exceeding three stories in height and protected by an approved automatic sprinkler system in accordance with 32.2.3.5, stair enclosures shall not be required, provided that there still remains a primary means of escape from each sleeping area that does not require occupants to pass through a portion of a lower floor, unless that route is separated from all spaces on that floor by construction having a ½-hour fire resistance rating.

32.2.2.4.7 Stairs serving a maximum of two stories in buildings protected with an approved automatic sprinkler system in accordance with 32.2.3.5 shall be permitted to be unenclosed.

32.2.2.5 Doors.

32.2.2.5.1 Doors, other than those meeting the requirements of 32.2.2.5.1.1 and 32.2.2.5.1.2, and paths of travel to a means of escape shall be not less than 32 in. (810 mm) wide.

32.2.2.5.1.1 Bathroom doors shall be not less than 24 in. (610 mm) wide.

32.2.2.5.1.2 In conversions (*see* 32.1.1.4), 28 in. (710 mm) doors shall be permitted.

32.2.2.5.2 Doors shall be swinging or sliding.

32.2.2.5.3 Every closet door latch shall be readily opened from the inside.

32.2.2.5.4 Every bathroom door shall be designed to allow opening from the outside during an emergency when locked.

32.2.2.5.5 No door in any means of escape, other than those meeting the requirement of 32.2.2.5.5.1 or 32.2.2.5.5.2, shall be locked against egress when the building is occupied.

32.2.2.5.5.1 Delayed-egress locks complying with 7.2.1.6.1 shall be permitted on exterior doors only.

32.2.2.5.5.2 Access-controlled egress locks complying with 7.2.1.6.2 shall be permitted.

32.2.2.5.6 Forces to open doors shall comply with 7.2.1.4.5.

32.2.2.5.7 Door-latching devices shall comply with 7.2.1.5.9.

32.2.2.5.8 Floor levels at doors shall comply with 7.2.1.3.

32.2.2.6 Stairs.

32.2.2.6.1 Stairs shall comply with 7.2.2, unless otherwise specified in this chapter.

32.2.2.6.2 Winders complying with 7.2.2.2.4 shall be permitted only in conversions.

32.2.2.6.3* Exterior stairs shall be protected against blockage caused by fire within the building.

32.2.3 Protection.

32.2.3.1 Protection of Vertical Openings.

32.2.3.1.1 Reserved.

32.2.3.1.2 Vertical openings, other than those meeting the requirement of 32.2.3.1.5, shall be separated by smoke partitions in accordance with Section 8.4 that resist the passage of smoke from one story to another story.

32.2.3.1.3 Smoke partitions described in 32.2.3.1.2 shall have a fire resistance rating of not less than ½ hour in accordance with Section 8.3.

32.2.3.1.4 Reserved.

32.2.3.1.5 Stairs shall be permitted to be open where complying with 32.2.2.4.6 or 32.2.2.4.7.

32.2.3.2 Hazardous Areas.

32.2.3.2.1* Any space where there is storage or activity having fuel conditions exceeding those of a one- or two-family dwelling and that possesses the potential for a fully involved fire shall be protected in accordance with 32.2.3.2.4 and 32.2.3.2.5.

32.2.3.2.2 Spaces requiring protection by 32.2.3.2.1 shall include, but shall not be limited to, areas for cartoned storage, food or household maintenance items in wholesale or institutional-type quantities and concentrations, or mass storage of residents' belongings.

32.2.3.2.3 Reserved.

32.2.3.2.4 Any hazardous area that is on the same floor as, and is in or abuts, a primary means of escape or a sleeping room shall be protected by one of the following means:

- (1) Protection shall be an enclosure with a fire resistance rating of not less than 1 hour, in accordance with 8.2.3, and an automatic fire detection system connected to the fire alarm system provided in 32.2.3.4.1.
- (2) Protection shall be automatic sprinkler protection, in accordance with 32.2.3.5, and a smoke partition, in accordance with Section 8.4, located between the hazardous area and the sleeping area or primary escape route, with any doors in such separation self-closing or automatic-closing in accordance with 7.2.1.8.

32.2.3.2.5 Other hazardous areas shall be protected by one of the following:

- (1) Enclosure having a fire resistance rating of not less than ½ hour, with a self-closing or automatic-closing door in accordance with 7.2.1.8 that is equivalent to not less than a 1¾ in. (44 mm) thick, solid-bonded wood core construction and protected by an automatic fire detection system connected to the fire alarm system provided in 32.2.3.4.1
- (2) Automatic sprinkler protection in accordance with 32.2.3.5, regardless of enclosure

32.2.3.3 Interior Finish.

32.2.3.3.1 General. Interior finish shall be in accordance with Section 10.2.

32.2.3.3.2 Interior Wall and Ceiling Finish. Interior wall and ceiling finish materials complying with Section 10.2 shall be Class A, Class B, or Class C.

32.2.3.3.3 Interior Floor Finish.

32.2.3.3.3.1 Interior floor finish shall comply with Section 10.2.

32.2.3.3.3.2 Interior floor finish shall comply with 10.2.7.1 or 10.2.7.2, as applicable.

32.2.3.4 Detection, Alarm, and Communications Systems.

32.2.3.4.1 Fire Alarm Systems. A manual fire alarm system shall be provided in accordance with Section 9.6.

32.2.3.4.2 Occupant Notification. Occupant notification shall be provided automatically, without delay, in accordance with 9.6.3.

32.2.3.4.3 Smoke Alarms.

32.2.3.4.3.1 Approved smoke alarms shall be provided in accordance with 9.6.2.9.

32.2.3.4.3.2 Smoke alarms shall be installed on all levels, including basements but excluding crawl spaces and unfinished attics.

32.2.3.4.3.3 Additional smoke alarms shall be installed in all living areas, as defined in 3.3.17.5.

32.2.3.4.3.4 Each sleeping room shall be provided with an approved smoke alarm in accordance with 9.6.2.9.

32.2.3.5* Extinguishment Requirements.

32.2.3.5.1* All facilities, other than those meeting the requirement of 32.2.3.5.2, shall be protected throughout by an approved automatic sprinkler system, installed in accordance with 32.2.3.5.3, using quick-response or residential sprinklers.

32.2.3.5.2* In conversions, sprinklers shall not be required in small board and care homes serving eight or fewer residents when all occupants have the ability as a group to move reliably to a point of safety within 3 minutes.

32.2.3.5.3 Where an automatic sprinkler system is installed, for either total or partial building coverage, the following requirements shall be met:

- (1) The system shall be in accordance with NFPA 13, *Standard for the Installation of Sprinkler Systems*, and shall initiate the fire alarm system in accordance with 32.2.3.4.1.
- (2) The adequacy of the water supply shall be documented to the authority having jurisdiction.

32.2.3.5.3.1 An automatic sprinkler system in accordance with NFPA 13R, *Standard for the Installation of Sprinkler Systems in Residential Occupancies up to and Including Four Stories in Height*, shall be permitted in facilities up to and including four stories in height. All habitable areas and closets shall be sprinklered.

32.2.3.5.3.2* An automatic sprinkler system with a 30-minute water supply, and complying with the following requirements and with NFPA 13D, *Standard for the Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes*, shall be permitted:

- (1) All habitable areas and closets shall be sprinklered.
- (2) Facilities with more than eight residents shall be treated as two-family dwellings with regard to water supply.

32.2.3.5.4 Automatic sprinkler systems installed in accordance with NFPA 13, *Standard for the Installation of Sprinkler Systems*, and NFPA 13R, *Standard for the Installation of Sprinkler Systems in Residential Occupancies up to and Including Four Stories in Height*, shall be provided with electrical supervision in accordance with 9.7.2.

32.2.3.5.5 Automatic sprinkler systems installed in accordance with NFPA 13D, *Standard for the Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes*, shall be provided with valve supervision by one of the following methods:

- (1) Single listed control valve that shuts off both domestic and sprinkler systems and separate shutoff for the domestic system only

- (2) Electrical supervision in accordance with 9.7.2
- (3) Valve closure that causes the sounding of an audible signal in the facility

32.2.3.5.6 Sprinkler piping serving not more than six sprinklers for any isolated hazardous area shall be permitted to be installed in accordance with 9.7.1.2 and shall meet the following requirements:

- (1) In new installations, where more than two sprinklers are installed in a single area, waterflow detection shall be provided to initiate the fire alarm system required by 32.2.3.4.1.
- (2) The duration of water supplies shall be as required by 32.2.3.5.3.2.

32.2.3.5.7 Systems installed in accordance with NFPA 13D, *Standard for the Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes*, shall be inspected, tested, and maintained in accordance with 32.2.3.5.7, which references specific sections of NFPA 25, *Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems*. The frequency of the inspection, test, or maintenance shall be in accordance with this Code, whereas the purpose and procedure shall be from NFPA 25.

32.2.3.5.7.1 Control valves shall be inspected monthly in accordance with 12.3.2 of NFPA 25, *Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems*.

32.2.3.5.7.2 Gages shall be inspected monthly in accordance with 12.2.8.1 of NFPA 25, *Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems*.

32.2.3.5.7.3 Alarm devices shall be inspected quarterly in accordance with 5.2.6 of NFPA 25, *Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems*.

32.2.3.5.7.4 Alarm devices shall be tested semiannually in accordance with 5.3.3 of NFPA 25, *Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems*.

32.2.3.5.7.5 Valve supervisory switches shall be tested semiannually in accordance with 12.3.3.5 of NFPA 25, *Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems*.

32.2.3.5.7.6 Visible sprinklers shall be inspected annually in accordance with 5.2.1 of NFPA 25, *Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems*.

32.2.3.5.7.7 Visible pipe shall be inspected annually in accordance with 5.2.2 of NFPA 25, *Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems*.

32.2.3.5.7.8 Visible pipe hangers shall be inspected annually in accordance with 5.2.3 of NFPA 25, *Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems*.

32.2.3.5.7.9 Buildings shall be inspected annually prior to the onset of freezing weather to ensure that there is adequate heat wherever water-filled piping is run in accordance with 5.2.5 of NFPA 25, *Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems*.

32.2.3.5.7.10 A representative sample of fast-response sprinklers shall be tested once the sprinklers in the system are 20 years old in accordance with 5.3.1.1.1.2 of NFPA 25, *Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems*. If the sample fails the test, all of the sprinklers represented by that sample shall be replaced. If the sprinklers pass the test, the test shall be repeated every 10 years thereafter.

32.2.3.5.7.11 A representative sample of dry-pendent sprinklers shall be tested once the sprinklers in the system are 10 years old in accordance with 5.3.1.1.1.5 of NFPA 25, *Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems*. If the sample fails the test, all of the sprinklers represented by that sample shall be replaced. If the sprinklers pass the test, the test shall be repeated every 10 years thereafter.

32.2.3.5.7.12 Antifreeze solutions shall be tested annually in accordance with 5.3.4 of NFPA 25, *Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems*.

32.2.3.5.7.13 Control valves shall be operated through their full range and returned to normal annually in accordance with 12.3.3.1 of NFPA 25, *Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems*.

32.2.3.5.7.14 Operating stems of OS&Y valves shall be lubricated annually in accordance with 12.3.4 of NFPA 25, *Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems*.

32.2.3.5.7.15 Dry-pipe systems that extend into the unheated portions of the building shall be inspected, tested, and maintained in accordance with 12.4.4 of NFPA 25, *Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems*.

32.2.3.6 Construction of Corridor Walls.

32.2.3.6.1 Corridor walls, other than those meeting 32.2.3.6.2, shall meet the following requirements:

- (1) The separation walls of sleeping rooms shall be capable of resisting fire for not less than ½ hour, which shall be considered to be achieved if the partitioning is finished on both sides with lath and plaster or materials providing a 15-minute thermal barrier.
- (2) Sleeping room doors shall be substantial doors, such as those of 1¾ in. (44 mm) thick, solid-bonded wood core construction or of other construction of equal or greater stability and fire integrity.
- (3) Any vision panels shall be fixed fire window assemblies in accordance with 8.3.4 or shall be wired glass not exceeding 9 ft² (0.84 m²) each in area and installed in approved frames.

