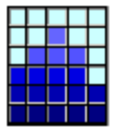
2012 Changes of the International Building Code Compared to the National Fire Protection Association- 101

For the Florida Building Commission And the Fire Code Advisory Council



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Introduction

The scope of this project is to review the 2012 changes to the International Building Code (IBC) and compare them to the 2012 edition of the National Fire Protection Association – 101 and to review the 2012 changes to the National Fire Protection Association -101 and compare them to the 2012 International Building Code (IBC) to determine if any conflicts exist due to the changes in either of the codes. The review includes comparing edition dates of the referenced standards in both codes. A conflict for the purpose of this study is defined as a requirement or construction specification in one code such as a dimension that would prevent compliance with the other code. Additionally a review was done of the current (2010 FBC- Building, Existing, and Mechanical) Florida specific changes "fire and life safety code correlation "modifications" against the 2012 National Fire Protection Association (NFPA) 101 changes and the 2012 International Building Code changes to determine whether an existing correlation is not covered by the updated codes and should be proposed for the 2013 FBC. The matrix was created from the Significant Code Changes published by the International Code Council and the National Fire Protection Association. The corresponding code section from either the IBC or NFPA 101 was added to the matrix and then these code changes were reviewed to determine if a conflict existed and the result of this review and possible recommendations or comments are provided in the matrix column titled "Recommendation". No direct comparison of the 2012 International Building Code to the 2012 National Fire Protection Association (NFPA) 101 was made to identify conflicts or differences in the codes. Only the changes to each code were compared to the other code. The Life Safety Modifications were not reviewed to the 2012 codes, but were reviewed only to the 2012 changes for each code. The Life Safety Modifications reviewed were the ones highlighted in yellow that have been carried over from edition to edition and not those changes made during the last code cycle or so-called glitches.

Five matrixes were created for this project. The matrix's are 1) 2012 changes to the International Building Code compared to the 2012 NFPA 101; 2) 2012 changes to NFPA 101 compared to the 2012 IBC; 3) 2012 Referenced Standards of the NFPA 101 compared to the 2012 IBC Referenced Standards; 4) Current Life Safety Modifications in the 2010 Florida Building Code – Building compared to the changes to the 2012 IBC and the changes to the 2012 NFPA 101 and; 5) Current Life Safety Code Modifications in the 2010 Florida Building Code – Mechanical and the 2010 Florida Building Code – Existing compared to the changes to the 2012 IMC and 2012 IEBC and the changes to the 2012 NFPA 101.

There were differences in the codes, but there were no identified conflicts based on the definition of a conflict by the Department. The current Florida Life Safety Code Modifications were made to change the codes to coordinate them, but these modifications do not meet the present definition of a conflict and therefore they should be eliminated.

2012 IBC	Explanation	2012 NFPA 101	Recommendations
24-HOUR CARE. The actual time that a person is an occupant within a facility for the purpose of receiving care. It shall not include a facility that is open for 24 hours and is capable of providing care to someone visiting the facility during any segment of the 24 hours**.**		**NA**	**NA**
AMBULATORY CARE FACILITY. Buildings or portions thereof used to provide medical, surgical, psychiatric, nursing or similar care on a less than 24-hour basis to individuals who are rendered *incapable of self-preservation* by the services provided.		**3.3.188.1*** ***Ambulatory Health Care Occupancy.*** An occupancy used to provide services or treatment simultaneously to four or more patients that provides, on an outpatient basis, one or more of the following: (1) treatment for patients that renders the patients incapable of taking action for selfpreservation under emergency conditions without the assistance of others; (2) anesthesia that renders the patients incapable of taking action for self-preservation under emergency conditions without the assistance of others; (3) emergency or urgent care for patients who, due to the nature of their injury or illness, are incapable of taking action for self-preservation under emergency conditions without the assistance of others.	**NA**
CARE SUITE. A group of treatment rooms, care recipient sleeping rooms and their associated support rooms or spaces and circulation space within Group I-2 occupancies where staff are in attendance for		**3.3.272 Suite.** **3.3.272.1** ***Guest Suite.*** An accommodation with two or more contiguous rooms comprising a compartment, with or without doors between such rooms, that provides living,	**NA**

2012 IBC	Explanation	2012 NFPA 101	Recommendations
supervision of all care recipients within the suite, and the suite is in compliance with the requirements of Section 407.4.3.		sleeping, sanitary, and storage facilities. **3.3.272.2** ***Non-Patient-Care Suite (Heath Care Occupancies).*** A suite within a health care occupancy that is not intended for sleeping or treating patients. **3.3.272.3** ***Patient Care Non-Sleeping Suite (Health Care Occupancies).*** A suite for treating patients with or without patient beds not intended for overnight sleeping. **3.3.272.4** ***Patient Care Sleeping Suite (Health Care Occupancies).*** A suite containing one or more patient beds intended for overnight sleeping. **3.3.272.5** ***Patient Care Suite (Health Care Occupancies).*** A series of rooms or spaces or a subdivided room separated	
CUSTODIAL CARE. Assistance with day-to-day living tasks; such as assistance with cooking, taking medication, bathing, using toilet facilities and other tasks of daily living. Custodial care includes occupants who evacuate at a slower rate and/or who have mental and psychiatric complications.		**3.3.206* Personal Care.** The care of residents who do not require chronic or convalescent medical or nursing care. **3.3.88.2*** ***Limited Care Facility.*** A building or portion of a building used on a 24-hour basis for the housing of four or more persons who are incapable of self-reservation because of age; physical limitations due to accident or illness; or limitations such as mental retardation/developmental disability, mental illness, or chemical dependency.	**NA**

2012 IBC	Explanation	2012 NFPA 101	Recommendations
EXIT. That portion of a *means of egress* system between the *exit access* and the *exit discharge* or *public way*. Exit components include exterior exit doors at the *level of exit discharge*, *interior exit stairways, interior exit ramps, exit passageways, exterior exit stairways* and *exterior exit ramps and horizontal exits*.		**3.3.81* Exit.** That portion of a means of egress that is separated from all other spaces of a building or structure by construction or equipment as required to provide a protected way of travel to the exit discharge.	**NA**
EXIT ACCESS DOORWAY. A door or access point along the path of egress travel from an occupied room, area or space where the path of egress enters an intervening room, *corridor*, *exit access stair* or *exit access ramp*.		**3.3.82 Exit Access.** That portion of a means of egress that leads to an exit.	**NA**
EXIT ACCESS RAMP. An interior *ramp* that is not a required *interior exit ramp*.		**NA**	**NA**
EXIT ACCESS STAIRWAY. An interior *stairway* that is not a required *interior exit stairway*.		**NA**	**NA**
FIRE-RATED GLAZING. Glazing with either a *fire protection rating* or a *fire-resistance rating*.		**3.3.106 Fire-Rated Glazing.** Glazing with either a fire protection rating or a fire resistance rating.	**NA**
FOSTER CARE FACILITIES. Facilities that provide care to more than five children, 21/2 years of age or less.		**NA**	**NA**
GROUP HOME. A facility for social rehabilitation, substance abuse or mental health problems that contains a group housing arrangement that provides *custodial care* but does not		**3.3.88.2* *Limited Care Facility.*** A building or portion of a building used on a 24-hour basis for the housing of four or more persons who are incapable of self-preservation because of age;	**NA**

2012 IBC	Explanation	2012 NFPA 101	Recommendations
provide acute care.		physical limitations due to accident or illness; or limitations such as mental retardation/developmental disability, mental illness, or chemical dependency. **3.3.188.4* *Day-Care Occupancy.*** An occupancy in which four or more clients receive care, maintenance, and supervision, by other than their relatives or legal guardians, for less than 24 hours per day.	
HOSPITALS AND PSYCHIATRIC HOSPITALS. Facilities that provide care or treatment for the medical, psychiatric, obstetrical, or surgical treatment of care recipients that are *incapable of self-preservation*.		**3.3.188.7* *Health Care Occupancy.*** An occupancy used to provide medical or other treatment or care simultaneously to four or more patients on an inpatient basis, where such patients are mostly incapable of self-preservation due to age, physical or mental disability, or because of security measures not under the occupants' control.	**NA**
INCAPABLE OF SELF-PRESERVATION. Persons because of age, physical limitations, mental limitations, chemical dependency, or medical treatment who cannot respond as an individual to an emergency situation.		**NA**	**NA**
INTERIOR EXIT RAMP. An *exit* component that serves to meet one or more *means of egress* design requirements, such as required number of *exits* or *exit*		**NA**	**NA**

2012 IBC	Explanation	2012 NFPA 101	Recommendations
access travel distance, and provides for a protected path of egress travel to the *exit discharge* or *public way.*			
INTERIOR EXIT STAIRWAY. An *exit* component that serves to meet one or more *means of egress* design requirements, such as required number of *exits* or *exit access* travel distance, and provides for a protected path of egress travel to the *exit discharge* or *public way.*		**NA**	**NA**
L RATING. The air leakage rating of a *through penetration firestop system* or a fire-resistant *joint* system when tested in accordance with UL 1479 or UL 2079, respectively.		**NA**	**NA**
LIVE/WORK UNIT. A *dwelling unit* or *sleeping unit* in which a significant portion of the space includes a nonresidential use that is operated by the tenant.		**NA**	**NA**
MEDICAL CARE. Care involving medical or surgical procedures, nursing or for psychiatric purposes.		**NA**	**NA**
MEMBRANE-PENETRATION FIRESTOP SYSTEM. An assemblage consisting of a fire-resistance-rated floor-ceiling, roof-ceiling or wall assembly, one or more penetrating items installed into or passing through the breach in one side of the assembly and		**NA**	**NA**

2012 IBC	Explanation	2012 NFPA 101	Recommendations
the materials or devices, or both, installed to resist the spread of fire into the assembly for a prescribed period of time.			
NURSING HOMES. Facilities that provide care, including both intermediate care facilities and skilled nursing facilities where any of the persons are *incapable of self-preservation*.		**3.3.140.2** ***Nursing Home.*** Abuilding or portion of a building used on a 24-hour basis for the housing and nursing care of four or more persons who, because of mental or physical incapacity, might be unable to provide for their own needs and safety without the assistance of another person. **3.3.88.2*** ***Limited Care Facility.*** A building or portion of a building used on a 24-hour basis for the housing of four or more persons who are incapable of self-preservation because of age; physical limitations due to accident or illness; or limitations such as mental retardation/developmental disability, mental illness, or chemical dependency.	**NA**
PERSONAL CARE SERVICE. The care of persons who do not require *medical care*. Personal care involves responsibility for the safety of the persons while inside the building		**3.3.206* Personal Care.** The care of residents who do not require chronic or convalescent medical or nursing care.	**NA**

2012 IBC	Explanation	2012 NFPA 101	Recommendations
TECHNICAL PRODUCTION AREA. Open elevated areas or spaces intended for entertainment technicians to walk on and occupy for servicing and operating entertainment technology systems and equipment. Galleries, including fly and lighting galleries, gridirons, catwalks, and similar areas are designed for these purposes.		**NA**	**NA**
THROUGH PENETRATION. A breach in both sides of a floor, floor-ceiling or wall assembly to accommodate an item passing through the breaches**.**		**NA**	**NA**
THROUGH-PENETRATION FIRESTOP SYSTEM. An assemblage consisting of a fire-resistance-rated floor, floorceiling, or wall assembly, one or more penetrating items passing through the breaches in both sides of the assembly and the materials or devices, or both, installed to resist the spread of fire through the assembly for a prescribed period of time.		**NA**	**NA**
Chapter 3			