32.2.3.6.2 The requirements of 32.2.3.6.1 shall not apply to corridor walls that are smoke partitions in accordance with Section 8.4 where the facility is protected in accordance with 32.2.3.5, and the following shall also apply:

- (1) In such instances, there shall be no limitation on the type or size of glass panels.
- (2) Door closing shall comply with 32.2.3.6.4.

32.2.3.6.3 No louvers, operable transoms, or other air passages shall penetrate the wall, except properly installed heating and utility installations other than transfer grilles, which shall be prohibited.

32.2.3.6.4 Doors shall meet the following requirements:

- (1) Doors shall be provided with latches or other mechanisms suitable for keeping the doors closed.
- (2) No doors shall be arranged to prevent the occupant from closing the door.

(3) Doors shall be self-closing or automatic-closing in accordance with 7.2.1.8 in buildings other than those protected throughout by an approved automatic sprinkler system in accordance with 32.2.3.5.

32.2.4 Reserved.

32.2.5 Building Services.

32.2.5.1 Utilities. Utilities shall comply with Section 9.1.

32.2.5.2 Heating, Ventilating, and Air-Conditioning.

32.2.5.2.1 Heating, ventilating, and air-conditioning equipment shall comply with 9.2.1 and 9.2.2, unless otherwise required in this chapter.

32.2.5.2.2 No stove or combustion heater shall be located to block escape in case of fire caused by the malfunction of the stove or heater.

32.2.5.2.3 Unvented fuel-fired heaters shall not be used in any residential board and care facility.

32.2.5.3 Elevators, Escalators, and Conveyors. Elevators, escalators, and conveyors shall comply with Section 9.4.

32.3 Large Facilities.

32.3.1 General.

32.3.1.1 Scope.

32.3.1.1.1 Section 32.3 shall apply to residential board and care occupancies providing sleeping accommodations for more than 16 residents.

32.3.1.1.2 Facilities having sleeping accommodations for not more than 16 residents shall comply with Section 32.2.

32.3.1.2 Reserved.

32.3.1.3 Minimum Construction Requirements. Building construction shall be in accordance with Chapter 7 of *NFPA 5000, Building Construction and Safety Code*.

32.3.1.4 Occupant Load. The occupant load, in number of persons for whom means of egress and other provisions are required, 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.

32.3.2 Means of Egress.

32.3.2.1 General. Means of egress shall be in accordance with Chapter 7.

32.3.2.2 Means of Egress Components.

32.3.2.2.1 Components Permitted. Components of means of egress shall be limited to the types described in 32.3.2.2.2 through 32.3.2.2.10.

32.3.2.2.2 Doors. Doors in means of egress shall be as follows:

- (1) Doors complying with 7.2.1 shall be permitted.
- (2) Doors within individual rooms and suites of rooms shall be permitted to be swinging or sliding.
- (3) No door, other than those meeting the requirement of 32.3.2.2.2(4) or (5), shall be equipped with a lock or latch that requires the use of a tool or key from the egress side.
- (4) Delayed-egress locks in accordance with 7.2.1.6.1 shall be permitted, provided that not more than one device is located in any egress path.

(5) Access-controlled egress doors in accordance with 7.2.1.6.2 shall be permitted.

(6) Doors located in the means of egress that are permitted to be locked under other provisions of Chapter 32, other than those meeting the requirement of 32.3.2.2.2(4) or (5), shall have adequate provisions made for the rapid removal of occupants by means such as remote control of locks, keying of all locks to keys carried by staff at all times, or other such reliable means available to staff at all times.

(7) Only one such locking device, as described in 32.3.2.2.2(6), shall be permitted on each door.

32.3.2.2.3 Stairs. Stairs complying with 7.2.2 shall be permitted.

32.3.2.2.4 Smokeproof Enclosures. Smokeproof enclosures complying with 7.2.3 shall be permitted.

32.3.2.2.5 Horizontal Exits. Horizontal exits complying with 7.2.4 shall be permitted.

32.3.2.2.6 Ramps. Ramps complying with 7.2.5 shall be permitted.

32.3.2.2.7 Exit Passageways. Exit passageways complying with 7.2.6 shall be permitted.

32.3.2.2.8 Fire Escape Ladders. Fire escape ladders complying with 7.2.9 shall be permitted.

32.3.2.2.9 Alternating Tread Devices. Alternating tread devices complying with 7.2.11 shall be permitted.

32.3.2.2.10 Areas of Refuge. Areas of refuge complying with 7.2.12 shall be permitted.

32.3.2.3 Capacity of Means of Egress.

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

32.3.2.3.2 Street floor exits shall be sufficient for the occupant load of the street floor plus the required capacity of stairs and ramps discharging onto the street floor.

32.3.2.3.3 The width of corridors shall be sufficient for the occupant load served but shall be not less than 60 in. (1525 mm).

32.3.2.4 Number of Exits. The minimum number of exits as required by Section 7.4 shall be provided on every story.

32.3.2.5 Arrangement of Means of Egress.

32.3.2.5.1 Access to all required exits shall be in accordance with Section 7.5.

32.3.2.5.2 Common paths of travel shall not exceed 75 ft (23 m).

32.3.2.5.3 Reserved.

32.3.2.5.4 Dead-end corridors shall not exceed 30 ft (9.1 m).

32.3.2.5.5 Any room, or any suite of rooms, exceeding 2000 ft² (185 m²) shall be provided with not less than two exit access doors located remotely from each other.

32.3.2.6 Travel Distance to Exits. Travel distance from any point in a room to the nearest exit, measured in accordance with Section 7.6, shall not exceed 250 ft (76 m).

32.3.2.7 Discharge from Exits. Exit discharge shall comply with Section 7.7.

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

32.3.2.9 Emergency Lighting. Emergency lighting in accordance with Section 7.9 shall be provided, unless each sleeping room has a direct exit to the outside at ground level.

32.3.2.10 Marking of Means of Egress. Means of egress shall be marked in accordance with Section 7.10.

32.3.2.11 Special Means of Egress Features.

32.3.2.11.1 Reserved.

32.3.2.11.2 Lockups. Lockups in residential board and care occupancies shall comply with the requirements of 22.4.5.

32.3.3 Protection.

32.3.3.1 Protection of Vertical Openings.

32.3.3.1.1 Vertical openings shall be enclosed or protected in accordance with Section 8.6.

32.3.3.1.2 Unenclosed vertical openings in accordance with 8.6.8.2 shall be permitted.

32.3.3.1.3 No floor below the level of exit discharge used only for storage, heating equipment, or purposes other than residential occupancy shall have unprotected openings to floors used for residential occupancy.

32.3.3.2 Protection from Hazards.

32.3.3.2.1 Hazardous areas shall be protected in accordance with Section 8.7.

32.3.3.2.2 The areas described in Table 32.3.3.2.2 shall be protected as indicated.

32.3.3.3* Interior Finish.

32.3.3.3.1 General. Interior finish shall be in accordance with Section 10.2.

32.3.3.3.2 Interior Wall and Ceiling Finish. Interior wall and ceiling finish materials complying with Section 10.2 shall be in accordance with the following:

- (1) Exit enclosures — Class A
- (2) Lobbies and corridors — Class B
- (3) Rooms and enclosed spaces — Class B

32.3.3.3.3 Interior Floor Finish.

32.3.3.3.3.1 Interior floor finish shall comply with Section 10.2.

32.3.3.3.3.2 Interior floor finish in exit enclosures and exit access corridors and spaces not separated from them by walls complying with 32.3.3.6 shall be not less than Class II.

32.3.3.3.3.3 Interior floor finish shall comply with 10.2.7.1 or 10.2.7.2, as applicable.

32.3.3.4 Detection, Alarm, and Communications Systems.

32.3.3.4.1 General. A fire alarm system shall be provided in accordance with Section 9.6.

32.3.3.4.2 Initiation. The required fire alarm system shall be initiated by all of the following:

- (1) Manual means in accordance with 9.6.2
- (2) Manual fire alarm box located at a convenient central control point under continuous supervision of responsible employees
- (3) Required automatic sprinkler system
- (4) Required detection system

Table 32.3.3.2.2 Hazardous Area Protection

Hazardous Area Description	Separation/Protection
Boiler and fuel-fired heater rooms	1 hour
Central/bulk laundries larger than 100 ft ² (9.3 m ²)	1 hour
Paint shops employing hazardous substances and materials in quantities less than those that would be classified as a severe hazard	1 hour
Physical plant maintenance shops	1 hour
Soiled linen rooms	1 hour
Storage rooms larger than 50 ft ² (4.6 m ²), but not exceeding 100 ft ² (9.3 m ²), storing combustible material	Smoke partition
Storage rooms larger than 100 ft ² (9.3 m ²) storing combustible material	1 hour
Trash collection rooms	1 hour

32.3.3.4.3 Annunciator Panel. An annunciator panel, connected to the fire alarm system, shall be provided at a location readily accessible from the primary point of entry for emergency response personnel.

32.3.3.4.4 Occupant Notification. Occupant notification shall be provided automatically, without delay, in accordance with 9.6.3.

32.3.3.4.5 High-Rise Buildings. High-rise buildings shall be provided with an approved emergency voice communication/ alarm system in accordance with 11.8.3.

32.3.3.4.6* Emergency Forces Notification. Emergency forces notification shall meet the following requirements:

- (1) Fire department notification shall be accomplished in accordance with 9.6.4.
- (2) Smoke detection devices or smoke detection systems shall be permitted to initiate a positive alarm sequence in accordance with 9.6.3.4 for not more than 120 seconds.

32.3.3.4.7 Smoke Alarms. Approved smoke alarms shall be installed in accordance with 9.6.2.9 inside every sleeping room, outside every sleeping area in the immediate vicinity of the bedrooms, and on all levels within a resident unit.

32.3.3.4.8 Smoke Detection Systems.

32.3.3.4.8.1 Corridors and spaces open to the corridors, other than those meeting the requirement of 32.3.3.4.8.3, shall be provided with smoke detectors that comply with *NFPA 72, National Fire Alarm Code*, and are arranged to initiate an alarm that is audible in all sleeping areas.

32.3.3.4.8.2 Reserved.

32.3.3.4.8.3 Smoke detection systems shall not be required in unenclosed corridors, passageways, balconies, colonnades, or

other arrangements with one or more sides along the long dimension fully or extensively open to the exterior at all times.

32.3.3.5 Extinguishment Requirements.

32.3.3.5.1 General. All buildings shall be protected throughout by an approved automatic sprinkler system installed in accordance with 9.7.1.1(1) and provided with quick-response or residential sprinklers throughout.

32.3.3.5.2 Reserved.

32.3.3.5.3 Reserved.

32.3.3.5.4 Supervision. Automatic sprinkler systems shall be provided with electrical supervision in accordance with 9.7.2.

32.3.3.5.5 Reserved.

32.3.3.5.6 Portable Fire Extinguishers. Portable fire extinguishers shall be provided in accordance with 9.7.4.1.

32.3.3.6* Corridors and Separation of Sleeping Rooms.

32.3.3.6.1 Access shall be provided from every resident use area to at least one means of egress that is separated from all sleeping rooms by walls complying with 32.3.3.6.3 through 32.3.3.6.6.

32.3.3.6.2 Sleeping rooms shall be separated from corridors, living areas, and kitchens by walls complying with 32.3.3.6.3 through 32.3.3.6.6.

32.3.3.6.3 Walls required by 32.3.3.6.1 or 32.3.3.6.2 shall be smoke partitions in accordance with Section 8.4 and shall have a fire resistance rating of not less than ½ hour.

32.3.3.6.4 Doors protecting corridor openings shall not be required to have a fire protection rating, but shall be constructed to resist the passage of smoke.

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

32.3.3.6.6 No louvers, transfer grilles, operable transoms, or other air passages, other than properly installed heating and utility installations, shall penetrate the walls or doors specified in 32.3.3.6.