2012 IBC	Explanation	2012 NFPA 101	Recommendations
303.1.3 Associated with Group E occupancies. A room or space used for assembly purposes that is associated with a Group E occupancy is not considered a separate occupancy.	Revised to clarify allowance for a Group E classification of accessory assembly spaces in school buildings to reduce confusion with the provision of mixed-occupancy requirements dealing with accessory occupancies as regulated by Section508.2.	**14.1.3.2 Assembly and Educational.** **14.1.3.2.1** Spaces subject to assembly occupancy shall comply with Chapter 12, including 12.1.3.2, which provides that, where auditorium and gymnasium egress lead through corridors or stairways also serving as egress for other parts of the building, the egress capacity shall be sufficient to allow simultaneous egress from auditorium and classroom sections **14.1.3.1 General.** Multiple occupancies shall be in accordance with 6.1.14. **15.1.3 Multiple Occupancies.** **15.1.3.1 General.** Multiple occupancies shall be in accordance with 6.1.14. **15.1.3.2 Assembly and Educational.** **15.1.3.2.1** Spaces subject to assembly occupancy shall comply with Chapter 13, including 13.1.3.2, which provides that, where auditorium and gymnasium egress lead through corridors or stairways also serving as egress for other parts of the building, the egress capacity shall be sufficient to allow simultaneous egress from auditorium and classroom sections. **15.1.2.3** In cases where instruction is incidental to some other occupancy, the section of	Possible Conflict

2012 IBC	Explanation	2012 NFPA 101	Recommendations
		this *Code* governing such other occupancy shall apply. **6.1.3.2 Other Occupancies.** Other occupancies associated with educational institutions shall be in accordance with the appropriate parts of this *Code*. **6.1.2.1* Definition — Assembly Occupancy.** An occupancy (1) used for a gathering of 50 or more persons for deliberation, worship, entertainment, eating, drinking, amusement, awaiting transportation, or similar uses; or (2) used as a special amusement building, regardless of occupant load. **6.1.14 Multiple Occupancies.** **6.1.14.1 General.** **6.1.14.1.1** Multiple occupancies shall comply with the requirements of 6.1.14.1 and one of the following: (1) Mixed occupancies — 6.1.14.3 (2) Separated occupancies — 6.1.14.4 **6.1.14.1.2** Where exit access from an occupancy traverses another occupancy, the multiple occupancy shall be treated as a mixed occupancy. **6.1.14.2 Definitions.** **6.1.14.2.1 Multiple Occupancy.** A building or structure in which two or more classes of occupancy exist. **6.1.14.2.2 Mixed Occupancy.** A	

2012 IBC	Explanation	2012 NFPA 101	Recommendations
		multiple occupancy where the occupancies are intermingled. **6.1.14.2.3 Separated Occupancy.** A multiple occupancy where the occupancies are separated by fire resistance–rated assemblies. **6.1.14.3 Mixed Occupancies.** **6.1.14.3.1** Each portion of the building shall be classified as to its use in accordance with Section 6.1. **6.1.14.3.2*** The building shall comply with the most restrictive requirements of the occupancies involved, unless separate safeguards are approved.	
303.1.4 Accessory to places of religious worship. Accessory religious educational rooms and religious auditoriums with *occupant loads* of less than 100 are not considered separate occupancies.		**6.1.14.2 Definitions.** **6.1.14.2.1 Multiple Occupancy.** A building or structure in which two or more classes of occupancy exist. **6.1.14.2.2 Mixed Occupancy.** A multiple occupancy where the occupancies are intermingled. **6.1.14.2.3 Separated Occupancy.** A multiple occupancy where the occupancies are separated by fire resistance–rated assemblies. **6.1.14.3 Mixed Occupancies.**	**NA**

2012 IBC	Explanation	2012 NFPA 101	Recommendations
		6.1.14.3.1 Each portion of the building shall be classified as to its use in accordance with Section 6.1. **6.1.14.3.2*** The building shall comply with the most restrictive requirements of the occupancies involved, unless separate safeguards are approved.	
303.3 Assembly Group A-2. Assembly uses intended for food and/or drink consumption including, but not limited to: Banquet halls Casinos (gaming areas) Nightclubs Restaurants, cafeterias and similar dining facilities (including associated commercial kitchens) Taverns and bars	Revised to clarify the classification of a casino gaming floor, is now specifically identified as a Group A-2 occupancy.	A Casino is not specifically listed in an Assembly occupancy definition in NFPA 101; however it is listed in Table 7.3.1.2 Occupant Load Factor under Assembly Use.	
306.2 Moderate-hazard factory industrial, Group F-1. Factory industrial uses which are not classified as Factory Industrial F-2 Low Hazard shall be classified as F-1 Moderate Hazard and shall include, but not be limited to, the following: Food processing and commercial kitchens not associated with restaurants, cafeterias and similar dining facilities	Revised to clarify the appropriate occupancy classification of a commercial kitchen based upon the kitchen's relationship, or 306.2 lack of a relationship, to dining facilities	**40.1.1.4** Industrial occupancies shall include factories making products of all kinds and properties used for operations such as processing, assembling, mixing, packaging, finishing or decorating, repairing, and similar operations. **40.1.2.1.1 General Industrial Occupancy.** General industrial occupancies shall include all of the following: (1) Industrial occupancies that conduct ordinary and low hazard industrial operations in buildings of conventional design that are usable for various types of industrial	**NA**

2012 IBC	Explanation	2012 NFPA 101	Recommendations
		processes (2) Industrial occupancies that include multistory buildings where floors are occupied by different tenants, or buildings that are usable for such occupancy and, therefore, are subject to possible use for types of industrial processes with a high density of employee population **40.1.2.1.2 Special-Purpose Industrial Occupancy.** Special purpose industrial occupancies shall include all of the following: (1) Industrial occupancies that conduct ordinary and low hazard industrial operations in buildings designed for, and that are usable only for, particular types of operations (2) Industrial occupancies that are characterized by a relatively low density of employee population with **6.1.14.1.3*** Where incidental to another occupancy, areas used as follows shall be permitted to be considered part of the predominant occupancy and shall be subject to the provisions of the *Code* that apply to the predominant occupancy: (1) Mercantile, business, industrial, or storage use (2)*Nonresidential use with an occupant load fewer than that established by Section 6.1 for the occupancy threshold	

2012 IBC	Explanation	2012 NFPA 101	Recommendations
305.2 Group E, day care facilities. This group includes buildings and structures or portions thereof occupied by more than five children older than 21/2 years of age who receive educational, supervision or *personal care services* for fewer than 24 hours per day. **305.2.1 Within places of religious worship.** Rooms and spaces within *places of religious worship* providing such day care during religious functions shall be classified as part of the primary occupancy. **305.2.2 Five or fewer children.** A facility having five or fewer children receiving such day care shall be classified as part of the primary occupancy. 305.2.3 **305.2.3 Five or fewer children in a dwelling unit.** A facility such as the above within a *dwelling unit* and having five or fewer children receiving such day care shall be classified as a Group R-3 occupancy or shall comply with the *International Residential Code*.	Revised to clarify day care facilities associated with places of worship and those providing care for five or fewer children are not classified as Group E, but are classified according to the primary occupancy. Similar provisions are also found in Sections 308.6.1 through 308.6.4, which address day care facilities that are not to be classified as Group I-4 day care.	**16.1.2.1 General.** Occupancies that include part-day preschools, kindergartens, and other schools whose purpose is primarily educational, even though the children who attend such schools are of preschool age, shall comply with the provisions of Chapter 14. **16.1.1.7** Places of religious worship shall not be required to meet the provisions of this chapter where providing day care while services are being held in the building. **16.6.1.1.5** Places of religious worship shall not be required to meet the provisions of Section 16.6 where operating a day-care home while services are being held in the building. **3.3.140.1* *Day-Care Home.*** A building or portion of a building in which more than 3 but not more than 12 clients receive care, maintenance, and supervision, by other than their relative(s) or legal guardians(s), for less than 24 hours per day. **3.3.188.4* *Day-Care Occupancy.*** An occupancy in which four or more clients receive care, maintenance, and supervision, by other than their relatives or legal guardians, for less than 24 hours per day.	**NA**

2012 IBC	Explanation	2012 NFPA 101	Recommendations
Table 307.1 See table below	Revised to clarify the determining of occupancy classification for a facility where combustible dusts are anticipated. A technical report and opinion are required be provided to the building official with all necessary information for a qualified	**A.3.3.188.8.2 High Hazard Industrial Occupancy.** A high hazard industrial occupancy includes occupancies where gasoline and other flammable liquids are handled, used, or stored under such conditions that involve possible release of flammable vapors; where grain dust, wood flour or plastic dust, aluminum or magnesium dust, or other explosive dusts are produced; where hazardous chemicals or explosives are manufactured, stored, or handled; where materials are processed or handled under conditions that might produce flammable flyings; and where other situations of similar hazard exist. Chapters 40 and 42 include detailed provisions on high hazard industrial and storage occupancies.	**NA**

Table 307.1

MATERIAL	CLASS	GROUP WHEN THE MAXIMUM ALLOWABLE QUANTITY IS EXCEEDED	STORAGE[b]			USE-CLOSED SYSTEMS[b]			USE-OPEN SYSTEMS[b]	
			Solid pounds (cubic feet)	Liquid gallons (pounds)	Gas (cubic feet at NTP)	Solid pounds (cubic feet)	Liquid gallons (pounds)	Gas (cubic feet at NTP)	Solid pounds (cubic feet)	Liquid gallons (pounds)
Combustible dust	N/A	H-2	Note q	N/A	N/A	Note q	N/A	N/A	Note q	N/A

2012 IBC	Explanation	2012 NFPA 101	Recommendations
g. Permitted only in buildings equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1.			
[F] 307.4 High-hazard Group H-2. Buildings and structures containing materials that pose a deflagration hazard or a hazard from accelerated burning shall be classified as Group H-2. Such materials shall include, but not be limited to, the following: Class I, II or IIIA flammable or combustible liquids which are used or stored in normally open containers or systems, or in closed containers or systems pressurized at more than 15 psi (103.4 kPa) gage Combustible dusts where manufactured, generated or used in such a manner that the concentration and conditions create a fire or explosion hazard based on information prepared in accordance with Section 414.1.3		**40.1.2.1.3* High Hazard Industrial Occupancy.** High hazard industrial occupancies shall include all of the following: (1) Industrial occupancies that conduct industrial operations that use high hazard materials or processes or house high hazard contents (2) Industrial occupancies in which incidental high hazard operations in low or ordinary hazard occupancies that are protected in accordance with Section 8.7 and 40.3.2 are not required to be the basis for overall occupancy classification	**NA**
308.1 Institutional Group I. Institutional Group I occupancy includes, among others, the use of a building or structure, or a portion thereof, in which care or supervision is provided to persons who are or are not capable of self-preservation without physical assistance or in which persons are detained for penal or correctional purposes or in which the liberty of the occupants is restricted. Institutional occupancies shall be classified as Group I-1, I-2, I-3 or	Created or substantially revised as part of a set of code change proposals that clarified various care occupancies. (Revisions to Chapter 3 show how these definitions affect occupancy classifications.)	**A.3.3.188.7 Health Care Occupancy.** Health care occupancies include the following: (1) Hospitals (2) Limited care facilities (3) Nursing homes Occupants of health care occupancies typically have physical or mental illness, disease, or infirmity. They also include infants, convalescents, or infirm aged persons. It is not the intent to consider	**NA**

2012 IBC	Explanation	2012 NFPA 101	Recommendations
I-4.		occupants incapable of selfpreservation because they are in a wheelchair or use assistive walking devices, such as a cane, a walker, or crutches. **3.3.188.1* *Ambulatory Health Care Occupancy.*** An occupancy used to provide services or treatment simultaneously to four or more patients that provides, on an outpatient basis, one or more of the following: (1) treatment for patients that renders the patients incapable of taking action for selfpreservation under emergency conditions without the assistance of others; (2) anesthesia that renders the patients incapable of taking action for self-preservation under emergency conditions without the assistance of others; (3) emergency or urgent care for patients who, due to the nature of their injury or illness, are incapable of taking action for self-preservation under emergency conditions without the assistance of others. **3.3.188.5* *Detention and Correctional Occupancy.*** An occupancy used to house one or more persons under varied degrees of restraint or security where such occupants are mostly incapable of self-preservation because of security	

2012 IBC	Explanation	2012 NFPA 101	Recommendations
		measures not under the occupants' control.	
308.4 Institutional Group I-2. This occupancy shall include buildings and structures used for *medical care* on a 24-hour basis for more than five persons who are *incapable of self preservation*. This group shall include, but not be limited to, the following: *Foster care facilities* *Detoxification facilities* *Hospitals* *Nursing homes* *Psychiatric hospitals*	Revised, a Group I-2 occupancy classification is now only applicable to those medical facilities where six or more individuals incapable of self-preservation are receiving care.	**3.3.188.7*** ***Health Care Occupancy.*** An occupancy used to provide medical or other treatment or care simultaneously to four or more patients on an inpatient basis, where such patients are mostly incapable of self-preservation due to age, physical or mental disability, or because of security measures not under the occupants' control. **18.1.1.1.5** The health care facilities regulated by this chapter shall be those that provide sleeping accommodations for their occupants and are occupied by persons who are mostly incapable of self-preservation because of age, because of physical or mental disability, or because of security measures not under the occupants' control. **18.1.1.1.6** Buildings, or sections of buildings, that primarily house patients who, in the opinion of the governing body of the facility and the governmental agency having jurisdiction, are capable of exercising judgment and appropriate physical action for self-preservation under emergency conditions shall be permitted to comply with chapters of this *Code* other than Chapter 18. **18.1.1.1.7*** It shall be recognized that, in buildings housing certain	Not a conflict as defined in scope of work, however this distinction can make compliance with both codes difficult.

2012 IBC	Explanation	2012 NFPA 101	Recommendations
		patients, it might be necessary to lock doors and bar windows to confine and protect building inhabitants. **18.1.1.1.8** Buildings, or sections of buildings, that house older persons and that provide activities that foster continued independence but that do not include services distinctive to health care occupancies *(see 18.1.4.2)*, as defined in 3.3.188.7, shall be permitted to comply with the requirements of other chapters of this *Code*, such as Chapters 30 or 32. **18.1.1.1.9** Facilities that do not provide housing on a 24-hour basis for their occupants shall be classified as other occupancies and shall be covered by other chapters of this *Code*.	
308.4.1 Five or fewer persons receiving care. A facility such as the above with five or fewer persons receiving such care shall be classified as Group R-3 or shall comply with the *International Residential Code* provided an *automatic sprinkler system* is installed in accordance with Section 903.3.1.3 or with Section P2904 of the *International Residential Code*.		**NA**	**NA**
310.2 Definitions. The following terms are defined in Chapter 2: **BOARDING HOUSE.** **CONGREGATE LIVING FACILITIES.**	Created or substantially revised as part of a set of code change proposals that clarified various care occupancies. (Revisions to Chapter 3 show how these	**Lodging or Rooming Houses** **26.1.1.1*** The requirements of this chapter shall apply to buildings that provide sleeping accommodations for 16 or	**NA**

2012 IBC	Explanation	2012 NFPA 101	Recommendations
DORMITORY. **GROUP HOME.** **PERSONAL CARE SERVICE.** **TRANSIENT.** **310.3 Residential Group R-1.** *Boarding houses* (*transient*) with more than 10 occupants *Congregate living facilities* (*transient)* with more than 10 occupants **310.4 Residential Group R-2.** *Boarding houses* (nontransient) with more than 16 occupants *Congregate living facilities* (nontransient) with more than 16 occupants **310.5 Residential Group R-3.** *Boarding houses* (nontransient) with 16 or fewer occupants *Boarding houses* (*transient*) with 10 or fewer occupants Care facilities that provide accommodations for five or fewer persons receiving care *Congregate living facilities* (nontransient) with 16 or fewer occupants *Congregate living facilities* (*transient*) with 10 or fewer Occupants	definitions affect occupancy classifications.)	fewer persons on either a transient or permanent basis, with or without meals, but without separate cooking facilities for individual occupants, except as provided in Chapter 24. **3.3.188.12* *Residential Board and Care Occupancy.*** An occupancy used for lodging and boarding of four or more residents, not related by blood or marriage to the owners or operators, for the purpose of providing personal care services. **6.1.9.1* Definition—Residential Board and Care Occupancy.** An occupancy used for lodging and boarding of four or more residents, not related by blood or marriage to the owners or operators, for the purpose of providing personal care services. **32.1.1.5 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)	
310.5.1 Care facilities within a dwelling. Care facilities for five or fewer persons receiving care that are within a single-family dwelling are permitted to comply with the *International Residential Code*	Added, this section applies for five or fewer and allows home care, be it medical, custodial or personal care.	**3.3.188.12* *Residential Board and Care Occupancy.*** An occupancy used for lodging and boarding of four or more residents, not related by blood or marriage to the owners or operators, for the	**NA**

2012 IBC	Explanation	2012 NFPA 101	Recommendations
provided an *automatic sprinkler system* is installed in accordance with Section 903.3.1.3 or with Section P2904 of the *International Residential Code*.		purpose of providing personal care services. **6.1.9.1* Definition—Residential Board and Care Occupancy.** An occupancy used for lodging and boarding of four or more residents, not related by blood or marriage to the owners or operators, for the purpose of providing personal care services	
310.3 Residential Group R-1. Residential occupancies containing *sleeping units* where the occupants are primarily *transient* in nature, including: *Boarding houses* (*transient*) with more than 10 occupants *Congregate living facilities* (*transient)* with more than 10 occupants	Eliminated the allowance for constructing Group R-4 supervised residential facilities under the International Residential Code Revised to clarify the distinctions between various care facilities that have been for the Group E, I and R occupancy groups. Groups' I-1 and R-4 facilities provide custodial care for persons who reside at the facility. The list of eight example facilities is the same for Groups I-1 and R-4. The distinction between these two occupancies is that Group I-1 is for facilities caring for more than 16 persons; Group R-4 is for facilities caring for more than five but no more than 16. See section 310.5.1 for facilities for five or fewer persons.	**NA**	**NA**
310.6 Residential Group R-4. This occupancy shall include buildings, structures or portions thereof for more than five but not more than 16 persons, excluding staff, who reside on a 24-hour basis in a supervised residential environment and receive *custodial care*. The persons receiving care are capable of self-preservation. This group shall include, but not be limited to, the following: Alcohol and drug centers Assisted living facilities Congregate care facilities Convalescent facilities *Group homes* Halfway houses Residential board and *custodial*		**3.3.188.12* *Residential Board and Care Occupancy.*** An occupancy used for lodging and boarding of four or more residents, not related by blood or marriage to the owners or operators, for the purpose of providing personal care services. **6.1.9.1* Definition—Residential Board and Care Occupancy.** An occupancy used for lodging and boarding of four or more residents, not related by blood or marriage to the owners or operators, for the purpose of providing personal care services **20.1.1.1.6** Buildings, or sections of buildings, that primarily house patients who, in the opinion of the	Not a conflict as defined in scope of work, however this distinction can make compliance with both codes difficult.

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care facilities Social rehabilitation facilities Group R-4 occupancies shall meet the requirements for construction as defined for Group R-3, except as otherwise provided for in this code.		governing body of the facility and the governmental agency having jurisdiction, are capable of exercising judgment and appropriate physical action for self-preservation under emergency conditions shall be permitted to comply with chapters of this *Code* other than Chapter 20.	
Chapter 4			
402.1.1 Open space. A *covered mall building* and attached *anchor buildings* and parking garages shall be surrounded on all sides by a permanent open space or not less than 60 feet (18 288 mm). An *open mall building* and *anchor buildings* and parking garages adjoining the perimeter line shall be surrounded on all sides by a permanent open space of not less than 60 feet (18 288 mm). **Exception:** The permanent open space of 60 feet (18 288 mm) shall be permitted to be reduced to not less than 40 feet (12 192 mm), provided the following requirements are met: 1. The reduced open space shall not be allowed for more than 75 percent of the perimeter of the *covered or open mall building* and *anchor buildings;*	Revised to clarify how the provisions that were originally developed for covered mall conditions apply to open mall buildings. The whole of Section 402 has been reorganized around main topics. Technical revisions applying to open malls have been made in most sections.	**NA**	**NA**

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402.1.2 Open mall building perimeter line. For the purpose of this code, a perimeter line shall be established. The perimeter line shall encircle all buildings and structures which comprise the *open mall building* and shall encompass any open-air interior walkways, open-air courtyards or similar open-air spaces. The perimeter line shall define the extent of the *open mall building*. *Anchor buildings* and parking structures shall be outside of the perimeter line and are not considered as part of the *open mall building*.	Added provision requires the establishment of a line around the perimeter of those that will be considered part of the open mall and those that are not, since open malls are usually a collection of structures versus one structure. Establishment of this line is essential to the application of the balance of Section 402.	**NA**	**NA**
403.6.1 Fire service access elevator. In buildings with an occupied floor more than 120 feet (36 576 mm) above the lowest level of fire department vehicle access, no fewer than two fire service access elevators, or all elevators, whichever is less, shall be provided in accordance with Section 3007. Each fire service access elevator shall have a capacity of not less than 3500 pounds (1588 kg).	Revised to clarify the minimum number of fire service access elevators required in applicable high-rise buildings has been increased from one to two where multiple elevators are provided in the building. The design and construction standards, for fire service access elevators, are found in Section 3007, was revised to clarify a variety of requirements.	**9.4.3 Fire Fighters' Emergency Operations.** **9.4.3.1** All new elevators shall conform to the fire fighters' emergency operations requirements of ASMEA17.1/CSA B44, *Safety Code for Elevators and Escalators*. **9.4.3.2** All existing elevators having a travel distance of 25 ft (7620 mm) or more above or below the level that best serves the needs of emergency personnel for fire-fighting or rescue purposes shall conform to the fire fighters' emergency operations requirements	**NA**

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406.4 Public parking garages. Parking garages other than private parking garages, shall be classified as public parking garages and shall comply with the provisions of Sections 406.4.2 through 406.4.8 and shall be classified as either an *open parking garage* or an enclosed parking garage. *Open parking garages* shall also comply with Section 406.5. Enclosed parking garages shall also comply with Section 406.6. See Section 510 for special provisions for parking garages.	Revised to clarify public parking garages as those parking structures that fall outside of the scope of Section 406.3 regulating private parking garages. Public parking garages are either open parking garages (Section 406.5) or enclosed parking garages (Section 406.6).	**42.8.1.1 Application.** The provisions of 42.8.1 through 42.8.5.4 shall apply to parking structures of the closed or open type, above or below grade plane, but shall not apply to assisted mechanical-type or automated-type parking facilities that are not occupied by customers. The requirements of Sections 42.1 through 42.7 shall not apply. **42.8.1.3 Open Parking Structures.** Open parking structures shall comply with 42.8.1.3.1 through 42.8.1.3.3. 42.8.1.3.1 Each parking level shall have wall openings open to the atmosphere for an area of not less than 1.4 ft2 for each linear foot (0.4 m2 for each linear meter) of its exterior perimeter. [88A: 5.5.1] 42.8.1.3.2 The openings addressed in 42.8.1.3.1 shall be distributed over 40 percent of the building perimeter or uniformly over two opposing sides. [88A: 5.5.2] 42.8.1.3.3 Interior wall lines and column lines shall be at least 20 percent open, with openings distributed to provide ventilation. [88A: 5.5.3] **42.8.1.4 Classification of Occupancy.** Incidental vehicle parking in another occupancy shall not be the basis for overall occupancy classification.	**NA**

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406.5.2.1 Openings below grade. Where openings below grade provide required natural *ventilation*, the outside horizontal clear space shall be one and one-half times the depth of the opening. The width of the horizontal clear space shall be maintained from grade down to the bottom of the lowest required opening.	Added provision specifies a clear horizontal space adjacent to such openings where the openings for an open parking garage are located "below grade." This clear horizontal space must comply with minimum widths based on the depth of the open parking garage's exterior wall openings.	**42.8.1.1 Application.** The provisions of 42.8.1 through 42.8.5.4 shall apply to parking structures of the closed or open type, above or below grade plane, but shall not apply to assisted mechanical-type or automated-type parking facilities that are not occupied by customers. The requirements of Sections 42.1 through 42.7 shall not apply. **42.8.1.3 Open Parking Structures.** Open parking structures shall comply with 42.8.1.3.1 through 42.8.1.3.3. **42.8.1.3.1** Each parking level shall have wall openings open to the atmosphere for an area of not less than 1.4 ft2 for each linear foot (0.4m2 for each linear meter) of its exterior perimeter. [**88A:** 5.5.1] **42.8.1.3.2** The openings addressed in 42.8.1.3.1 shall be distributed over 40 percent of the building perimeter or uniformly over two opposing sides. [**88A:** 5.5.2] **42.8.1.3.3** Interior wall lines and column lines shall be at least 20 percent open, with openings distributed to provide ventilation. [**88A:** 5.5.3]	**NA**