32.3.3.7 Subdivision of Building Spaces. Buildings shall be subdivided by smoke barriers in accordance with 32.3.3.7.1 through 32.3.3.7.21.

32.3.3.7.1 Every story shall be divided into not less than two smoke compartments, unless it meets the requirement of 32.3.3.7.4, 32.3.3.7.5, 32.3.3.7.6, or 32.3.3.7.7.

32.3.3.7.2 Each smoke compartment shall have an area not exceeding 22,500 ft² (2100 m²).

32.3.3.7.3 The travel distance from any point to reach a door in the required smoke barrier shall be limited to a distance of 200 ft (61 m).

32.3.3.7.4 Smoke barriers shall not be required on stories that do not contain a board and care occupancy located above the board and care occupancy.

32.3.3.7.5 Smoke barriers shall not be required in areas that do not contain a board and care occupancy and that are separated from the board and care occupancy by a fire barrier complying with Section 8.3.

32.3.3.7.6 Smoke barriers shall not be required on stories that do not contain a board and care occupancy and that are more than one story below the board and care occupancy.

32.3.3.7.7 Smoke barriers shall not be required in open parking structures protected throughout by an approved, supervised automatic sprinkler system in accordance with 32.3.3.5.

32.3.3.7.8 Smoke barriers shall be constructed in accordance with Section 8.3 and shall have a fire resistance rating of not less than 1 hour, unless they meet the requirement of 32.3.3.7.9 or 32.3.3.7.10.

32.3.3.7.9 Where an atrium is used, smoke barriers shall be permitted to terminate at an atrium wall constructed in accordance with 8.6.7(1)(c), in which case not less than two separate smoke compartments shall be provided on each floor.

32.3.3.7.10* Dampers shall not be required in duct penetrations of smoke barriers in fully ducted heating, ventilating, and air-conditioning systems.

32.3.3.7.11 Not less than 15 net ft² (1.4 net m²) per resident shall be provided within the aggregate area of corridors, lounge or dining areas, and other low hazard areas on each side of the smoke barrier.

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

32.3.3.7.13* Doors in smoke barriers shall be substantial doors, such as 1¾ in. (44 mm) thick, solid-bonded wood core doors, or shall be of construction that resists fire for not less than 20 minutes.

32.3.3.7.14 Nonrated factory- or field-applied protective plates extending not more than 48 in. (1220 mm) above the bottom of the door shall be permitted.

32.3.3.7.15 Cross-corridor openings in smoke barriers shall be protected by a pair of swinging doors or a horizontal-sliding door complying with 7.2.1.14.

32.3.3.7.16 Swinging doors shall be arranged so that each door swings in a direction opposite from the other.

32.3.3.7.17* Doors in smoke barriers shall comply with 8.5.4 and shall be self-closing or automatic-closing in accordance with 7.2.1.8.

32.3.3.7.18* Vision panels consisting of fire-rated glazing or wired glass panels in approved frames shall be provided in each cross-corridor swinging door and in each cross-corridor horizontal-sliding door in a smoke barrier.

32.3.3.7.19 Rabbits, bevels, or astragals shall be required at the meeting edges, and stops shall be required at the head and sides of door frames in smoke barriers.

32.3.3.7.20 Positive latching hardware shall not be required.

32.3.3.7.21 Center mullions shall be prohibited.

32.3.3.8* Cooking Facilities. Cooking facilities, other than those within individual residential units, shall be protected in accordance with 9.2.3.

32.3.3.9 Standpipes.

32.3.3.9.1 General. Where required, standpipe and hose systems shall be installed and maintained in accordance with 9.7.4.2.

32.3.3.9.2 In High-Rise Buildings. Class I standpipe systems shall be installed throughout all high-rise buildings.

32.3.3.9.3 Roof Outlets. Roof outlets shall not be required on roofs having a slope of 3 in 12 or greater.

32.3.4 Special Provisions. High-rise buildings shall comply with Section 11.8.

32.3.5 Reserved.

32.3.6 Building Services.

32.3.6.1 Utilities. Utilities shall comply with Section 9.1.

32.3.6.2 Heating, Ventilating, and Air-Conditioning.

32.3.6.2.1 Heating, ventilating, and air-conditioning equipment shall comply with Section 9.2.

32.3.6.2.2 No stove or combustion heater shall be located such that it blocks escape in case of fire caused by the malfunction of the stove or heater.

32.3.6.2.3 Unvented fuel-fired heaters shall not be used in any board and care occupancy.

32.3.6.3 Elevators, Dumbwaiters, and Vertical Conveyors.

32.3.6.3.1 Elevators, dumbwaiters, and vertical conveyors shall comply with Section 9.4.

32.3.6.3.2* In high-rise buildings, one elevator shall be provided with a protected power supply and shall be available for use by the fire department in case of emergency.

32.3.6.4 Rubbish Chutes, Incinerators, and Laundry Chutes. Rubbish chutes, incinerators, and laundry chutes shall comply with Section 9.5.

32.4* Suitability of an Apartment Building to House a Board and Care Occupancy.

32.4.1 General.

32.4.1.1 Scope.

32.4.1.1.1 Section 32.4 shall apply to apartment buildings that have one or more individual apartments used as a board and care occupancy.

32.4.1.1.2 The provisions of Section 32.4 shall be used to determine the suitability of apartment buildings, other than those complying with 32.4.1.1.4, to house a residential board and care facility.

32.4.1.1.3 The suitability of apartment buildings not used for board and care occupancies shall be determined in accordance with Chapter 30.

32.4.1.1.4 If a new board and care occupancy is created in an existing apartment building, the suitability of such buildings for apartments not used for board and care occupancies shall be determined in accordance with Chapter 31.

32.4.1.2 Requirements for Individual Apartments. Requirements for individual apartments used as residential board and care occupancies shall be as specified in Section 32.2. Egress from the apartment into the common building corridor shall be considered acceptable egress from the board and care facility.

32.4.1.3* Additional Requirements. Apartment buildings housing board and care facilities shall comply with the requirements of Chapter 30 and the additional requirements of Section 32.4, unless the authority having jurisdiction has determined that

equivalent safety for housing a residential board and care facility is provided in accordance with Section 1.4.

32.4.1.4 Minimum Construction Requirements.

32.4.1.4.1 In addition to the requirements of Chapter 30, apartment buildings, other than those complying with 32.4.1.4.2, housing residential board and care facilities shall meet the construction requirements of 32.3.1.3.

32.4.1.4.2 If a new board and care occupancy is created in an existing apartment building, the construction requirements of 19.1.6 shall apply.

32.4.2 Means of Egress.

32.4.2.1 The requirements of Section 30.2 shall apply only to the parts of means of egress serving the apartment(s) used as a residential board and care occupancy, as modified by 32.4.2.2.

32.4.2.2 If a new board and care occupancy is created in an existing apartment building, the requirements of Section 31.2 shall apply to the parts of the means of egress serving the apartment(s) used as a residential board and care occupancy.

32.4.3 Protection.

32.4.3.1 Interior Finish.

32.4.3.1.1 The requirements of 30.3.3 shall apply only to the parts of means of egress serving the apartment(s) used as a residential board and care occupancy, as modified by 32.4.3.1.2.

32.4.3.1.2 If a new board and care occupancy is created in an existing apartment building, the requirements of 31.3.3 shall apply to the parts of the means of egress serving the apartment(s) used as a residential board and care occupancy.

32.4.3.2 Construction of Corridor Walls.

32.4.3.2.1 The requirements of 30.3.6 shall apply only to corridors serving the residential board and care facility, including that portion of the corridor wall separating the residential board and care facility from the common corridor, as modified by 32.4.3.2.1.

32.4.3.2.2 If a new board and care occupancy is created in an existing apartment building, the requirements of 31.3.6 shall apply to the corridor serving the residential board and care facility.

32.4.3.3 Subdivision of Building Spaces. (Reserved)

32.5 Reserved.

32.6 Reserved.

32.7 Operating Features.

32.7.1 Emergency Plan.

32.7.1.1 The administration of every residential board and care facility shall have, in effect and available to all supervisory personnel, written copies of a plan for protecting all persons in the event of fire, for keeping persons in place, for evacuating persons to areas of refuge, and for evacuating persons from the building when necessary.

32.7.1.2 The emergency plan shall include special staff response, including the fire protection procedures needed to ensure the safety of any resident, and shall be amended or revised whenever any resident with unusual needs is admitted to the home.

32.7.1.3 All employees shall be periodically instructed and kept informed with respect to their duties and responsibilities under the plan, and such instruction shall be reviewed by the staff not less than every 2 months.

32.7.1.4 A copy of the plan shall be readily available at all times within the facility.

32.7.2 Resident Training.

32.7.2.1 All residents participating in the emergency plan shall be trained in the proper actions to be taken in the event of fire.

32.7.2.2 The training required by 32.7.2.1 shall include actions to be taken if the primary escape route is blocked.

32.7.2.3 If a resident is given rehabilitation or habilitation training, training in fire prevention and the actions to be taken in the event of a fire shall be a part of the training program.

32.7.2.4 Residents shall be trained to assist each other in case of fire to the extent that their physical and mental abilities permit them to do so without additional personal risk.

32.7.3 Emergency Egress and Relocation Drills. Emergency egress and relocation drills shall be conducted in accordance with 32.7.3.1 through 32.7.3.6.

32.7.3.1 Emergency egress and relocation drills shall be conducted not less than six times per year on a bimonthly basis, with not less than two drills conducted during the night when residents are sleeping, as modified by 32.7.3.5 and 32.7.3.6.

32.7.3.2 The emergency drills shall be permitted to be announced in advance to the residents.

32.7.3.3 The drills shall involve the actual evacuation of all residents to an assembly point, as specified in the emergency plan, and shall provide residents with experience in egressing through all exits and means of escape required by the *Code*.

32.7.3.4 Exits and means of escape not used in any drill shall not be credited in meeting the requirements of this *Code* for board and care facilities.

32.7.3.5 Actual exiting from windows shall not be required to comply with 32.7.3; opening the window and signaling for help shall be an acceptable alternative.

32.7.3.6 Residents who cannot meaningfully assist in their own evacuation or who have special health problems shall not be required to actively participate in the drill. Section 18.7 shall apply in such instances.

32.7.4 Smoking.

32.7.4.1* Smoking regulations shall be adopted by the administration of board and care occupancies.

32.7.4.2 Where smoking is permitted, noncombustible safety-type ashtrays or receptacles shall be provided in convenient locations.

32.7.5* Furnishings, Bedding, and Decorations.

32.7.5.1 New draperies, curtains, and other similar loosely hanging furnishings and decorations in board and care facilities shall be in accordance with the provisions of 10.3.1.

32.7.5.2* New upholstered furniture within board and care facilities shall comply with 32.7.5.2.1 or 32.7.5.2.2.

32.7.5.2.1 New upholstered furniture shall be tested in accordance with the provisions of 10.3.2.1(1) and 10.3.3.

32.7.5.2.2 Upholstered furniture belonging to residents in sleeping rooms shall not be required to be tested, provided that a smoke alarm is installed in such rooms; battery-powered single-station smoke alarms shall be permitted in such rooms.

32.7.5.3* New mattresses within board and care facilities shall comply with 32.7.5.3.1 or 32.7.5.3.2.

32.7.5.3.1 New mattresses shall be tested in accordance with the provisions of 10.3.2.2 and 10.3.4.

32.7.5.3.2 Mattresses belonging to residents in sleeping rooms shall not be required to be tested, provided that a smoke alarm is installed in such rooms; battery-powered single-station smoke alarms shall be permitted in such rooms.

32.7.6 Staff. Staff shall be on duty and in the facility at all times when residents requiring evacuation assistance are present.

Chapter 33 Existing Residential Board and Care Occupancies

33.1 General Requirements.

33.1.1* Application.

33.1.1.1 General. The requirements of this chapter shall apply to existing buildings or portions thereof currently occupied as residential board and care occupancies.

33.1.1.2* Chapter 32 Compliance. Any facility meeting the requirements of Chapter 32 shall not be required to meet those of Chapter 33.