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406.5.5 Area and height increases. The allowable area and height of *open parking garages* shall be increased in accordance with the provisions of this section. Garages with sides open on three-fourths of the building's perimeter are permitted to be increased by 25 percent in area and one tier in height. Garages with sides open around the entire building's perimeter are permitted to be increased by 50 percent in area and one tier in height. For a side to be considered open under the above provisions, the total area of openings along the side shall not be less than 50 percent of the interior area of the side at each tier and such openings shall be equally distributed along the length of the tier. For purposes of calculating the interior area of the side, the height shall not exceed 7 feet (2134 mm).	Modified for consistent application; the method for determining the amount of openings required to receive allowable area and height increases.	**NA**	**NA**
[F] 407.8 Automatic fire detection. *Corridors* in *nursing homes*, long-term care facilities, *detoxification facilities* and spaces permitted to be open to the *corridors* by Section 407.2 shall be equipped with an automatic fire detection system. Hospitals shall be equipped with smoke detection as required in Section 407.2. **Exceptions:** 1. *Corridor* smoke detection is not required where sleeping rooms		**18.3.4.5.3* Nursing Homes.** An approved automatic smoke detection system shall be installed in corridors throughout smoke compartments containing patient sleeping rooms and in spaces open to corridors as permitted in nursing homes by 18.3.6.1, unless otherwise permitted by one of the following: (1) Corridor systems shall not be required where each patient sleeping room is protected by an	**NA**

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are provided with *smoke detectors* that comply with UL 268. Such detectors shall provide a visual display on the *corridor* side of each sleeping room and an audible and visual alarm at the care provider's station attending each unit. 2. *Corridor* smoke detection is not required where sleeping room doors are equipped with automatic door-closing devices with integral *smoke detectors* on the unit sides installed in accordance with their listing, provided that the integral detectors perform the required alerting function		approved smoke detection system. (2) Corridor systems shall not be required where patient room doors are equipped with automatic door-closing devices with integral smoke detectors on the room side installed in accordance with their listing, provided that the integral detectors provide occupant notification.	
407.9 Secured yards. Grounds are permitted to be fenced and gates therein are permitted to be equipped with locks, provided that safe dispersal areas having 30 net square feet (2.8 m2) for bed and litter care recipients and 6 net square feet (0.56 m2) for ambulatory care recipients and other occupants are located between the building and the fence. Such provided safe dispersal area shall be located not less than 50 feet (15 240 mm) from the building they serve.		**NA**	**NA**
407.4.3 Group I-2 care suites. *Care suites* in Group I-2 shall comply with Section 407.4.3.1 through 407.4.3.4 and either Section 407.4.3.5 or 407.4.3.6.	Clarified provisions addressing the arrangement of portions of hospitals into care suites. Relocated from Chapter 10 and integrated into other means-of-egress provisions found in Section 407 addressing Group I-2 occupancies.		

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407.4.3.1 Exit access through care suites. *Exit access* from all other portions of a building not classified as a *care suite* shall not pass through a *care suite*. In a *care suite* required to have more than one *exit*, one *exit access* is permitted to pass through an adjacent *care suite* provided all of the other requirements of Sections 407.4 and 1014.2 are satisfied.		**18.2.5.7.2.2 Sleeping Suite Number of Means of Egress.** **(A)** Sleeping suites of more than 1000 ft2 (93 m2) shall have not less than two exit access doors remotely located from each other. **(B)*** One means of egress from the suite shall be directly to a corridor complying with 18.3.6. **(C)*** For suites requiring two means of egress, one means of egress from the suite shall be permitted to be into another suite, provided that the separation between the suites complies with the corridor requirements of 18.3.6.2 through 18.3.6.5.	**NA**

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407.4.3.2 Separation. *Care suites* shall be separated from other portions of the building by a smoke partition complying with Section 710.		**18.2.5.7.1.2* Suite Separation.** Suites shall be separated from the remainder of the building, and from other suites, by walls and doors meeting the requirements of 18.3.6.2 through 18.3.6.5. **18.2.5.7.1.3 Suite Hazardous Contents Areas. (A)*** Intervening rooms shall not be hazardous areas as defined by 18.3.2. **(B)** Hazardous areas within a suite shall be separated from the remainder of the suite in accordance with 18.3.2.1, unless otherwise provided in 18.2.5.7.1.3(C). **(C)*** Hazardous areas within a suite shall not be required to b separated from the remainder of the suite where complying with all of the following: (1) The suite is primarily a hazardous area. (2) The suite is protected by an approved automatic smoke detection system in accordance with Section 9.6. (3) The suite is separated from the rest of the health care facility as required for a hazardous area by 18.3.2.1.	**NA**
407.4.3.3 One intervening room. For rooms other than sleeping rooms located within a *care suite*, *exit access* travel from the *care suite* shall be permitted through one intervening room where the travel distance to the *exit access*		**18.2.5.7.3.2 Patient Care Non-Sleeping Suite Number of Means of Egress.** **(A)** Non-sleeping suites of more than 2500 ft2 (230 m2) shall have not less than two exit access doors remotely located from each	**NA**

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door from the *care suite* is not greater than 100 feet (30 480 mm).		other. **(B)*** One means of egress from the suite shall be directly to a corridor complying with 18.3.6. **(C)*** For suites requiring two means of egress, one means of egress from the suite shall be permitted to be into another suite, provided that the separation between the suites complies with the corridor requirements of 18.3.6.2 through 18.3.6.5.	
407.4.3.4 Two intervening rooms. For rooms other than sleeping rooms located within a *care suite*, *exit access* travel within the *care suite* shall be permitted through two intervening rooms where the travel distance to the *exit access* door from the *care suite* is not greater than 50 feet (15 240 mm).		**18.2.5.7.3.1 Patient Care Non-Sleeping Suite Arrangement.** **(A)** Occupants of habitable rooms within non-sleeping suites shall have exit access to a corridor complying with 18.3.6, or to a horizontal exit, directly from the suite. **18.2.5.7.3.4 Patient Care Non-Sleeping Suite Travel Distance.** **(A)** Travel distance within a non-sleeping suite to an exit access door from the suite shall not exceed 100 ft (30 m).	**NA**
407.4.3.5 Care suites containing sleeping room areas. Sleeping rooms shall be permitted to be grouped into *care suites* with one intervening room if one of the following conditions is met: 1. The intervening room within the *care suite* is not used as an *exit access* for more than eight care recipient beds. 2. The arrangement of the *care suite* allows for direct and constant visual supervision by care		**18.2.5.7.2.1 Sleeping Suite Arrangement.** **(A)*** Occupants of habitable rooms within sleeping suites shall have exit access to a corridor complying with 18.3.6, or to a horizontal exit, directly from the suite. **(B)** Where two or more exit access doors are required from the suite by 18.2.5.5.1, one of the exit access doors shall be permitted to be directly to an exit stair, exit passageway, or exit	**NA**

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providers. **407.4.3.5.1 Area.** *Care suites* containing sleeping rooms shall be not greater than 5,000 square feet (465 m2) in area.		door to the exterior. **(C)** Sleeping suites shall be provided with constant staff supervision within the suite. **(D)** Sleeping suites shall be arranged in accordance with one of the following: (1)*Patient sleeping rooms within sleeping suites shall provide one of the following: (a) The patient sleeping rooms shall be arranged to allow for direct supervision from a normally attended location within the suite, such as is provided by glass walls, and cubicle curtains shall be permitted. (b) Any patient sleeping rooms without the direct supervision required by 18.2.5.7.2.1(D)(1)(a) shall be provided with smoke detection in accordance with Section 9.6 and 18.3.4. (2) Sleeping suites shall be provided with a total coverage (complete) automatic smoke detection system in accordance with 9.6.2.9 and 18.3.4. **18.2.5.7.2.3 Sleeping Suite Maximum Size.** **(A) Reserved.** **(B)** Sleeping suites shall not exceed 7500 ft2 (700 m2), unless otherwise provided in 18.2.5.7.2.3(C). **(C)** Sleeping suites greater than 7500 ft2 (700 m2) and not exceeding 10,000 ft2 (930 m2) shall be permitted where both of	

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		the following are provided in the suite: (1)*Direct visual supervision in accordance with 18.2.5.7.2.1(D)(1)(a) (2) Total coverage (complete) automatic smoke detection in accordance with 9.6.2.9 and 18.3.4	
407.4.3.5.2 Exit access. Any sleeping room, or any *care suite* that contains sleeping rooms, of more than 1,000 square feet (93 m2) shall have no fewer than two *exit access* doors from the *care suite* located in accordance with Section 1015.2.		**18.2.5.7.2.2 Sleeping Suite Number of Means of Egress.** **(A)** Sleeping suites of more than 1000 ft2 (93 m2) shall have not less than two exit access doors remotely located from each other.	**NA**
407.4.3.5.3 Travel distance. The travel distance between any point in a *care suite* containing sleeping rooms and an *exit access* door from that *care suite* shall be not greater than 100 feet (30 480 mm).		**18.2.5.7.2.4 Sleeping Suite Travel Distance.** **(A)** Travel distance between any point in a sleeping suite and an exit access door from that suite shall not exceed 100 ft (30 m). **(B)** Travel distance between any point in a sleeping suite and an exit shall not exceed 200 ft (61 m).	**NA**
407.4.3.6 Care suites not containing sleeping rooms. Areas not containing sleeping rooms, but only treatment areas and the associated rooms, spaces or circulation space shall be permitted to be grouped into *care suites* and shall conform to the limitations in Section 407.4.3.6.1		**NA**	**NA**

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and 407.4.3.6.2.			
407.4.3.6.1 Area. *Care suites* of rooms, other than sleeping rooms, shall have an area not greater than 10,000 square feet (929 m2).		**18.2.5.7.3.3 Patient Care Non-Sleeping Suite Maximum Size.** Non-sleeping suites shall not exceed 10,000 ft2 (930 m2).	**NA**
407.4.3.6.2 Exit access. *Care suites*, other than sleeping rooms, with an area of more than 2,500 square feet (232 m2) shall have no fewer than two *exit access* doors from the *care suite* located in accordance with Section 1015.2.		**18.2.5.7.3.2 Patient Care Non-Sleeping Suite Number of Means of Egress.** **(A)** Non-sleeping suites of more than 2500 ft2 (230 m2) shall have not less than two exit access doors remotely located from each other.	**NA**
410.6.3 Technical production areas. *Technical production areas* shall be provided with means of egress and means of escape in accordance with Sections 10.6.3.1 through 410.6.3.5.	Omitted outdated terminology, such as fly galleries, gridirons, and pinrails, has been replaced by the general and comprehensive term "technical production area," which is defined in Chapter 2. The special means-of-egress provisions for such areas have all been combined with provisions previously located in Section 1015.6 and are now located in Section 410.	**NA**	**NA**
410.6.3.1 Means of egress. No fewer than one *means of egress* shall be provided from *technical production areas*.		**NA**	**NA**
410.6.3.2 Travel distance. The length of *exit access* travel shall be not greater than 300 feet (91 440 mm) for buildings without a sprinkler system and 400 feet (121 900 mm) for buildings equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1.		**NA**	**NA**