33.1.1.3 Chapter Sections. This chapter is divided into five sections as follows:

- (1) Section 33.1 — General Requirements
- (2) Section 33.2 — Small Facilities (that is, sleeping accommodations for not more than 16 residents)
- (3) Section 33.3 — Large Facilities (that is, sleeping accommodations for more than 16 residents)
- (4) Section 33.4 — Suitability of an Apartment Building to House a Board and Care Occupancy (*Sections 33.5 and 33.6 are reserved.*)
- (5) Section 33.7 — Operating Features

33.1.1.4 Conversion. For the purposes of this chapter, exceptions for conversions shall apply only for a change of occupancy from an existing residential or health care occupancy to a residential board and care occupancy.

33.1.2 Multiple Occupancies.

33.1.2.1 Multiple occupancies shall comply with 6.1.14 in buildings other than those meeting the requirement of 33.1.2.2.

33.1.2.2 The requirement of 33.1.2.1 shall not apply to apartment buildings housing residential board and care occupancies in conformance with Section 33.4. In such facilities, any safeguards required by Section 33.4 that are more restrictive than those for other housed occupancies shall apply only to the extent prescribed by Section 33.4.

33.1.2.3 No board and care occupancy shall have its sole means of egress or means of escape pass through any nonresidential or non-health care occupancy in the same building.

33.1.2.4 No board and care occupancy shall be located above a nonresidential or non-health care occupancy, unless one of the following conditions is met:

- (1) The board and care occupancy and exits therefrom are separated from the nonresidential or non-health care occupancy by construction having a fire resistance rating of not less than 2 hours.
- (2) The nonresidential or non-health care occupancy is protected throughout by an approved, supervised automatic sprinkler system in accordance with Section 9.7 and is separated therefrom by construction with a fire resistance rating of 1 hour.

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

- (1) **Evacuation Capability.** See 3.3.65.
- (2) **Impractical Evacuation Capability.** See 3.3.65.1.
- (3) **Personal Care.** See 3.3.181.
- (4) **Point of Safety.** See 3.3.186.
- (5) **Prompt Evacuation Capability.** See 3.3.65.2.
- (6) **Residential Board and Care Occupancy.** See 3.3.168.12.
- (7) **Residential Board and Care Resident.** See 3.3.203.
- (8) **Slow Evacuation Capability.** See 3.3.65.3.
- (9) **Staff (Residential Board and Care).** See 3.3.232.
- (10) **Thermal Barrier.** See 3.3.24.3.

33.1.4 Acceptability of Means of Egress or Escape. No means of escape or means of egress shall be considered as complying with the minimum criteria for acceptance, unless emergency evacuation drills are regularly conducted using that route in accordance with the requirements of 33.7.3.

33.1.5* Fire Resistance-Rated Assemblies. Fire resistance-rated assemblies shall comply with Section 8.3.

33.1.6 Changes in Facility Size. A change in facility size from small to large shall be considered a change in occupancy subclassification and shall require compliance with the provisions applicable to new construction.

33.1.7* Changes in Group Evacuation Capability. A change in evacuation capability to a slower level shall be permitted where the facility conforms to the requirements applicable to new construction, conversions, and the new evacuation capability.

33.2 Small Facilities.

33.2.1 General.

33.2.1.1 Scope.

33.2.1.1.1 Section 33.2 shall apply to residential board and care occupancies providing sleeping accommodations for not more than 16 residents.

33.2.1.1.2 Where there are sleeping accommodations for more than 16 residents, the occupancy shall be classified as a large facility in accordance with Section 33.3.

33.2.1.2 Requirements Based on Evacuation Capability.

33.2.1.2.1 Small facilities, other than those meeting the requirement of 33.2.1.2.1.1 or 33.2.1.2.1.2, shall comply with the requirements of Section 33.2, as indicated for the appropriate evacuation capability; the ability of all occupants, residents, staff, and family members shall be considered in determining evacuation capability.

33.2.1.2.1.1* Facilities where the authority having jurisdiction has determined equivalent safety is provided in accordance with Section 1.4 shall not be required to comply with Section 33.2.

33.2.1.2.1.2 Facilities that were previously approved as complying with the requirements for a large facility having the

same evacuation capability shall not be required to comply with Section 33.2.

33.2.1.2.2 Facility management shall furnish to the authority having jurisdiction, upon request, an evacuation capability determination using a procedure acceptable to the authority having jurisdiction; where such documentation is not furnished, the evacuation capability shall be classified as impractical.

33.2.1.3 Minimum Construction Requirements.

33.2.1.3.1 Prompt Evacuation Capability. (No special requirements)

33.2.1.3.2 Slow Evacuation Capability.

33.2.1.3.2.1 The facility shall be housed in a building where the interior is fully sheathed with lath and plaster or other material providing a 15-minute thermal barrier, as modified by 33.2.1.3.2.3 through 33.2.1.3.2.7, including all portions of bearing walls, bearing partitions, floor construction, and roofs.

33.2.1.3.2.2 All columns, beams, girders, and trusses shall be similarly encased or otherwise shall provide not less than a ½-hour fire resistance rating.

33.2.1.3.2.3 Exposed steel or wood columns, girders, and beams (but not joists) located in the basement shall be permitted.

33.2.1.3.2.4 Buildings of Type I, Type II(222), Type II(111), Type III(211), Type IV, or Type V(111) construction shall not be required to meet the requirement of 33.2.1.3.2. (See 8.2.1.)

33.2.1.3.2.5 Areas protected by approved automatic sprinkler systems in accordance with 33.2.3.5 shall not be required to meet the requirement of 33.2.1.3.2.

33.2.1.3.2.6 Unfinished, unused, and essentially inaccessible loft, attic, or crawl spaces shall not be required to meet the requirement of 33.2.1.3.2.

33.2.1.3.2.7 Where the facility has demonstrated to the authority having jurisdiction that the group is capable of evacuating the building in 8 minutes or less, or where the group achieves an E-score of 3 or less using the board and care occupancies evacuation capability determination methodology of NFPA 101A, *Guide on Alternative Approaches to Life Safety*, the requirements of 33.2.1.3.2 shall not apply.

33.2.1.3.3 Impractical Evacuation Capability. Nonsprinklered buildings shall be of any construction type in accordance with 8.2.1, other than Type II(000), Type III(200), or Type V(000) construction. Buildings protected throughout by an approved, supervised automatic sprinkler system in accordance with 33.2.3.5 shall be permitted to be of any type of construction.

33.2.2 Means of Escape. Designated means of escape shall be continuously maintained free of all obstructions or impediments to full instant use in the case of fire or emergency.

33.2.2.1 Number of Means of Escape.

33.2.2.1.1 Each normally occupied story of the facility shall have not less than two remotely located means of escape that do not involve using windows, unless the facility meets the requirement of 33.2.2.1.4 or 33.2.2.1.5.

33.2.2.1.2 Not less than one of the means of escape required by 33.2.2.1.1 shall be in accordance with 33.2.2.2.

33.2.2.1.3 The provisions of Chapter 7 shall not apply to means of escape, unless specifically referenced in this chapter.

33.2.2.1.4 In prompt evacuation capability facilities, one means of escape shall be permitted to involve windows complying with 33.2.2.3.1(3).

33.2.2.1.5 A second means of escape from each story shall not be required where the entire building is protected throughout by an approved automatic sprinkler system complying with 33.2.3.5 and the facility has two means of escape; this provision shall not be permitted to be used in conjunction with 33.2.2.3.2.

33.2.2.2 Primary Means of Escape.

33.2.2.2.1 Every sleeping room and living area shall have access to a primary means of escape located to provide a safe path of travel to the outside.

33.2.2.2.2 Where sleeping rooms or living areas are above or below the level of exit discharge, the primary means of escape shall be an interior stair in accordance with 33.2.2.4, an exterior stair, a horizontal exit, or a fire escape stair.

33.2.2.2.3 In slow and impractical evacuation capability facilities, the primary means of escape for each sleeping room shall not be exposed to living areas and kitchens, unless the building is protected by an approved automatic sprinkler system in accordance with 33.2.3.5 utilizing quick-response or residential sprinklers throughout.

33.2.2.2.4 Standard-response sprinklers shall be permitted for use in hazardous areas in accordance with 33.2.3.2.

33.2.2.3 Secondary Means of Escape.

33.2.2.3.1 In addition to the primary route, each sleeping room shall have a second means of escape consisting of one of the following, unless the provisions of 33.2.2.3.2, 33.2.2.3.3, or 33.2.2.3.4 are met:

- (1) Door, stairway, passage, or hall providing a way of unobstructed travel to the outside of the dwelling at street or ground level that is independent of, and remotely located from, the primary means of escape
- (2) Passage through an adjacent nonlockable space independent of, and remotely located from, the primary means of escape to any approved means of escape
- (3)*Outside window or door operable from the inside without the use of tools, keys, or special effort, that provides a clear opening of not less than 5.7 ft² (0.53 m²), with the width not less than 20 in. (510 mm), the height not less than 24 in. (610 mm), and the bottom of the opening not more than 44 in. (1120 mm) above the floor, with such means of escape acceptable, provided that one of the following criteria is met:
 - (a) The window is within 20 ft (6100 mm) of grade.
 - (b) The window is directly accessible to fire department rescue apparatus, as approved by the authority having jurisdiction.
 - (c) The window or door opens onto an exterior balcony.
- (4) Windows having a sill height below the adjacent ground level provided with a window well meeting the following criteria:
 - (a) The window well has horizontal dimensions that allow the window to be fully opened.
 - (b) The window well has an accessible net clear opening of not less than 9 ft² (0.82 m²), with a length and width of not less than 36 in. (915 mm).

(c) A window well with a vertical depth of more than 44 in. (1120 mm) is equipped with an approved permanently affixed ladder or with steps meeting the following criteria:

- i. The ladder or steps do not encroach more than 6 in. (150 mm) into the required dimensions of the window well.
- ii. The ladder or steps are not obstructed by the window.

33.2.2.3.2 Sleeping rooms that have a door leading directly to the outside of the building with access to grade or to a stairway that meets the requirements of exterior stairs in 33.2.2.2.2 shall be considered as meeting all the requirements for a second means of escape.

33.2.2.3.3 A second means of escape from each sleeping room shall not be required where the facility is protected throughout by an approved automatic sprinkler system in accordance with 33.2.3.5.

33.2.2.3.4 Existing approved means of escape shall be permitted to continue to be used.

33.2.2.4 Interior Stairs Used for Primary Means of Escape. Interior stairs used for primary means of escape shall comply with 33.2.2.4.1 through 33.2.2.4.9.

33.2.2.4.1 Interior stairs shall be enclosed with ½-hour fire barriers in accordance with Section 8.3 and shall comply with 7.2.2.5.3.

33.2.2.4.2 Reserved.

33.2.2.4.3 The entire primary means of escape shall be arranged so that it is not necessary for occupants to pass through a portion of a lower story, unless that route is separated from all spaces on that story by construction having not less than a ½-hour fire resistance rating.

33.2.2.4.4 In buildings of construction other than Type II(000), Type III(200), or Type V(000), the supporting construction shall be protected to afford the required fire resistance rating of the supported wall.

33.2.2.4.5 Stairs that connect a story at street level to only one other story shall be permitted to be open to the story that is not at street level.

33.2.2.4.6 Stair enclosures shall not be required in buildings that are comprised of three or fewer stories, and that house prompt or slow evacuation capability facilities protected throughout by an approved automatic sprinkler system, in accordance with 33.2.3.5, that uses quick-response or residential sprinklers, provided that a primary means of escape from each sleeping area still exists that does not pass through a portion of a lower floor, unless that route is separated from all spaces on that floor by construction having a ½-hour fire resistance rating.

33.2.2.4.7 Stair enclosures shall not be required in buildings that are comprised of two or fewer stories that house prompt evacuation capability facilities with not more than eight residents, and are protected by an approved automatic sprinkler system in accordance with 33.2.3.5 that uses quick-response or residential sprinklers.

33.2.2.4.8 The provisions of 33.2.2.3.3, 33.2.3.4.3.6, or 33.2.3.4.3.7 shall not be used in conjunction with 33.2.2.4.7.

33.2.2.4.9 Stairs shall be permitted to be open at the topmost story only where all of the following criteria are met:

- (1) The building shall have three or fewer stories.
- (2) The building shall house prompt or slow evacuation capability facilities.
- (3) The building shall be protected by an approved automatic sprinkler system in accordance with 33.2.3.5.
- (4) The entire primary means of escape of which the stairs are a part shall be separated from all portions of lower stories.

33.2.2.5 Doors.

33.2.2.5.1 Doors, other than bathroom doors addressed in 33.2.2.5.1.1, and paths of travel to a means of escape shall be not less than 28 in. (710 mm) wide.

33.2.2.5.1.1 Bathroom doors shall be not less than 24 in. (610 mm) wide.

33.2.2.5.1.2 Reserved.

33.2.2.5.2 Doors shall be swinging or sliding.

33.2.2.5.3 Every closet door latch shall be readily opened from the inside.

33.2.2.5.4 Every bathroom door shall be designed to allow opening from the outside during an emergency when locked.

33.2.2.5.5 No door in any means of escape, other than those meeting the requirement of 33.2.2.5.5.1 or 33.2.2.5.5.2, shall be locked against egress when the building is occupied.

33.2.2.5.5.1 Delayed-egress locks complying with 7.2.1.6.1 shall be permitted on exterior doors only.

33.2.2.5.5.2 Access-controlled egress locks complying with 7.2.1.6.2 shall be permitted.

33.2.2.5.6 Forces to open doors shall comply with 7.2.1.4.5.

33.2.2.5.7 Door-latching devices shall comply with 7.2.1.5.9.

33.2.2.6 Stairs.

33.2.2.6.1 Stairs shall comply with 7.2.2, unless otherwise specified in this chapter.

33.2.2.6.2 Winders complying with 7.2.2.2.4 shall be permitted.

33.2.2.6.3* Exterior stairs shall be protected against blockage caused by fire within the building.

33.2.3 Protection.

33.2.3.1 Protection of Vertical Openings.

33.2.3.1.1 Vertical openings, other than stairs complying with 33.2.2.4.5, 33.2.2.4.6, or 33.2.2.4.7, shall be protected so as not to expose a primary means of escape.

33.2.3.1.2 Vertical openings required to be protected by 33.2.3.1.1 shall be considered protected where separated by smoke partitions in accordance with Section 8.4 that resist the passage of smoke from one story to any primary means of escape on another story.

33.2.3.1.3 Smoke partitions used to protect vertical openings shall have a fire resistance rating of not less than ½ hour.

33.2.3.1.4 Any doors or openings to the protected vertical opening shall be capable of resisting fire for not less than 20 minutes.

33.2.3.2 Hazardous Areas.

33.2.3.2.1 Any space where there is storage or activity having fuel conditions exceeding those of a one- or two-family dwelling and that possesses the potential for a fully involved fire shall be protected in accordance with 33.2.3.2.4 and 33.2.3.2.5.

33.2.3.2.2 Spaces requiring protection by 33.2.3.2.1 shall include, but shall not be limited to, areas for cartoned storage, food or household maintenance items in wholesale or institutional-type quantities and concentrations, or mass storage of residents' belongings.

33.2.3.2.3 Areas containing approved, properly installed and maintained furnaces and heating equipment, furnace rooms, and cooking and laundry facilities shall not be classified as hazardous areas solely on the basis of such equipment.

33.2.3.2.4 Any hazardous area that is on the same floor as, and is in or abuts, a primary means of escape or a sleeping room shall be protected by one of the following means:

- (1) Protection shall be an enclosure with a fire resistance rating of not less than 1 hour, with a self-closing or automatic-closing fire door in accordance with 7.2.1.8 that has a fire protection rating of not less than ¾ hour.
- (2) Protection shall be automatic sprinkler protection, in accordance with 33.2.3.5, and a smoke partition, in accordance with Section 8.4, located between the hazardous area and the sleeping area or primary escape route, with any doors in such separation self-closing or automatic-closing in accordance with 7.2.1.8.

33.2.3.2.5 Other hazardous areas shall be protected by one of the following:

- (1) Enclosure having a fire resistance rating of not less than ½ hour, with a self-closing or automatic-closing door in accordance with 7.2.1.8 that is equivalent to not less than a 1¾ in. (44 mm) thick, solid-bonded wood core construction
- (2) Automatic sprinkler protection in accordance with 33.2.3.5, regardless of enclosure

33.2.3.3 Interior Finish.

33.2.3.3.1 General. Interior finish shall be in accordance with Section 10.2.

33.2.3.3.2 Interior Wall and Ceiling Finish. Interior wall and ceiling finish materials complying with Section 10.2 shall be as follows:

- (1) Class A or Class B in facilities other than those having prompt evacuation capability
- (2) Class A, Class B, or Class C in facilities having prompt evacuation capability

33.2.3.3.3 Interior Floor Finish. (No requirements)

33.2.3.4 Detection, Alarm, and Communications Systems.

33.2.3.4.1 Fire Alarm Systems. A manual fire alarm system shall be provided in accordance with Section 9.6, unless the provisions of 33.2.3.4.1.1 or 33.2.3.4.1.2 are met.

33.2.3.4.1.1 A fire alarm system shall not be required where interconnected smoke alarms complying with 33.2.3.4.3 and not less than one manual fire alarm box per floor arranged to continuously sound the smoke detector alarms are provided.

33.2.3.4.1.2 Other manually activated continuously sounding alarms acceptable to the authority having jurisdiction shall be permitted in lieu of a fire alarm system.

33.2.3.4.2 Occupant Notification. Occupant notification shall be in accordance with 9.6.3.

33.2.3.4.3* Smoke Alarms.

33.2.3.4.3.1 Approved smoke alarms shall be provided in accordance with 9.6.2.9, unless otherwise indicated in 33.2.3.4.3.6 and 33.2.3.4.3.7.

33.2.3.4.3.2 Smoke alarms shall be installed on all levels, including basements but excluding crawl spaces and unfinished attics.

33.2.3.4.3.3 Additional smoke alarms shall be installed for living rooms, dens, day rooms, and similar spaces.

33.2.3.4.3.4 Reserved.

33.2.3.4.3.5 Smoke alarms shall be powered from the building electrical system and, when activated, shall initiate an alarm that is audible in all sleeping areas.

33.2.3.4.3.6 Smoke alarms in accordance with 33.2.3.4.3.1 shall not be required where buildings are protected throughout by an approved automatic sprinkler system, in accordance with 33.2.3.5, that uses quick-response or residential sprinklers, and are protected with approved smoke alarms installed in each sleeping room, in accordance with 9.6.2.9, that are powered by the building electrical system.

33.2.3.4.3.7 Smoke alarms in accordance with 33.2.3.4.3.1 shall not be required where buildings are protected throughout by an approved automatic sprinkler system, in accordance with 33.2.3.5, that uses quick-response or residential sprinklers, with existing battery-powered smoke alarms in each sleeping room, and where, in the opinion of the authority having jurisdiction, the facility has demonstrated that testing, maintenance, and a battery replacement program ensure the reliability of power to the smoke alarms.

33.2.3.5* Extinguishment Requirements.

33.2.3.5.1 Reserved.

33.2.3.5.2 Where an automatic sprinkler system is installed, for either total or partial building coverage, the following requirements shall be met:

- (1) The system shall be in accordance with Section 9.7 and shall initiate the fire alarm system in accordance with 33.2.3.4.1, as modified by 33.2.3.5.2.1 through 33.2.3.5.2.6.
- (2) The adequacy of the water supply shall be documented to the authority having jurisdiction.

33.2.3.5.2.1* In prompt evacuation capability facilities, the following requirements shall be met:

- (1) An automatic sprinkler system in accordance with NFPA 13D, *Standard for the Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes*, shall be permitted.
- (2) Automatic sprinklers shall not be required in closets not exceeding 24 ft² (2.2 m²) and in bathrooms not exceeding 55 ft² (5.1 m²), provided that such spaces are finished with lath and plaster or materials providing a 15-minute thermal barrier.

33.2.3.5.2.2 In slow and impractical evacuation capability facilities, the following requirements shall be met:

- (1) An automatic sprinkler system in accordance with NFPA 13D, *Standard for the Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes*, with a 30-minute water supply, shall be permitted.
- (2) All habitable areas and closets shall be sprinklered.
- (3) Automatic sprinklers shall not be required in bathrooms not exceeding 55 ft² (5.1 m²), provided that such spaces are finished with lath and plaster or materials providing a 15-minute thermal barrier.

33.2.3.5.2.3 In prompt and slow evacuation facilities, where an automatic sprinkler system is in accordance with NFPA 13, *Standard for the Installation of Sprinkler Systems*, sprinklers shall not be required in closets not exceeding 24 ft² (2.2 m²) and in bathrooms not exceeding 55 ft² (5.1 m²), provided that such spaces are finished with lath and plaster or materials providing a 15-minute thermal barrier.

33.2.3.5.2.4 In prompt and slow evacuation capability facilities up to and including four stories in height, systems installed in accordance with NFPA 13R, *Standard for the Installation of Sprinkler Systems in Residential Occupancies up to and Including Four Stories in Height*, shall be permitted.

33.2.3.5.2.5 In impractical evacuation capability facilities up to and including four stories in height, the following requirements shall be met:

- (1) Systems installed in accordance with NFPA 13R, *Standard for the Installation of Sprinkler Systems in Residential Occupancies up to and Including Four Stories in Height*, shall be permitted.
- (2) All habitable areas and closets shall be sprinklered.
- (3) Automatic sprinklers shall not be required in bathrooms not exceeding 55 ft² (5.1 m²), provided that such spaces are finished with lath and plaster or materials providing a 15-minute thermal barrier.

33.2.3.5.2.6 Initiation of the fire alarm system shall not be required for existing installations in accordance with 33.2.3.5.6.

33.2.3.5.3 All impractical evacuation capability facilities shall be protected throughout by an approved, supervised automatic sprinkler system in accordance with 33.2.3.5.2.

33.2.3.5.4 Reserved.

33.2.3.5.5 Reserved.

33.2.3.5.6 Sprinkler piping serving not more than six sprinklers for any isolated hazardous area shall be permitted to be installed in accordance with 9.7.1.2 and shall meet the following requirements:

- (1) In new installations, where more than two sprinklers are installed in a single area, waterflow detection shall be provided to initiate the fire alarm system required by 33.2.3.4.1.
- (2) The duration of water supplies shall be as required for the sprinkler systems addressed in 33.2.3.5.2.

33.2.3.5.7 Systems installed in accordance with NFPA 13D, *Standard for the Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes*, shall be inspected, tested, and maintained in accordance with 33.2.3.5.7, which references specific sections of NFPA 25, *Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems*. The frequency of the inspection, test, or maintenance shall be in accordance with this Code, whereas the purpose and procedure shall be from NFPA 25.

33.2.3.5.7.1 Control valves shall be inspected monthly in accordance with 12.3.2 of NFPA 25, *Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems*.

33.2.3.5.7.2 Gages shall be inspected monthly in accordance with 12.2.8.1 of NFPA 25, *Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems*.

33.2.3.5.7.3 Alarm devices shall be inspected quarterly in accordance with 5.2.6 of NFPA 25, *Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems*.

33.2.3.5.7.4 Alarm devices shall be tested semiannually in accordance with 5.3.3 of NFPA 25, *Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems*.

33.2.3.5.7.5 Valve supervisory switches shall be tested semiannually in accordance with 12.3.3.5 of NFPA 25, *Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems*.

33.2.3.5.7.6 Visible sprinklers shall be inspected annually in accordance with 5.2.1 of NFPA 25, *Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems*.

33.2.3.5.7.7 Visible pipe shall be inspected annually in accordance with 5.2.2 of NFPA 25, *Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems*.

33.2.3.5.7.8 Visible pipe hangers shall be inspected annually in accordance with 5.2.3 of NFPA 25, *Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems*.