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410.6.3.3 Two means of egress. Where two *means of egress* are required, the *common path of travel* shall be not greater than 100 feet (30 480 mm). **Exception:** A means of escape to a roof in place of a second *means of egress* is permitted.		**NA**	**NA**
410.6.3.4 Path of egress travel. The following *exit access* components are permitted where serving *technical production areas:* 1. *Stairways*. 2. *Ramps*. 3. *Spiral stairways*. 4. Catwalks. 5. *Alternating tread devices*. 6. Permanent ladders.		**NA**	**NA**
410.6.3.5 Width. The path of egress travel within and from technical support areas shall be not less than 22 inches (559 mm).		**NA**	**NA**
[F] 412.4.6.2 Separation of maximum single fire areas. Maximum single *fire areas* established in accordance with hangar classification and construction type in Table 412.4.6 shall be separated by 2-hour *fire walls* constructed in accordance with Section 706. In determining the maximum single *fire area* as set forth in Table 412.4.6, ancillary uses which are separated from aircraft servicing areas by a *fire barrier* of not less than one hour, constructed in accordance with	Revised, spaces ancillary to the aircraft servicing and storage areas of an aircraft hangar, and separated by fire-resistance rated construction, are no longer included in the fire area size when determining fire suppression requirements.	**NA**	**NA**

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Section 707 shall not be included in the area.			
419.1 General. A *live/work unit* shall comply with Sections 419.1 through 419.9. **Exception:** Dwelling or sleeping units that include an office that is less than 10 percent of the area of the *dwelling unit* are permitted to be classified as *dwelling units* with accessory occupancies in accordance with Section 508.2.	Revised, the means-of-egress and plumbing facilities requirements for the nonresidential portion of a live/work unit are now regulated based upon the specific function of the nonresidential space rather than those of the Group R-2 occupancy.	**NA**	**NA**
419.2 Occupancies. *Live/work units* shall be classified as a Group R-2 occupancy. Separation requirements found in Sections 420 and 508 shall not apply within the *live/work unit* where the *live/work unit* is in compliance with Section 419. Nonresidential uses which would otherwise be classified as either a Group H or S occupancy shall not be permitted in a *live/work unit*. **Exception:** Storage shall be permitted in the *live/work unit* provided the aggregate area of storage in the nonresidential portion of the *live/work unit* shall be limited to 10 percent of the space dedicated to nonresidential activities. **419.3 Means of egress.** Except as modified by this section, the *means of egress* components for a *live/work unit* shall be designed in accordance with Chapter 10 for		**NA**	**NA**

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the function served.			
419.9 Plumbing facilities. The nonresidential area of the *live/work unit* shall be provided with minimum plumbing facilities as specified by Chapter 29, based on the function of the nonresidential area. Where the nonresidential area of the *live/work unit* is required to be *accessible* by Section 1103.2.13, the plumbing fixtures specified by Chapter 29 shall be *accessible*.		**NA**	**NA**
422.1 General. Occupancies classified as *ambulatory care facilities* shall comply with the provisions of Sections 422.1 through 422.7 and other applicable provisions of this code.	Revised language for a multiple-tenant or mixed-occupancy building where there are uses present other than an ambulatory care facility, a fire partition is now required between the care facility	**20.3.7 Subdivision of Building Space.** **20.3.7.1** Ambulatory health care facilities shall be separated from other tenants and occupancies and shall meet all of the following	**NA**

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422.2 Separation. *Ambulatory care facilities* where the potential for four or more care recipients are to be *incapable of self-preservation* at any time, whether rendered incapable by staff or staff accepted responsibility for a care recipient already incapable, shall be separated from adjacent spaces, *corridors* or tenants with a *fire partition* installed in accordance with Section 708.	and those nonrelated spaces where the ambulatory care facility is intended to have at least four care recipients incapable of self-preservation at any one time.	requirements: (1) Walls shall have not less than a 1-hour fire resistance rating and shall extend from the floor slab below to the floor or roof slab above. (2) Doors shall be constructed of not less than 13⁄4 in. (44 mm) thick, solid-bonded wood core or the equivalent and shall be equipped with positive latches. (3) Doors shall be self-closing and shall be kept in the closed position, except when in use. (4) Any windows in the barriers shall be of fixed fire window assemblies in accordance with Section 8.3.	

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422.3 Smoke compartments. Where the aggregate area of one or more *ambulatory care facilities* is greater than 10,000 square feet (929 m2) on one *story*, the *story* shall be provided with a *smoke barrier* to subdivide the *story* into no fewer than two *smoke compartments*. The area of any one such *smoke compartment* shall be not greater than 22,500 square feet (2092 m2). The travel distance from any point in a *smoke compartment* to a *smoke barrier* door shall be not greater than 200 feet (60 960 mm). The *smoke barrier* shall be installed in accordance with Section 709 with the exception that *smoke barriers* shall be continuous from outside wall to an outside wall, a floor to a floor, or from a *smoke barrier* to a *smoke barrier* or a combination thereof.		**20.3.7.2** Every story of an ambulatory health care facility shall be divided into not less than two smoke compartments, unless otherwise permitted by one of the following: (1) This requirement shall not apply to facilities of less than 5000 ft2 (465 m2) that are protected by an approved automatic smoke detection system. (2) This requirement shall not apply to facilities of less than 10,000 ft2 (929 m2) that are protected throughout by an approved, supervised automatic sprinkler system installed in accordance with Section 9.7. (3) An area in an adjoining occupancy shall be permitted to serve as a smoke compartment for an ambulatory health care facility if all of the following criteria are met: (a) The separating wall and both compartments meet the requirements of 20.3.7. **20.3.7.3** Smoke compartments shall not exceed an area of 22,500 ft2 (2100 m2), and the travel distance from any point to reach a door in a smoke barrier shall not exceed 200 ft (61 m)	**NA**

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422.4 Refuge area. Not less than 30 net square feet (2.8 m2) for each nonambulatory care recipient shall be provided within the aggregate area of *corridors,* care recipient rooms, treatment rooms, lounge or dining areas and other low-hazard areas within each *smoke compartment.* Each occupant of an *ambulatory care facility* shall be provided with access to a refuge area without passing through or utilizing adjacent tenant spaces.		**20.3.7.**8 Not less than 15 net ft2 (1.4 net m2) per ambulatory health care facility occupant shall be provided within the aggregate area of corridors, patient rooms, treatment rooms,. lounges, and other low hazard areas on each side of the smoke compartment for the total number of occupants in adjoining compartments.	**NA**
424.1 Children's play structures. Children's play structures installed inside all occupancies covered by this code that exceed 10 feet (3048 mm) in height and 150 square feet (14 m2) in area shall comply with Sections 424.2 through 424.5.	Revised regulations for children's play structures, previously limited in application only to covered mall buildings, are now applicable where such structures are located within any building regulated by the IBC, regardless of occupancy classification. The provisions also apply were such structures are in the pedestrian mall area of an open mall.	**12.4.7.1* General.** Special amusement buildings, regardless of occupant load, shall meet the requirements for assembly occupancies in addition to the requirements of **12.4.7,** unless the special amusement building is a multilevel play structure that is not more than 10 ft (3050 mm) in height and has aggregate horizontal projections not exceeding160 ft2 (15 m2).	**NA**

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424.2 Materials. Children's play structures shall be constructed of noncombustible materials or of combustible materials that comply with the following: 1. *Fire-retardant-treated* wood complying with Section 2303.2. 2. Light-transmitting plastics complying with Section 2606. 3. Foam plastics (including the pipe foam used in soft contained play equipment structures) having a maximum heat-release rate not greater than 100 kilowatts when tested in accordance with UL 1975 or when tested in accordance with NFPA 289, using the 20 kW ignition source. 4. Aluminum composite material (ACM) meeting the requirements of Class A *interior finish* in accordance with Chapter 8 when tested as an assembly in the maximum thickness intended for use. 5. Textiles and films complying with the flame propagation performance criteria contained in NFPA 701. 6. Plastic materials used to construct rigid components of soft-contained play equipment structures (such as tubes, windows, panels, junction boxes, pipes, slides and decks) exhibiting a peak rate of heat release not exceeding 400 kW/m2 when tested in accordance with ASTM E 1354 at an incident heat flux of 50 kW/m2 in the		**12.4.7.8 Interior Finish**. Interior wall and ceiling finish materials complying with Section 10.2 shall be Class A throughout.	**NA**

2012 IBC	Explanation	2012 NFPA 101	Recommendations
horizontal orientation at a thickness of 6 mm. 7. Ball pool balls, used in soft-contained play equipment structures, having a maximum heat-release rate not greater than 100 kilowatts when tested in accordance with UL 1975 or when tested in accordance with NFPA 289, using the 20 kW ignition source. The minimum specimen test size shall be 36 inches by 36 inches (914 mm by 914 mm) by an average of 21 inches (533 mm) deep, and the balls shall be held in a box constructed of galvanized steel poultry netting wire mesh. 8. Foam plastics shall be covered by a fabric, coating or film meeting the flame propagation performance criteria of NFPA 701. 9. The floor covering placed under the children's play structure shall exhibit a Class I interior floor finish classification, as described in Section 804, when tested in accordance with NFPA 253.			
F] 424.3 Fire protection. Children's play structures shall be provided with the same level of *approved* fire suppression and detection devices required for other structures in the same occupancy.		**12.4.7.2* Automatic Sprinklers.** Every special amusement building, other than buildings or structures not exceeding 10 ft (3050 mm) in height and not exceeding 160 ft2 (15 m2) in aggregate horizontal projection, shall be protected throughout by an approved, supervised automatic sprinkler system installed and	**NA**

2012 IBC	Explanation	2012 NFPA 101	Recommendations
		maintained in accordance with Section 9.7.	
424.4 Separation. Children's play structures shall have a horizontal separation from building walls, partitions and from elements of the *means of egress* of not less than 5 feet (1524 mm). Children's playground structures shall have a horizontal separation from other children's play structures of not less than 20 feet (6090 mm).		**NA**	**NA**
424.5 Area limits. Children's play structures shall be not greater than 300 square feet (28 m2) in area, unless a special investigation, acceptable to the building official, has demonstrated adequate fire safety.		**NA**	**NA**
Chapter 5			

2012 IBC	Explanation	2012 NFPA 101	Recommendations
F] 501.2 Address identification. New and existing buildings shall be provided with *approved* address numbers or letters. Each character shall be not less than 4 inches (102 mm) in height and not less than 0.5 inch (12.7 mm) in width. They shall be installed on a contrasting background and be plainly visible from the street or road fronting the property. When required by the fire code official, address numbers shall be provided in additional *approved* locations to facilitate emergency response. Where access is by means of a private road and the building address cannot be viewed from the *public way*, a monument, pole or other *approved* sign or means shall be used to identify the structure. Address numbers shall be maintained.	Clarified to allow the fire code official to require address numbers be posted in multiple locations if necessary to facilitate emergency response.	**NA**	**NA**
505.2.2 Means of egress. The *means of egress* for *mezzanines* shall comply with the applicable provisions of Chapter 10.	Deleted specific provisions for mezzanine means of egress. Provisions have been deleted and replaced with a general reference to Chapter 10. Chapter 10 was revised to clarify that mezzanines should comply with the provisions for a space, not a story.	**7.4.1.1** The number of means of egress from any balcony, mezzanine, story, or portion thereof shall be not less than two, except under one of the following conditions: (1) A single means of egress shall be permitted where permitted in Chapters 11 through 43. (2) A single means of egress shall be permitted for a mezzanine or balcony where the common path of travel limitations of Chapters 11 through 43 are met. **7.3.1.6 Egress Capacity from Balconies and Mezzanines.**	**NA**

2012 IBC	Explanation	2012 NFPA 101	Recommendations
		Where any required egress capacity from a balcony or mezzanine passes through the room below, that required capacity shall be added to the required egress capacity of the room below. **8.6.10.3.2** A mezzanine having two or more means of egress shall not be required to open into the room in which it is located if not less than one of the means of egress provides direct access from the enclosed area to an exit at the mezzanine level. **Example of the occupancy chapters: 14.2.4.2** Not less than two separate exits shall be in accordance with the following criteria: (1) They shall be provided on every story. (2) They shall be accessible from every part of every story and mezzanine; however, exit access travel shall be permitted to be common for the distance permitted as common path of travel by 14.2.5.3.	
506.2.1 Width limits. To apply this section the value of *W* shall be not less than 20 feet (6096 mm). Where the value of *W* varies along the perimeter of the building, the calculation performed in accordance with Equation 5-2 shall be based on the weighted average calculated in accordance	Revised, allowable building areas can be increased based on the extent the buildings facades (frontage) are facing open spaces and public ways. The methods for determining the width of the open space and the averaging of the width have been clarified.	**NA**	**NA**

2012 IBC	Explanation	2012 NFPA 101	Recommendations
with Equation 5-3 for portions of the exterior perimeter walls where the value of *W* is greater than or equal to 20 feet (6096 mm). Where the value of *W* is greater than 30 feet (9144 mm), a value of 30 feet (9144 mm) shall be used in calculating the weighted average, regardless of the actual width of the open space. *W* shall be measured perpendicular from the face of the building to the closest interior *lot line*. Where the building fronts on a *public way*, the entire width of the *public way* shall be used. Where two or more buildings are on the same *lot*, *W* shall be measured from the exterior face of each building to the opposing exterior face of each adjacent building, as applicable. Weighted average *W* = (*L1* □□*w*1 + *L*2 □□*w*2 + *L*3 □□*w*3…)/*F*. **(Equation 5-3)** where: *Ln* = Length of a portion of the exterior perimeter wall. *wn* = Width of open space associated with that portion of the exterior perimeter wall. *F* = Building perimeter that fronts on a *public way* or open space having a width of 20 feet (6096 mm) or more. **Exception:** Where the building meets the requirements of Section 507, as applicable, except for compliance with the 60-foot (18 288 mm) *public way* or *yard* requirement, and the value of *W* is			

2012 IBC	Explanation	2012 NFPA 101	Recommendations
greater than 30 feet (9144 mm), the value of *W* divided by 30 shall be limited to a maximum of 2.			
507.1 General. The area of buildings of the occupancies and configurations specified in Sections 507.1 through 507.12 shall not be limited. **Exception:** Other occupancies shall be permitted in unlimited area buildings in accordance with the provisions of Section 508.2. Where Sections 507.2 through 507.12 require buildings to be surrounded and adjoined by *public ways* and *yards,* those open spaces shall be determined as follows: 1. *Yards* shall be measured from the building perimeter in all directions to the closest interior *lot lines* or to the exterior face of an opposing building located on the same *lot*, as applicable. 2 Where the building fronts on a *public way*, the entire width of the *public way* shall be used.	Revised to clarify that accessory occupancies in unlimited area buildings can include those occupancies that may not be specifically addressed in Sections 507.2 through 507.12. Such accessory occupancies must comply with Section 508.2. Clarifies the measurement of open space required to surround unlimited area buildings.	**NA**	**NA**
507.8 Group H occupancies. Group H-2, H-3 and H-4 occupancies shall be permitted in unlimited area buildings containing Group F and S occupancies in accordance with Sections 507.3 and 507.4 and the provisions of Sections 507.8.1 through 507.8.4.	Clarified and reformatted limitations placed on Group H occupancies permitted in unlimited area buildings to aid in consistent application.	**NA**	**NA**

2012 IBC	Explanation	2012 NFPA 101	Recommendations
507.8.1 Allowable area. The aggregate floor area of Group H occupancies located in an unlimited area building shall not exceed 10 percent of the area of the building nor the area limitations for the Group H occupancies as specified in Table 503 as modified by Section 506.2 based upon the perimeter of each Group H floor area that fronts on a *public way* or open space.		**NA**	**NA**
507.8.1.1 Located within the building. The aggregate floor area of Group H occupancies not located at the perimeter of the building shall not exceed 25 percent of the area limitations for the Group H occupancies as specified in Table 503.1 **507.8.1.1.1 Liquid use, dispensing and mixing rooms.** Liquid use, dispensing and mixing rooms having a floor area of not more than 500 square feet (46.5 m2) need not be located on the outer perimeter of the building where they are in accordance with the *International Fire Code* and NFPA 30. **507.8.1.1.2 Liquid storage rooms.** Liquid storage rooms having a floor area of not more than 1,000 square feet (93 m2) need not be located on the outer perimeter where they are in accordance with the *International Fire Code* and NFPA 30. **507.8.1.1.3 Spray paint booths.**		**NA**	**NA**

2012 IBC	Explanation	2012 NFPA 101	Recommendations
Spray paint booths that comply with the *International Fire Code* need not be located on the outer perimeter.			
507.8.2 Located on building perimeter. Except as provided for in Section 507.8.1.1, Group H occupancies shall be located on the perimeter of the building. In Group H-2 and H-3 occupancies, not less than 25 percent of the perimeter of such occupancies shall be an *exterior wall*.		**NA**	**NA**
507.8.3 Occupancy separations. Group H occupancies shall be separated from the remainder of the unlimited area building and from each other in accordance with Table 508.4.		**NA**	**NA**
507.8.4 Height limitations. For two-*story* unlimited area buildings, Group H occupancies shall not be located more than one *story above grade plane* unless permitted based on the allowable height in *stories* and feet as set forth in Table 503 for the type of construction of the unlimited area building.		**NA**	**NA**

2012 IBC	Explanation	2012 NFPA 101	Recommendations
509.1 General Incidental uses located within single occupancy or mixed occupancy buildings shall comply with the provisions of this section. Incidental uses are ancillary functions associated with a given occupancy that generally pose a greater level of risk to that occupancy and are limited to those uses listed in Table 509.	Clarified the concept of incidental by eliminating the previous relationship with the mixed-occupancy provisions. While many of the provisions regulating incidental uses parallel those of accessory uses, incidental uses are not distinct occupancies but are often support spaces for the primary occupancy.	**6.1.14 Multiple Occupancies.** **6.1.14.1.3*** Where incidental to another occupancy, areas used as follows shall be permitted to be considered part of the predominant occupancy and shall be subject to the provisions of the *Code* that apply to the predominant occupancy: (1) Mercantile, business, industrial, or storage use (2)*Nonresidential use with an occupant load fewer than that established by Section 6.1 for the occupancy threshold assemblies.	**NA**
509.2 Occupancy classification. Incidental uses shall not be individually classified in accordance with Section 302.1. Incidental uses shall be included in the building occupancies within which they are located.		**6.1.14 Multiple Occupancies.** **6.1.14.1.3*** Where incidental to another occupancy, areas used as follows shall be permitted to be considered part of the predominant occupancy and shall be subject to the provisions of the *Code* that apply to the predominant occupancy: (1) Mercantile, business, industrial, or storage use (2)*Nonresidential use with an occupant load fewer than that established by Section 6.1 for the occupancy threshold assemblies.	**NA**
509.3 Area limitations. Incidental uses shall not occupy more than 10 percent of the *building area* of the *story* in which they are located.		**NA**	**NA**

2012 IBC	Explanation	2012 NFPA 101	Recommendations
509.4 Separation and protection. The incidental uses listed in Table 509 shall be separated from the remainder of the building or equipped with an *automatic sprinkler system*, or both, in accordance with the provisions of that table.	Clarified the concept of incidental by eliminating the previous relationship with the mixed-occupancy provisions. While many of the provisions regulating incidental uses parallel those of accessory uses, incidental uses are not distinct occupancies but are often support spaces for the primary occupancy.	**NA**	**NA**
509.4.1 Separation. Where Table 509 specifies a fire resistance-rated separation, the incidental uses shall be separated from the remainder of the *building* by a *fire barrier* constructed in accordance with Section 707 or a *horizontal assembly* constructed in accordance with Section 711, or both. Construction supporting 1-hour *fire barriers* or *horizontal assemblies* used for incidental use separations in buildings of Type IIB, IIIB and VB construction is not required to be fire-resistance rated unless required by other sections of this code.		**NA**	**NA**
509.4.2 Protection. Where Table 509 permits an *automatic sprinkler system* without a *fire barrier*, the incidental uses shall be separated from the remainder of the building by construction capable of resisting the passage of smoke. The walls shall extend from the top of the foundation or floor assembly below to the underside of the ceiling that is a component of a fire-resistance-rated floor assembly or roof assembly above		**NA**	**NA**

2012 IBC	Explanation	2012 NFPA 101	Recommendations
or to the underside of the floor or roof sheathing, deck or slab above. Doors shall be self- or automatic-closing upon detection of smoke in accordance with Section 716.5.9.3. Doors shall not have air transfer openings and shall not be undercut in excess of the clearance permitted in accordance with NFPA 80. Walls surrounding the incidental use shall not have air transfer openings unless provided with smoke dampers in accordance with Section 710.7.			
509.4.2.1 Protection limitation. Except as specified in Table 509 for certain incidental uses, where an *automatic sprinkler system* is provided in accordance with Table 509, only the space occupied by the incidental use need be equipped with such a system.		**NA**	**NA**
	Revised the list of incidental to include waste and linen collection rooms in Group B ambulatory care facilities and says that such rooms must be separated from the remainder of the building by minimum 1-hour fire-resistance-rated fire barriers and/or horizontal assemblies.	**NA**	**NA**

TABLE 509 INCIDENTAL USES

ROOM OR AREA	SEPARATION AND/OR PROTECTION
Furnace room where any piece of equipment is over 400,000 Btu per hour input	1 hour or provide automatic sprinkler system

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Rooms with boilers where the largest piece of equipment is over 15 psi and 10 horsepower	1 hour or provide automatic sprinkler system
Refrigerant machinery room	1 hour or provide automatic sprinkler system
Hydrogen cutoff rooms, not classified as Group H	1 hour in Group B, F, M, S and U occupancies; 2 hours in Group A, E, I and R occupancies.
Incinerator rooms	2 hours and automatic sprinkler system
Paint shops, not classified as Group H, located in occupancies other than Group F	2 hours; or 1 hour and provide automatic sprinkler system
Laboratories and vocational shops, not classified as Group H, located in a Group E or I-2 occupancy	1 hour or provide automatic sprinkler system
Laundry rooms over 100 square feet	1 hour or provide automatic sprinkler system
Group I-3 cells equipped with padded surfaces	1 hour
Waste and linen collection rooms located in either Group I-2 occupancies or ambulatory care facilities	1 hour
Waste and linen collection rooms over 100 square feet	1 hour or provide automatic sprinkler system
Stationary storage battery systems having a liquid electrolyte capacity of more than 50 gallons for flooded lead-acid, nickel cadmium or VRLA, or more than 1,000 pounds for lithium-ion and lithium metal polymer used for facility standby power, emergency power or uninterruptable power supplies	1 hour in Group B, F, M, S and U occupancies; 2 hours in Group A, E, I and R occupancies.