33.2.3.5.7.9 Buildings shall be inspected annually prior to the onset of freezing weather to ensure that there is adequate heat wherever water-filled piping is run in accordance with 5.2.5 of NFPA 25, *Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems*.

33.2.3.5.7.10 A representative sample of fast-response sprinklers shall be tested once the sprinklers in the system are 20 years old in accordance with 5.3.1.1.1.2 of NFPA 25, *Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems*. If the sample fails the test, all of the sprinklers represented by that sample shall be replaced. If the sprinklers pass the test, the test shall be repeated every 10 years thereafter.

33.2.3.5.7.11 A representative sample of dry-pendent sprinklers shall be tested once the sprinklers in the system are 10 years old in accordance with 5.3.1.1.1.5 of NFPA 25, *Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems*. If the sample fails the test, all of the sprinklers represented by that sample shall be replaced. If the sprinklers pass the test, the test shall be repeated every 10 years thereafter.

33.2.3.5.7.12 Antifreeze solutions shall be tested annually in accordance with 5.3.4 of NFPA 25, *Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems*.

33.2.3.5.7.13 Control valves shall be operated through their full range and returned to normal annually in accordance with 12.3.3.1 of NFPA 25, *Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems*.

33.2.3.5.7.14 Operating stems of OS&Y valves shall be lubricated annually in accordance with 12.3.4 of NFPA 25, *Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems*.

33.2.3.5.7.15 Dry-pipe systems that extend into the unheated portions of the building shall be inspected, tested, and maintained in accordance with 12.4.4 of NFPA 25, *Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems*.

33.2.3.6 Construction of Corridor Walls.

33.2.3.6.1 Unless otherwise indicated in 33.2.3.6.1.1 through 33.2.3.6.1.4, corridor walls shall meet the following requirements:

- (1) The separation walls of sleeping rooms shall be capable of resisting fire for not less than ½ hour, which shall be considered to be achieved if the partitioning is finished on both sides with lath and plaster or materials providing a 15-minute thermal barrier.
- (2) Sleeping room doors shall be substantial doors, such as those of 1¾ in. (44 mm) thick, solid-bonded wood core construction or of other construction of equal or greater stability and fire integrity.
- (3) Any vision panels shall be fixed fire window assemblies in accordance with 8.3.4 or shall be wired glass not exceeding 9 ft² (0.84 m²) each in area and installed in approved frames.

33.2.3.6.1.1 In prompt evacuation capability facilities, all sleeping rooms shall be separated from the escape route by smoke partitions in accordance with Section 8.4, and door closing shall be regulated by 33.2.3.6.4.

33.2.3.6.1.2 The requirement of 33.2.3.6.1 shall not apply to corridor walls that are smoke partitions in accordance with Section 8.4 and that are protected by automatic sprinklers in accordance with 33.2.3.5 on both sides of the wall and door, and the following shall also apply:

- (1) In such instances, there shall be no limitation on the type or size of glass panels.
- (2) Door closing shall comply with 33.2.3.6.4.

33.2.3.6.1.3 Sleeping arrangements that are not located in sleeping rooms shall be permitted for nonresident staff members, provided that the audibility of the alarm in the sleeping area is sufficient to awaken staff who might be sleeping.

33.2.3.6.1.4 In previously approved facilities, where the facility has demonstrated to the authority having jurisdiction that the group is capable of evacuating the building in 8 minutes or less, or where the group achieves an E-score of 3 or less using the board and care occupancies evacuation capability determination methodology of NFPA 101A, *Guide on Alternative Approaches to Life Safety*, sleeping rooms shall be separated from escape routes by walls and doors that are smoke resistant.

33.2.3.6.2 Reserved.

33.2.3.6.3 No louvers, operable transoms, or other air passages shall penetrate the wall, except properly installed heating and utility installations other than transfer grilles, which shall be prohibited.

33.2.3.6.4 Doors shall meet the following requirements:

- (1) Doors shall be provided with latches or other mechanisms suitable for keeping the doors closed.
- (2) No doors shall be arranged to prevent the occupant from closing the door.
- (3) Doors shall be self-closing or automatic-closing in accordance with 7.2.1.8 in buildings other than those protected throughout by an approved automatic sprinkler system in accordance with 33.2.3.5.2.

33.2.4 Reserved.

33.2.5 Building Services.

33.2.5.1 Utilities. Utilities shall comply with Section 9.1.

33.2.5.2 Heating, Ventilating, and Air-Conditioning.

33.2.5.2.1 Heating, ventilating, and air-conditioning equipment shall comply with the provisions of 9.2.1 and 9.2.2, except as otherwise required in this chapter.

33.2.5.2.2 No stove or combustion heater shall be located to block escape in case of fire caused by the malfunction of the stove or heater.

33.2.5.2.3 Unvented fuel-fired heaters shall not be used in any residential board and care facility.

33.3 Large Facilities.

33.3.1 General.

33.3.1.1 Scope.

33.3.1.1.1 Section 33.3 shall apply to residential board and care occupancies providing sleeping accommodations for more than 16 residents.

33.3.1.1.2 Facilities having sleeping accommodations for not more than 16 residents shall be evaluated in accordance with Section 33.2.

33.3.1.1.3 Facilities meeting the requirements of Section 33.3 shall be considered to have met the requirements of Section 33.2 for prompt evacuation capability or slow evacuation capability.

33.3.1.2 Requirements Based on Evacuation Capability.

33.3.1.2.1 **Prompt and Slow.** Large facilities classified as prompt or slow evacuation capability, other than those meeting the requirement of 33.3.1.2.1.1 or 33.3.1.2.1.2, shall comply with the requirements of Section 33.3, as indicated for the appropriate evacuation capability.

33.3.1.2.1.1* Facilities where the authority having jurisdiction has determined equivalent safety is provided in accordance with Section 1.4 shall not be required to comply with the requirements of Section 33.3, as indicated for the appropriate evacuation capability.

33.3.1.2.1.2 Facilities that were previously approved as complying with 33.3.1.2.2 shall not be required to comply with the requirements of Section 33.3, as indicated for the appropriate evacuation capability.

33.3.1.2.2* **Impractical.** Large facilities classified as impractical evacuation capability shall meet the requirements for limited care facilities in Chapter 19, unless the authority having jurisdiction has determined equivalent safety is provided in accordance with Section 1.4.

33.3.1.2.3 Evacuation Capability Determination.

33.3.1.2.3.1 Facility management shall furnish to the authority having jurisdiction, upon request, an evacuation capability determination using a procedure acceptable to the authority having jurisdiction.

33.3.1.2.3.2 Where the documentation required by 33.3.1.2.3.1 is not furnished, the evacuation capability shall be classified as impractical.

33.3.1.3 Minimum Construction Requirements.

33.3.1.3.1 Construction requirements for large facilities shall be as required by 33.3.1.3.

33.3.1.3.2 Where noted as "fully sheathed," the interior shall be covered with lath and plaster or materials providing a 15-minute thermal barrier.

33.3.1.3.3 For the purpose of construction requirements, stories shall be counted as follows:

- (1) Stories shall be counted starting with the primary level of exit discharge and ending with the highest occupied level.
- (2) Where the primary level of exit discharge is not readily apparent, the primary level of exit discharge of a building shall be that story that is level with or above finished grade of the exterior wall line for 50 percent or more of its perimeter.
- (3) Building levels below the primary level shall not be counted as a story in determining the height of the building.

33.3.1.3.4 The minimum construction requirements (*see 8.2.1*), based on the highest story normally used by board and care residents, shall be as follows:

- (1) Unless meeting the requirement of 33.3.1.3.4(2), one- or two-story facilities shall be any construction type that meets the requirements for 1-hour or greater fire resistance rating, that is Type IV(2HH), that is fully sheathed, or that is protected throughout by an approved automatic sprinkler system in accordance with 33.3.3.5.
- (2) One-story prompt evacuation capability facilities having 30 or fewer residents shall be permitted to be of any type construction.
- (3) Unless meeting the requirements of 33.3.1.3.4(4), three- to six-story facilities shall be Type I, Type II, or Type III construction that meets the requirements for 1-hour or greater fire resistance rating; Type IV construction that is protected throughout by an approved automatic sprinkler system in accordance with 33.3.3.5; or any other type of construction that is both sheathed and protected throughout by an approved automatic sprinkler system installed in accordance with 33.3.3.5, other than Type V(000).
- (4) Three- to four-story facilities of Type V(000) construction that are both fully sheathed and protected throughout by an approved, supervised automatic sprinkler system in accordance with 33.3.3.5 shall be considered to have met the requirements of 33.3.1.3.4(3).
- (5) Unless meeting the requirements of 33.3.1.3.4(6), facilities more than six stories high shall be any Type I or Type II(222) construction, or any Type II(111), Type III(211), or Type IV(2HH) construction that is protected throughout by an approved automatic sprinkler system in accordance with 33.3.3.5.
- (6) Any building of Type I, Type II(222), or Type II(111) construction shall be permitted to include roofing systems involving combustible supports, decking, or roofing, provided that the following criteria are met:
 - (a) The roof covering meets Class A requirements in accordance with NFPA 256, *Standard Methods of Fire Tests of Roof Coverings*.
 - (b) The roof is separated from all occupied portions of the building by a noncombustible floor assembly having not less than a 2-hour fire resistance rating that includes not less than 2½ in. (64 mm) of concrete or gypsum fill, and the attic or other space so developed is either unused or protected throughout by an approved automatic sprinkler system in accordance with 33.3.3.5.1.

33.3.1.4 **Occupant Load.** The occupant load, in number of persons for whom means of egress and other provisions are required, 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.

33.3.2 Means of Egress.

33.3.2.1 General. Means of egress shall be in accordance with Chapter 7.

33.3.2.2 Means of Egress Components.

33.3.2.2.1 Components Permitted. Components of means of egress shall be limited to the types described in 33.3.2.2.2 through 33.3.2.2.10.

33.3.2.2.2 Doors. Doors in means of egress shall be as follows:

- (1) Doors complying with 7.2.1 shall be permitted.
- (2) Doors within individual rooms and suites of rooms shall be permitted to be swinging or sliding.
- (3) No door in any means of egress, other than those meeting the requirement of 33.3.2.2.2(4) or (5), shall be locked against egress when the building is occupied.
- (4) Delayed-egress locks in accordance with 7.2.1.6.1 shall be permitted, provided that not more than one device exists in a means of egress.
- (5) Access-controlled egress doors in accordance with 7.2.1.6.2 shall be permitted.
- (6) Revolving doors complying with 7.2.1.10 shall be permitted.

33.3.2.2.3 Stairs. Stairs complying with 7.2.2 shall be permitted.

33.3.2.2.4 Smokeproof Enclosures. Smokeproof enclosures complying with 7.2.3 shall be permitted.

33.3.2.2.5 Horizontal Exits. Horizontal exits complying with 7.2.4 shall be permitted.

33.3.2.2.6 Ramps. Ramps complying with 7.2.5 shall be permitted.

33.3.2.2.7 Exit Passageways. Exit passageways complying with 7.2.6 shall be permitted.

33.3.2.2.8 Fire Escape Ladders. Fire escape ladders complying with 7.2.9 shall be permitted.

33.3.2.2.9 Alternating Tread Devices. Alternating tread devices complying with 7.2.11 shall be permitted.

33.3.2.2.10 Areas of Refuge. Areas of refuge complying with 7.2.12 shall be permitted.

33.3.2.3 Capacity of Means of Egress.

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

33.3.2.3.2 Street floor exits shall be sufficient for the occupant load of the street floor plus the required capacity of stairs and ramps discharging onto the street floor.

33.3.2.3.3 The width of corridors serving an occupant load of 50 or more shall be sufficient for the occupant load served but shall be not less than 44 in. (1120 mm).

33.3.2.3.4 Corridors serving an occupant load fewer than 50 shall be not less than 36 in. (915 mm) wide.

33.3.2.4 Number of Exits. The minimum number of exits as required by Section 7.4 shall be provided on every story.

33.3.2.5 Arrangement of Means of Egress.

33.3.2.5.1 Access to all required exits shall be in accordance with Section 7.5.

33.3.2.5.2 Common paths of travel shall not exceed 110 ft (33.5 m) in buildings not protected throughout by an automatic sprinkler system in accordance with 33.3.3.5.