Chapter 7

706.2 Structural stability. Fire walls shall have sufficient structural stability under fire conditions to allow collapse of construction on either side without collapse of the wall for the duration of time indicated by the required *fire-resistance rating* or shall be constructed as double fire walls in accordance with NFPA 221.	Added, a new allowance permits the use of a double fire wall complying with NFPA 221, in lieu of a single fire wall that satisfies the intended objective of structural stability.	**8.3.1.3** Walls used as fire barriers shall comply with Chapter 7 of NFPA 221, *Standard for High Challenge Fire Walls, Fire Walls, and Fire Barrier Walls*. The NFPA 221 limitation on percentage width of openings shall not apply.	**NA**

2012 IBC	Explanation	2012 NFPA 101	Recommendations
706.6.2 Buildings with sloped roofs. Where a *fire wall* serves as an interior wall for a building, and the roof on one side or both sides of the fire wall slopes toward the fire wall at a slope greater than two units vertical in 12 units horizontal (2:12), the *fire wall* shall extend to a height equal to the height of the roof located 4 feet (1219 mm) from the *fire wall* plus 30 inches (762 mm). In no case shall the extension of the fire wall be less than 30 inches (762 mm).	Added provisions to address conditions where a sloped roof occurs on one or both sides of a fire wall parapet.	**NA**	**NA**
709.4 Continuity. *Smoke barriers* shall form an effective membrane continuous from outside wall to outside wall and from the top of the foundation or floor/ceiling assembly below to the underside of the floor or roof sheathing, deck or slab above, including continuity through concealed spaces, such as those found above suspended ceilings, and interstitial structural and mechanical spaces. The supporting construction shall be protected to afford the required *fire-resistance rating* of the wall or floor supported in buildings of other than Type IIB, IIIB or VB construction. **Exceptions:** 1. Smoke-barrier walls are not required in interstitial spaces where such spaces are designed and constructed with ceilings that provide resistance to the passage of fire and smoke equivalent to	Added exceptions for elevator lobbies and areas of refuge that do not require the enclosing smoke barriers to extend to the exterior walls.	**8.5.2* Continuity.** **8.5.2.1** Smoke barriers required by this *Code* shall be continuous from an outside wall to an outside wall, from a floor to a floor, or from a smoke barrier to a smoke barrier, or by use of a combination thereof. **8.5.2.2** Smoke barriers shall be continuous through all concealed spaces, such as those found above a ceiling, including interstitial spaces. **8.5.2.3** A smoke barrier required for an occupied space below an interstitial space shall not be required to extend through the interstitial space, provided that the construction assembly forming the bottom of the interstitial space provides resistance to the passage of smoke equal to that provided by the smoke barrier.	**NA**

2012 IBC	Explanation	2012 NFPA 101	Recommendations
that provided by the smoke-barrier walls. 2. *Smoke barriers* used for elevator lobbies in accordance with Section 405.4.3, 3007.4.2 or 3008.11.2 are not required to extend from outside wall to outside wall. 3. *Smoke barriers* used for areas of refuge in accordance with Section 1007.6.2 are not required to extend from outside wall to outside wall.			
714.4.1.1.2 Through-penetration firestop system. *Through penetrations* shall be protected by an *approved through-penetration firestop system* installed and tested in accordance with ASTM E 814 or UL 1479, with a minimum positive pressure differential of 0.01 inch of water (2.49 Pa). The system shall have an F rating/T rating of not less than 1 hour but not less than the required rating of the floor penetrated. **Exceptions:** 1. Floor penetrations contained and located within the cavity of a wall above the floor or below the floor do not require a T rating. 2. Floor penetrations by floor drains, tub drains or shower drains contained and located within the concealed space of a horizontal assembly do not require a T rating.	Added, a second exception to the requirement for T ratings now allows those floor penetrations of horizontal assemblies by floor, tub and shower drains that are concealed and protected by the ceiling membrane.	**8.3.5.6.2** The firestop system or device shall be tested in accordance with ASTM E 814, *Standard Test Method for Fire Tests of Through Penetration Fire Stops*, or ANSI/UL 1479, *Standard for Fire Tests of Through-Penetration Firestops*, at a minimum positive pressure differential of 0.01 in. water column (2.5 N/m2) between the exposed and the unexposed surface of the test assembly, unless one of the following applies: (1) Membrane penetrations of ceilings that are not an integral part of a fire resistance–rated floor/ceiling or roof/ ceiling assembly shall be permitted. (2) Membrane penetrations of steel, ferrous, or copper conduits, and pipes, tubes, or combustion vents or exhaust vents, shall be permitted where the annular space is protected with an	**NA**

2012 IBC	Explanation	2012 NFPA 101	Recommendations
		approved material and the aggregate area of the openings does not exceed 0.7 ft2(0.06 m2) in any 100 ft2 (9.3 m2) of ceiling area. (3) Electrical outlet boxes and fittings shall be permitted, provided that such devices are listed for use in fire resistance–rated assemblies and are installed in accordance with their listing. (4) The annular space created by the membrane penetration of a fire sprinkler shall be permitted **8.3.5.1.4** Penetrations in fire-rated horizontal assemblies shall have a minimum 1-hour T rating, but not less than the fire resistance rating of the horizontal assembly. Rated penetrations shall not be required for either of the following: (1) Floor penetrations contained within the cavity of a wall assembly (2) Penetrations through floors or floor assemblies where the penetration is not in direct contact with combustible material	
714.4.1.2 Membrane penetrations. Penetrations of membranes that are part of a *horizontal assembly* shall comply with Section 714.4.1.1.1 or 714.4.1.1.2. Where floor/ceiling assemblies are required to have a *fire resistance rating*, recessed fixtures shall be installed such that the required *fire resistance* will not	Changed, the ceiling membrane of a 1-hour or 2-hour fire resistance-rated floor/ceiling or roof/ceiling assembly is now permitted, under specific conditions, to be interrupted by a double wood top plate of a fire-resistance-rated wall assembly.	**8.3.5.6.2** The firestop system or device shall be tested in accordance with ASTM E 814, *Standard Test Method for Fire Tests of Through Penetration Fire Stops*, or ANSI/UL 1479, *Standard for Fire Tests of Through-Penetration Firestops*, at a minimum positive pressure differential of 0.01 in. water	**NA**

2012 IBC	Explanation	2012 NFPA 101	Recommendations
be reduced. **Exceptions:** 6. Noncombustible items that are cast into concrete building elements and that do not penetrate both top and bottom surfaces of the element. 7. The ceiling membrane of 1- and 2-hour fire resistance-rated horizontal assemblies is permitted to be interrupted with the double wood top plate of a *fire-resistance-rated* wall assembly, provided that all penetrating items through the double top plates are protected in accordance with Section 14.4.1.1.1 or 714.4.1.1.2. The *fire-resistance rating* of the wall shall not be less than the rating of the horizontal assembly.		column (2.5 N/m2) between the exposed and the unexposed surface of the test assembly, unless one of the following applies: (1) Membrane penetrations of ceilings that are not an integral part of a fire resistance–rated floor/ceiling or roof/ ceiling assembly shall be permitted. (2) Membrane penetrations of steel, ferrous, or copper conduits, and pipes, tubes, or combustion vents or exhaust vents, shall be permitted where the annular space is protected with an approved material and the aggregate area of the openings does not exceed 0.7 ft2(0.06 m2) in any 100 ft2 (9.3 m2) of ceiling area. (3) Electrical outlet boxes and fittings shall be permitted, provided that such devices are listed for use in fire resistance–rated assemblies and are installed in accordance with their listing. (4) The annular space created by the membrane penetration of a fire sprinkler shall be permitted, provided that the space is covered by a metal escutcheon plate. **8.3.5.6.3** Where walls or partitions are required to have a minimum 1-hour fire resistance rating, recessed fixtures shall be installed in the wall or partition in such a manner that the required fire resistance is not reduced, unless one of the following	

2012 IBC	Explanation	2012 NFPA 101	Recommendations
		is met: (1) Any steel electrical box not exceeding 0.1 ft2 (0.01m2) shall be permitted where the aggregate area of the openings provided for the boxes does not exceed 0.7 ft2 (0.06 m2) in any 100 ft2 (9.3 m2) of wall area, and, where outlet boxes are installed on opposite sides of the wall, the boxes shall be separated by one of the following: (a) Horizontal distance of not less than 24 in. (610 mm) (b) Horizontal distance of not less than the depth of the wall cavity, where the wall cavity is filled with cellulose loose-fill, rock wool, or slag wool insulation (c)*Solid fireblocking (d) Other listed materials and methods (2) Membrane penetrations for any listed electrical outlet box made of any material shall be permitted, provided that such boxes have been tested for use in fire resistance– rated assemblies and are installed in accordance with the instructions included in the listing. (3) The annular space created by the membrane penetration of a fire sprinkler shall be permitted, provided that the space is covered by a metal escutcheon plate.	
716.3 Marking fire-rated glazing assemblies. *Fire-rated glazing* assemblies shall be marked in	Added Section 716.3 and Table 716.3 to define and relate the various test standards for fire-	**8.3.4.2.1** Fire-rated glazing assemblies marked as complying with hose stream requirements (H)	**NA**

<table>
<tr><th>2012 IBC</th><th>Explanation</th><th>2012 NFPA 101</th><th>Recommendations</th></tr>
<tr><td>accordance with Tables 716.3, 716.5, and 716.6.

716.3.1 Fire-rated glazing that exceeds the code requirements. Fire-rated glazing assemblies marked as complying with hose stream requirements (H) shall be permitted in applications that do not require compliance with hose stream requirements. Fire-rated glazing assemblies marked as complying with temperature rise requirements (T) shall be permitted in applications that do not require compliance with temperature rise requirements. Fire-rated glazing assemblies marked with ratings (XXX) that exceed the ratings required by this code shall be permitted.</td><td>rated glazing, now defined in Chapter 2, to the designations used to mark such glazing.</td><td>shall be permitted in applications that do not require compliance with hose stream requirements. Fire-rated glazing assemblies marked as complying with temperature rise requirements (T) shall be permitted in applications that do not require compliance with temperature rise requirements. Fire-rated glazing assemblies marked with ratings that exceed the ratings required by this Code (XXX) shall be permitted.</td><td></td></tr>
<tr><td>716.5</td><td>Revised Table 716.5 to include minimum marking requirements for opening fire protection assemblies.</td><td></td><td>NA</td></tr>
<tr><td colspan="4">716.5
TABLE 716.5 OPENING FIRE PROTECTION ASSEMBLIES, RATINGS AND MARKINGS
<table>
<tr><th rowspan="2">TYPE OF ASSEMBLY</th><th rowspan="2">REQUIRED WALL ASSEMBLY RATING (hours)</th><th rowspan="2">MINIMUM FIRE DOOR AND FIRE SHUTTER ASSEMBLY RATING (hours)</th><th rowspan="2">DOOR VISION PANELSIZE</th><th rowspan="2">FIRE RATED GLAZING MARKING DOOR VISION PANEL[e]</th><th colspan="2">MINIMUM SIDELIGHT/ TRANSOM ASSEMBLY RATING (hours)</th><th colspan="2">FIRE-RATED GLAZING MARKING SIDELITE/TRANSOM PANEL</th></tr>
<tr><th>Fire protection</th><th>Fire resistance</th><th>Fire protection</th><th>Fire resistance</th></tr>
<tr><td>Fire walls and fire</td><td>4</td><td>3</td><td>Not Permitted</td><td>Not Permitted</td><td>Not Permitte</td><td>4</td><td>Not Permitte</td><td>W-240</td></tr>
</table></td></tr>
</table>

	barriers having a required fire-resistance rating greater than 1 hour					d		d	
		3	3[a]	Not Permitted	Not Permitted	Not Permitted	3	Not Permitted	W-180
		2	$1^1/_2$	100 sq. in.[c]	≤100 sq.in. = D-H-90 >100 sq.in.= D-H-W-90	Not Permitted	2	Not Permitted	W-120
		$1^1/_2$	$1^1/_2$	100 sq. in.[c]	≤100 sq.in. = D-H-90 >100 sq.in.= D-H-W-90	Not Permitted	$1^1/_2$	Not Permitted	W-90
	Shaft, exit enclosures and exit passageway walls	2	$1^1/_2$	100 sq. in.[c, d]	≤100 sq.in. = D-H-90 > 100 sq.in.= D-H-T-or D-H-T-W-90	Not Permitted	2	Not Permitted	W-120
	Fire barriers having a required fire-resistance rating of 1 hour: Enclosures for shafts, exit access stairways, exit access ramps, interior exit stairways, i terior exit ramps and exit passageway walls	1	1	100 sq. in.[c, d]	≤100 sq.in. = D-H-60 >100 sq.in.= D-H-T-60 or D-H-T-W-60	Not Permitted	1	Not Permitted	W-60
						Fire protection			
	Other fire	1	$^3/_4$	Maximum	D-H-NT-45	$^3/_4$		D-H-NT-45	

barriers			size tested			
Fire partitions: Corridor walls	1	1/3[b]	Maximum size tested	D-20	3/4[b]	D-H-OH-45
	0.5	1/3[b]	Maximum size tested	D-20	1/3	D-H-OH-20
Other fire partitions	1	3/4	Maximum size tested	D-H-45	3/4	D-H-45
	0.5	1/3	Maximum size tested	D-H-20	1/3	D-H-20

(continued)