33.3.2.5.3 In buildings protected throughout by automatic sprinkler systems in accordance with 33.3.3.5, common paths of travel shall not exceed 160 ft (48.8 m).

33.3.2.5.4 Dead-end corridors shall not exceed 50 ft (15 m).

33.3.2.6 Travel Distance to Exits.

33.3.2.6.1 Travel distance from the door within a room, suite, or living unit to a corridor door shall not exceed 75 ft (23 m) in buildings not protected throughout by an approved automatic sprinkler system in accordance with 33.3.3.5.

33.3.2.6.2 Travel distance from the door within a room, suite, or living unit to a corridor door shall not exceed 125 ft (38 m) in buildings protected throughout by an approved automatic sprinkler system in accordance with 33.3.3.5.

33.3.2.6.3 Travel distance from the corridor door of any room to the nearest exit shall be in accordance with 33.3.2.6.3.1, 33.3.2.6.3.2, or 33.3.2.6.3.3.

33.3.2.6.3.1 Travel distance from the corridor door of any room to the nearest exit, measured in accordance with Section 7.6, shall not exceed 100 ft (30 m).

33.3.2.6.3.2 Travel distance to exits shall not exceed 61 m (200 ft) for exterior ways of exit access arranged in accordance with 7.5.3.

33.3.2.6.3.3 Travel distance to exits shall not exceed 200 ft (61 m) if the exit access and any portion of the building that is tributary to the exit access are protected throughout by approved automatic sprinkler systems in accordance with 33.3.3.5. In addition, the portion of the building in which 200 ft (61 m) travel distance is permitted shall be separated from the remainder of the building by construction having a fire resistance rating of not less than 1 hour, for buildings not more than three stories in height, and not less than 2 hours for buildings more than three stories in height.

33.3.2.7 Discharge from Exits. Exit discharge shall comply with Section 7.7.

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

33.3.2.9 Emergency Lighting. Emergency lighting in accordance with Section 7.9 shall be provided in all buildings with more than 25 rooms, unless each sleeping room has a direct exit to the outside of the building at ground level.

33.3.2.10 Marking of Means of Egress. Means of egress shall be marked in accordance with Section 7.10.

33.3.2.11 Special Means of Egress Features.

33.3.2.11.1 Reserved.

33.3.2.11.2 Lockups. Lockups in residential board and care occupancies, other than approved existing lockups, shall comply with the requirements of 23.4.5.

33.3.3 Protection.**33.3.3.1 Protection of Vertical Openings.**

33.3.3.1.1 Vertical openings shall comply with 33.3.3.1.1.1, 33.3.3.1.1.2, or 33.3.3.1.1.3.

33.3.3.1.1.1 Vertical openings shall be enclosed or protected in accordance with Section 8.6.

33.3.3.1.1.2 Unprotected vertical openings not part of required egress shall be permitted by the authority having jurisdiction

where such openings do not endanger required means of egress, provided that the building is protected throughout by an approved automatic sprinkler system in accordance with 33.3.3.5, and the exits and required ways of travel thereto are adequately safeguarded against fire and smoke within the building, or where every individual room has direct access to an exterior exit without passing through a public corridor.

33.3.3.1.1.3 In buildings not more than two stories in height, unprotected vertical openings shall be permitted by the authority having jurisdiction, provided that the building is protected throughout by an approved automatic sprinkler system in accordance with 33.3.3.5.

33.3.3.1.2 Reserved.

33.3.3.1.3 No floor below the level of exit discharge and used only for storage, heating equipment, or purposes other than residential occupancy shall have unprotected openings to floors used for residential occupancy.

33.3.3.2 Protection from Hazards.

33.3.3.2.1 Rooms containing high-pressure boilers, refrigerating machinery, transformers, or other service equipment subject to possible explosion shall not be located directly under or adjacent to exits, and such rooms shall be effectively separated from other parts of the building as specified in Section 8.7.

33.3.3.2.2 Hazardous areas, which shall include, but shall not be limited to, the following, shall be separated from other parts of the building by construction having a fire resistance rating of not less than 1 hour, with communicating openings protected by approved self-closing fire doors, or such area shall be equipped with automatic fire extinguishing systems:

- (1) Boiler and heater rooms
- (2) Laundries
- (3) Repair shops
- (4) Rooms or spaces used for storage of combustible supplies and equipment in quantities deemed hazardous by the authority having jurisdiction

33.3.3.3 Interior Finish.

33.3.3.3.1 General. Interior finish shall be in accordance with Section 10.2.

33.3.3.3.2 Interior Wall and Ceiling Finish. Interior wall and ceiling finish materials complying with Section 10.2 shall be Class A or Class B.

33.3.3.3.3 Interior Floor Finish. Interior floor finish, other than approved existing floor coverings, shall be Class I or Class II in corridors or exits.

33.3.3.4 Detection, Alarm, and Communications Systems.

33.3.3.4.1 General. A fire alarm system in accordance with Section 9.6 shall be provided, unless each sleeping room has exterior exit access in accordance with 7.5.3, and the building is not more than three stories in height.

33.3.3.4.2 Initiation. The required fire alarm system shall be initiated by all of the following means:

- (1) Manual means in accordance with 9.6.2, unless there are other effective means (such as a complete automatic sprinkler or automatic detection system) for notification of fire as required

- (2) Manual fire alarm box located at a convenient central control point under continuous supervision of responsible employees

- (3) Automatic sprinkler system, other than those not required by another section of this *Code*

- (4) Required detection system, other than sleeping room smoke alarms

33.3.3.4.3 Reserved.

33.3.3.4.4 Occupant Notification. Occupant notification shall be provided automatically, without delay, by internal audible alarm in accordance with 9.6.3.

33.3.3.4.5 Reserved.

33.3.3.4.6* Emergency Forces Notification. In case of a fire, provisions shall be made for the immediate notification of the public fire department, by either telephone or other means, or, where there is no public fire department, this notification shall be made to the private fire brigade.

33.3.3.4.7 Smoke Alarms. Smoke alarms shall be provided in accordance with 33.3.3.4.7.1, 33.3.3.4.7.2, or 33.3.3.4.7.3.

33.3.3.4.7.1 Each sleeping room shall be provided with an approved smoke alarm in accordance with 9.6.2.9 that is powered from the building electrical system.

33.3.3.4.7.2 Existing battery-powered smoke alarms, rather than building electrical service-powered smoke alarms, shall be accepted where, in the opinion of the authority having jurisdiction, the facility has demonstrated that testing, maintenance, and battery replacement programs ensure the reliability of power to the smoke alarms.

33.3.3.4.7.3 Sleeping room smoke alarms shall not be required in facilities having an existing corridor smoke detection system that complies with Section 9.6 and is connected to the building fire alarm system.

33.3.3.4.8 Smoke Detection Systems.

33.3.3.4.8.1 All living areas, as defined in 3.3.17.5, and all corridors shall be provided with smoke detectors that comply with *NFPA 72, National Fire Alarm Code*, and are arranged to initiate an alarm that is audible in all sleeping areas, as modified by 33.3.3.4.8.2 and 33.3.3.4.8.3.

33.3.3.4.8.2 Smoke detection systems shall not be required in living areas in facilities protected throughout by an approved automatic sprinkler system installed in accordance with 33.3.3.5.

33.3.3.4.8.3 Smoke detection systems shall not be required in unenclosed corridors, passageways, balconies, colonnades, or other arrangements with one or more sides along the long dimension fully or extensively open to the exterior at all times.

33.3.3.5 Extinguishment Requirements.

33.3.3.5.1* General. Where an automatic sprinkler system is installed, for either total or partial building coverage, the system shall be installed in accordance with Section 9.7, as modified by 33.3.3.5.1.1, 33.3.3.5.1.2, and 33.3.3.5.1.3.

33.3.3.5.1.1 In buildings not more than four stories in height, a sprinkler system complying with *NFPA 13R, Standard for the Installation of Sprinkler Systems in Residential Occupancies up to and Including Four Stories in Height*, shall be permitted.

33.3.3.5.1.2 Automatic sprinklers shall not be required in closets not exceeding 24 ft² (2.2 m²) and in bathrooms not exceeding 55 ft² (5.1 m²), provided that such spaces are

finished with lath and plaster or materials with a 15-minute thermal barrier.

33.3.3.5.1.3 Initiation of the fire alarm system shall not be required for existing installations in accordance with 33.3.3.5.5.

33.3.3.5.2 High-Rise Buildings. All high-rise buildings shall be protected throughout by an approved, supervised automatic sprinkler system in accordance with 33.3.3.5, as modified by 33.3.3.5.3. Such systems shall initiate the fire alarm system in accordance with Section 9.6.

33.3.3.5.3 Closets and Bathrooms. Automatic sprinklers shall not be required in small clothes closets where the smallest dimension does not exceed 36 in. (915 mm), the area does not exceed 24 ft² (2.2 m²), and the walls and ceiling are finished with noncombustible or limited-combustible materials.

33.3.3.5.4 Supervision. Automatic sprinkler systems shall be supervised in accordance with Section 9.7; waterflow alarms shall not be required to be transmitted off-site.

33.3.3.5.5 Domestic Water Supply Option. Sprinkler piping serving not more than six sprinklers for any isolated hazardous area in accordance with 9.7.1.2 shall be permitted; in new installations where more than two sprinklers are installed in a single area, waterflow detection shall be provided to initiate the fire alarm system required by 33.3.3.4.1.

33.3.3.5.6 Portable Fire Extinguishers. Portable fire extinguishers in accordance with 9.7.4.1 shall be provided near hazardous areas.

33.3.3.6 Corridors and Separation of Sleeping Rooms.

33.3.3.6.1 Access shall be provided from every resident use area to not less than one means of egress that is separated from all other rooms or spaces by walls complying with 33.3.3.6.3 through 33.3.3.6.6.3, unless otherwise indicated in 33.3.3.6.1.1 through 33.3.3.6.1.3.

33.3.3.6.1.1 Rooms or spaces, other than sleeping rooms, protected throughout by an approved automatic sprinkler system in accordance with 33.3.3.5 shall not be required to comply with 33.3.3.6.1.

33.3.3.6.1.2 Prompt evacuation capability facilities in buildings not over two stories in height, where not less than one required means of egress from each sleeping room provides a path of travel to the outside without traversing any corridor or other spaces exposed to unprotected vertical openings, living areas, and kitchens, shall not be required to comply with 33.3.3.6.1.

33.3.3.6.1.3 Rooms or spaces, other than sleeping rooms, provided with a smoke detection and alarm system connected to activate the building evacuation alarm shall not be required to comply with 33.3.3.6.1. Furnishings, finishes, and furniture, in combination with all other combustibles within the spaces, shall be of minimum quantity and arranged so that a fully developed fire is unlikely to occur.

33.3.3.6.2 Sleeping rooms shall be separated from corridors, living areas, and kitchens by walls complying with 33.3.3.6.3 through 33.3.3.6.6.3.

33.3.3.6.3 Walls required by 33.3.3.6.1 or 33.3.3.6.2 shall comply with 33.3.3.6.3.1, 33.3.3.6.3.2, or 33.3.3.6.3.3.

33.3.3.6.3.1 Walls shall have a fire resistance rating of not less than ½ hour.

33.3.3.6.3.2 In buildings protected throughout by an approved automatic sprinkler system in accordance with 33.3.3.5, walls shall be smoke partitions in accordance with Section 8.4, and the provisions of 8.4.3.5 shall not apply.

33.3.3.6.3.3 In buildings not more than two stories in height that are classified as prompt evacuation capability and that house not more than 30 residents, walls shall be smoke partitions in accordance with Section 8.4, and the provisions of 8.4.3.5 shall not apply.

33.3.3.6.4 Doors in walls required by 33.3.3.6.1 or 33.3.3.6.2 shall comply with 33.3.3.6.4.1, 33.3.3.6.4.2, 33.3.3.6.4.3, or 33.3.3.6.4.4.

33.3.3.6.4.1 Doors shall have a fire protection rating of not less than 20 minutes.

33.3.3.6.4.2 Solid-bonded wood core doors of not less than 1¾ in. (44 mm) thickness shall be permitted to continue in use.

33.3.3.6.4.3 In buildings protected throughout by an approved automatic sprinkler system in accordance with 33.3.3.5, doors that are nonrated shall be permitted to continue in use.

33.3.3.6.4.4 Where automatic sprinkler protection is provided in the corridor in accordance with 31.3.5.9, the following requirements shall be met:

- (1) Doors shall not be required to have a fire protection rating, but shall be in accordance with 8.4.3.
- (2) The provisions of 8.4.3.5 shall not apply.
- (3) Doors shall be equipped with latches for keeping the doors tightly closed.

33.3.3.6.5 Where walls and doors are required by 33.3.3.6.1 and 33.3.3.6.2, the following requirements shall be met:

- (1) Such walls and doors shall be constructed as smoke partitions in accordance with Section 8.4.
- (2) The provisions of 8.4.3.5 shall not apply.
- (3) No louvers, transfer grilles, operable transoms, or other air passages shall penetrate such walls or doors, except properly installed heating and utility installations.

33.3.3.6.6 Doors in walls required by 33.3.3.6.1 and 33.3.3.6.2 shall comply with 33.3.3.6.6.1, 33.3.3.6.6.2, or 33.3.3.6.6.3.

33.3.3.6.6.1 Doors shall be self-closing or automatic-closing in accordance with 7.2.1.8, and doors in walls separating sleeping rooms from corridors shall be automatic-closing in accordance with 7.2.1.8.2.

33.3.3.6.6.2 Doors to sleeping rooms that have occupant-control locks such that access is normally restricted to the occupants or staff personnel shall be permitted to be self-closing.

33.3.3.6.6.3 In buildings protected throughout by an approved automatic sprinkler system installed in accordance with 33.3.3.5, doors, other than doors to hazardous areas, vertical openings, and exit enclosures, shall not be required to be self-closing or automatic-closing.

33.3.3.7 Subdivision of Building Spaces. The requirements of 33.3.3.7.1 through 33.3.3.7.6 shall be met for all sleeping floors.

33.3.3.7.1 Every sleeping room floor shall be divided into not less than two smoke compartments of approximately the same size, with smoke barriers in accordance with Section 8.5, unless otherwise indicated in 33.3.3.7.4, 33.3.3.7.5, and 33.3.3.7.6.

33.3.3.7.2 Smoke dampers shall not be required.

33.3.3.7.3 Additional smoke barriers shall be provided such that the travel distance from a sleeping room corridor door to a smoke barrier shall not exceed 150 ft (46 m).

33.3.3.7.4 Smoke barriers shall not be required in buildings protected throughout by an approved automatic sprinkler system installed in accordance with 33.3.3.5.

33.3.3.7.5 Smoke barriers shall not be required where each sleeping room is provided with exterior ways of exit access arranged in accordance with 7.5.3.

33.3.3.7.6 Smoke barriers shall not be required where the aggregate corridor length on each floor is not more than 150 ft (46 m).

33.3.4 Special Provisions. (Reserved)

33.3.5 Reserved.

33.3.6 Building Services.

33.3.6.1 Utilities. Utilities shall comply with the provisions of Section 9.1.

33.3.6.2 Heating, Ventilating, and Air-Conditioning.

33.3.6.2.1 Heating, ventilating, and air-conditioning equipment shall comply with the provisions of Section 9.2.

33.3.6.2.2 No stove or combustion heater shall be located such that it blocks escape in case of fire caused by the malfunction of the stove or heater.

33.3.6.2.3 Unvented fuel-fired heaters shall not be used in any board and care occupancy.

33.3.6.3 Elevators, Dumbwaiters, and Vertical Conveyors. Elevators, dumbwaiters, and vertical conveyors shall comply with Section 9.4.

33.3.6.4 Rubbish Chutes, Incinerators, and Laundry Chutes. Rubbish chutes, incinerators, and laundry chutes shall comply with the provisions of Section 9.5.

33.4* Suitability of an Apartment Building to House a Board and Care Occupancy.

33.4.1 General.

33.4.1.1 Scope.

33.4.1.1.1 Section 33.4 shall apply to apartment buildings that have one or more individual apartments used as a board and care occupancy.

33.4.1.1.2 The provisions of Section 33.4 shall be used to determine the suitability of apartment buildings to house a residential board and care facility.

33.4.1.1.3 The suitability of existing apartment buildings not used for board and care occupancies shall be determined in accordance with Chapter 31.

33.4.1.2 Requirements for Individual Apartments. Requirements for individual apartments used as residential board and care occupancies shall be as specified in Section 33.2. Egress from the apartment into the common building corridor shall be considered acceptable egress from the board and care facility.

33.4.1.3 Additional Requirements.

33.4.1.3.1* Apartment buildings housing board and care facilities shall comply with the requirements of Section 33.4, unless the authority having jurisdiction has determined that equivalent safety for housing a residential board and care facility is provided in accordance with Section 1.4.

33.4.1.3.2 All facilities shall meet the requirements of Chapter 31 and the additional requirements of Section 33.4.

33.4.1.4 Minimum Construction Requirements.

33.4.1.4.1 In addition to the requirements of Chapter 31, apartment buildings housing residential board and care facilities for groups classified as prompt or slow evacuation capability shall meet the construction requirements of 33.3.1.3, and those for groups classified as impractical evacuation capability shall meet the construction requirements of 19.1.6.

33.4.1.4.2 In applying the construction requirements of 33.4.1.4.1, the height shall be determined by the height of the residential board and care facility, measured above the primary level of exit discharge.

33.4.2 Means of Egress. The requirements of Section 31.2 shall apply only to the parts of means of egress serving the apartment(s) used as a residential board and care occupancy.

33.4.3 Protection.

33.4.3.1 Interior Finish. The requirements of 31.3.3 shall apply only to the parts of means of egress serving the apartment(s) used as a residential board and care occupancy.

33.4.3.2 Construction of Corridor Walls. The requirements of 31.3.6 shall apply only to corridors serving the residential board and care facility, including that portion of the corridor wall separating the residential board and care facility from the common corridor.

33.4.3.3 Subdivision of Building Spaces. The requirements of 31.3.7 shall apply to those stories with an apartment(s) used as a residential board and care occupancy.

33.5 Reserved.

33.6 Reserved.

33.7 Operating Features.

33.7.1 Emergency Plan.

33.7.1.1 The administration of every residential board and care facility shall have, in effect and available to all supervisory personnel, written copies of a plan for protecting all persons in the event of fire, for keeping persons in place, for evacuating persons to areas of refuge, and for evacuating persons from the building when necessary.

33.7.1.2 The emergency plan shall include special staff response, including the fire protection procedures needed to ensure the safety of any resident, and shall be amended or revised whenever any resident with unusual needs is admitted to the home.

33.7.1.3 All employees shall be periodically instructed and kept informed with respect to their duties and responsibilities under the plan, and such instruction shall be reviewed by the staff not less than every 2 months.

33.7.1.4 A copy of the plan shall be readily available at all times within the facility.

33.7.2 Resident Training.

33.7.2.1 All residents participating in the emergency plan shall be trained in the proper actions to be taken in the event of fire.

33.7.2.2 The training required by 32.7.2.1 shall include actions to be taken if the primary escape route is blocked.

33.7.2.3 If the resident is given rehabilitation or habilitation training, training in fire prevention and the actions to be taken in the event of a fire shall be a part of the training program.

33.7.2.4 Residents shall be trained to assist each other in case of fire to the extent that their physical and mental abilities permit them to do so without additional personal risk.

33.7.3 Emergency Egress and Relocation Drills. Emergency egress and relocation drills shall be conducted in accordance with 33.7.3.1 through 33.7.3.6.

33.7.3.1 Emergency egress and relocation drills shall be conducted not less than six times per year on a bimonthly basis, with not less than two drills conducted during the night when residents are sleeping, as modified by 33.7.3.5 and 33.7.3.6.

33.7.3.2 The emergency drills shall be permitted to be announced in advance to the residents.

33.7.3.3 The drills shall involve the actual evacuation of all residents to an assembly point, as specified in the emergency plan, and shall provide residents with experience in egressing through all exits and means of escape required by this *Code*.

33.7.3.4 Exits and means of escape not used in any drill shall not be credited in meeting the requirements of this *Code* for board and care facilities.

33.7.3.5 Actual exiting from windows shall not be required to comply with 33.7.3; opening the window and signaling for help shall be an acceptable alternative.

33.7.3.6 If the board and care facility has an evacuation capability classification of impractical, those residents who cannot meaningfully assist in their own evacuation or who have special health problems shall not be required to actively participate in the drill. Section 19.7 shall apply in such instances.

33.7.4 Smoking.

33.7.4.1* Smoking regulations shall be adopted by the administration of board and care occupancies.

33.7.4.2 Where smoking is permitted, noncombustible safety-type ashtrays or receptacles shall be provided in convenient locations.

33.7.5* Furnishings, Bedding, and Decorations.

33.7.5.1 New draperies, curtains, and other similar loosely hanging furnishings and decorations in board and care facilities shall be in accordance with the provisions of 10.3.1.

33.7.5.2* New upholstered furniture within board and care facilities shall comply with 33.7.5.2.1 or 33.7.5.2.2.

33.7.5.2.1 New upholstered furniture shall be tested in accordance with the provisions of 10.3.2.1(1) and 10.3.3.

33.7.5.2.2 Upholstered furniture belonging to residents in sleeping rooms shall not be required to be tested, provided that a smoke alarm is installed in such rooms; battery-powered single-station smoke alarms shall be permitted in such rooms.

33.7.5.3* New mattresses within board and care facilities shall comply with 33.7.5.3.1 or 33.7.5.3.2.

33.7.5.3.1 New mattresses shall be tested in accordance with the provisions of 10.3.2.2 and 10.3.4.

33.7.5.3.2 Mattresses belonging to residents in sleeping rooms shall not be required to be tested, provided that a smoke alarm is installed in such rooms; battery-powered single-station smoke alarms shall be permitted in such rooms.

33.7.6 Staff. Staff shall be on duty and in the facility at all times when residents requiring evacuation assistance are present.

Chapter 34 Reserved**Chapter 35 Reserved****Chapter 36 New Mercantile Occupancies****36.1 General Requirements.****36.1.1 Application.**

36.1.1.1 The requirements of this chapter shall apply to new buildings or portions thereof used as mercantile occupancies (*see 1.3.1*).

36.1.1.2 The provisions of this chapter shall apply to life safety requirements for all new mercantile buildings. Specific requirements shall apply to suboccupancy groups, such as Class A, Class B, and Class C mercantile occupancies; covered malls; and bulk merchandising retail buildings, and are contained in paragraphs pertaining thereto.

36.1.1.3 Additions to existing buildings shall comply with 36.1.1.3.1, 36.1.1.3.2, and 36.1.1.3.3.

36.1.1.3.1 Additions to existing buildings shall conform to the requirements of 4.6.7.

36.1.1.3.2 Existing portions of the structure shall not be required to be modified, provided that the new construction has not diminished the fire safety features of the facility.

36.1.1.3.3 Existing portions shall be upgraded if the addition results in a change of mercantile subclassification. (*See 36.1.4.2.*)

36.1.1.4 When a mercantile occupancy changes from Class C to Class A or Class B, or from Class B to Class A, the provisions of this chapter shall apply.

36.1.2 Multiple Occupancies.**36.1.2.1 General.**

36.1.2.1.1 All multiple occupancies shall be in accordance with 6.1.14 and 36.1.2.

36.1.2.1.2 Where there are differences in the specific requirements in this chapter and provisions for mixed occupancies or separated occupancies as specified in 6.1.14.3 and 6.1.14.4, the requirements of this chapter shall apply.