TABLE 716.5—continued OPENING FIRE PROTECTION ASSEMBLIES, RATINGS AND MARKINGS

TYPE OF ASSEMBLY	REQUIRED WALL ASSEMBLY RATING (hours)	MINIMUM FIRE DOOR AND FIRE SHUTTER ASSEMBLY RATING (hours)	DOOR VISION PANEL SIZE	FIRE RATED GLAZING MARKING DOOR VISION PANEL[e]	MINIMUM SIDELIGHT/ TRANSOM ASSEMBLY RATING (hours)		FIRE-RATED GLAZING MARKING SIDELITE/TRANSOM PANEL	
					Fire protection	Fire resistance	Fire protection	Fire resistance
Exterior walls	3	1 1/2	100 sq. in.[c]	≤ 100 sq.in. = D-H-90 >100 sq.in = D-H-W-90	Not Permitted	3	Not Permitted	W-180
	2	1 1/2	100 sq. in.[c]	≤100 sq.in. = D-H-90 >100 sq.in.= D-H-W-90	Not Permitted	2	Not Permitted	W-120
					Fire Protection			

	1	3/4	Maximum size tested	D-H-45	3/4	D-H-45
Smoke barriers					**Fire protection**	
	1	1/3 [b]	Maximum size tested	D-20	3/4	D-H-OH-45

For SI: 1 square inch = 645.2 mm.

a. Two doors, each with a fire protection rating of $1^1/_2$ hours, installed on opposite sides of the same opening in a fire wall, shall be deemed equivalent in fire protection rating to one 3-hour fire door.

b. For testing requirements, see Section 716.6.3.

c. Fire-resistance-rated glazing tested to ASTM E 119 in accordance with Section 716.2 shall be permitted, in the maximum size tested.

d. Except where the building is equipped throughout with an automatic sprinkler and the fire-rated glazing meets the criteria established in Section 716.5.5.

e. Under the column heading "Fire-rated glazing marking door vision panel," W refers to the fire-resistance rating of the glazing, not the frame.

Top Previous Section Next Section To view the next subsection please select the Next Section option.

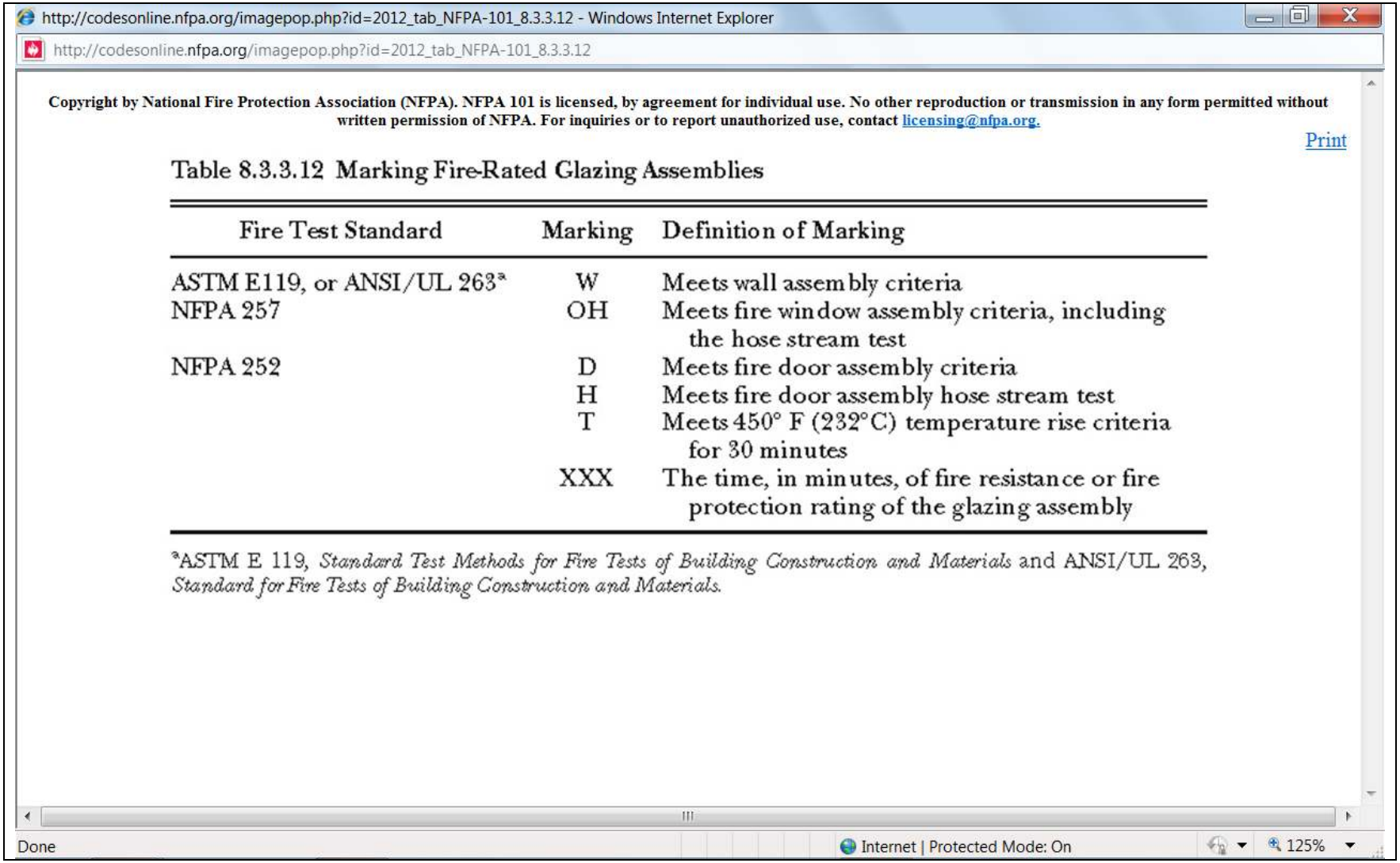

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Table 8.3.3.12 Marking Fire-Rated Glazing Assemblies

Fire Test Standard	Marking	Definition of Marking
ASTM E119, or ANSI/UL 263[a]	W	Meets wall assembly criteria
NFPA 257	OH	Meets fire window assembly criteria, including the hose stream test
NFPA 252	D	Meets fire door assembly criteria
	H	Meets fire door assembly hose stream test
	T	Meets 450° F (232°C) temperature rise criteria for 30 minutes
	XXX	The time, in minutes, of fire resistance or fire protection rating of the glazing assembly

[a]ASTM E 119, *Standard Test Methods for Fire Tests of Building Construction and Materials* and ANSI/UL 263, *Standard for Fire Tests of Building Construction and Materials.*

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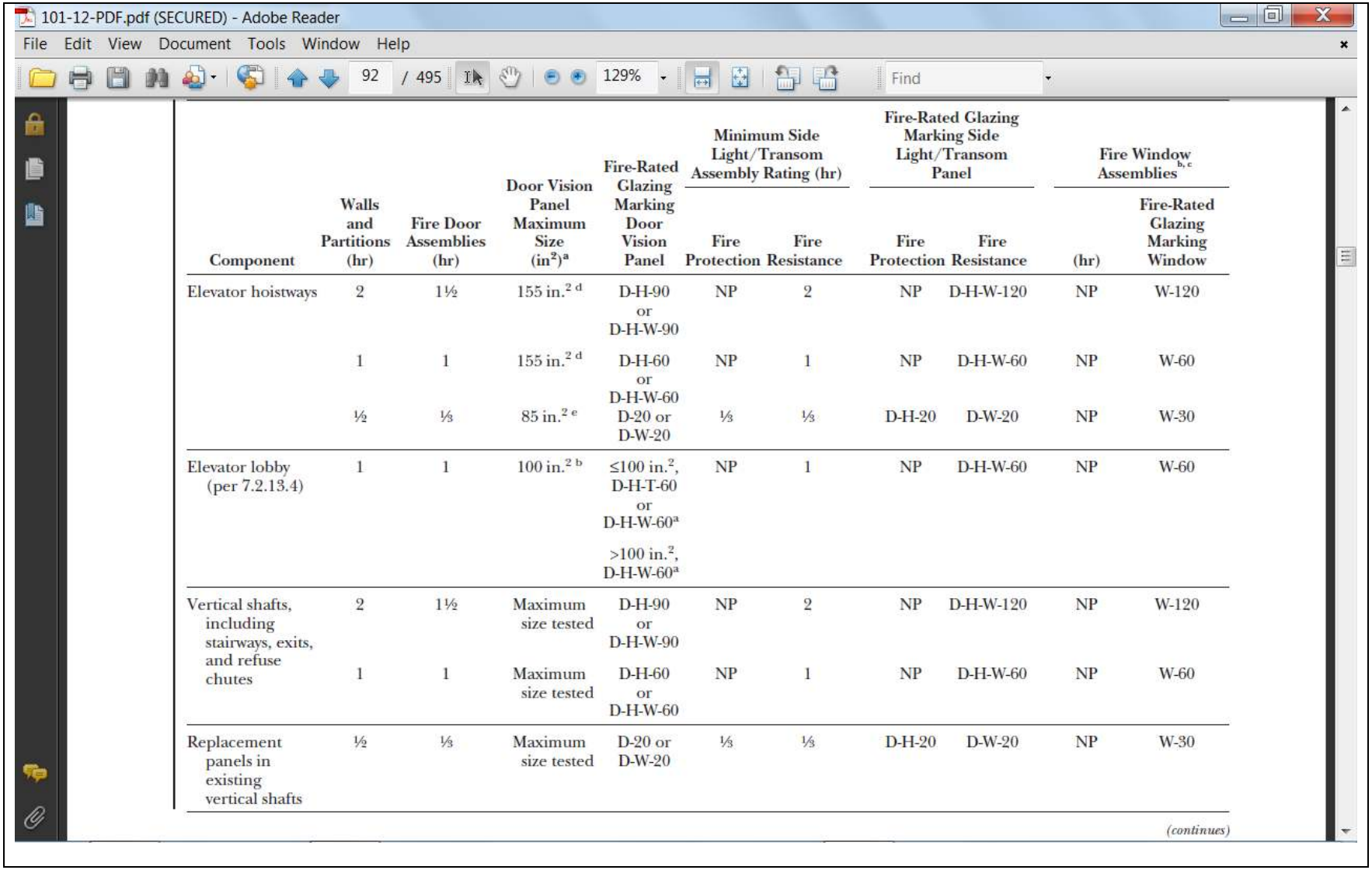

Component	Walls and Partitions (hr)	Fire Door Assemblies (hr)	Door Vision Panel Maximum Size (in^2)[a]	Fire-Rated Glazing Marking Door Vision Panel	Minimum Side Light/Transom Assembly Rating (hr)		Fire-Rated Glazing Marking Side Light/Transom Panel		Fire Window Assemblies[b,c]	
					Fire Protection	Fire Resistance	Fire Protection	Fire Resistance	(hr)	Fire-Rated Glazing Marking Window
Elevator hoistways	2	1½	155 $in.^2$ [d]	D-H-90 or D-H-W-90	NP	2	NP	D-H-W-120	NP	W-120
	1	1	155 $in.^2$ [d]	D-H-60 or D-H-W-60	NP	1	NP	D-H-W-60	NP	W-60
	½	⅓	85 $in.^2$ [e]	D-20 or D-W-20	⅓	⅓	D-H-20	D-W-20	NP	W-30
Elevator lobby (per 7.2.13.4)	1	1	100 $in.^2$ [b]	≤100 $in.^2$, D-H-T-60 or D-H-W-60[a]	NP	1	NP	D-H-W-60	NP	W-60
				>100 $in.^2$, D-H-W-60[a]						
Vertical shafts, including stairways, exits, and refuse chutes	2	1½	Maximum size tested	D-H-90 or D-H-W-90	NP	2	NP	D-H-W-120	NP	W-120
	1	1	Maximum size tested	D-H-60 or D-H-W-60	NP	1	NP	D-H-W-60	NP	W-60
Replacement panels in existing vertical shafts	½	⅓	Maximum size tested	D-20 or D-W-20	⅓	⅓	D-H-20	D-W-20	NP	W-30

(continues)

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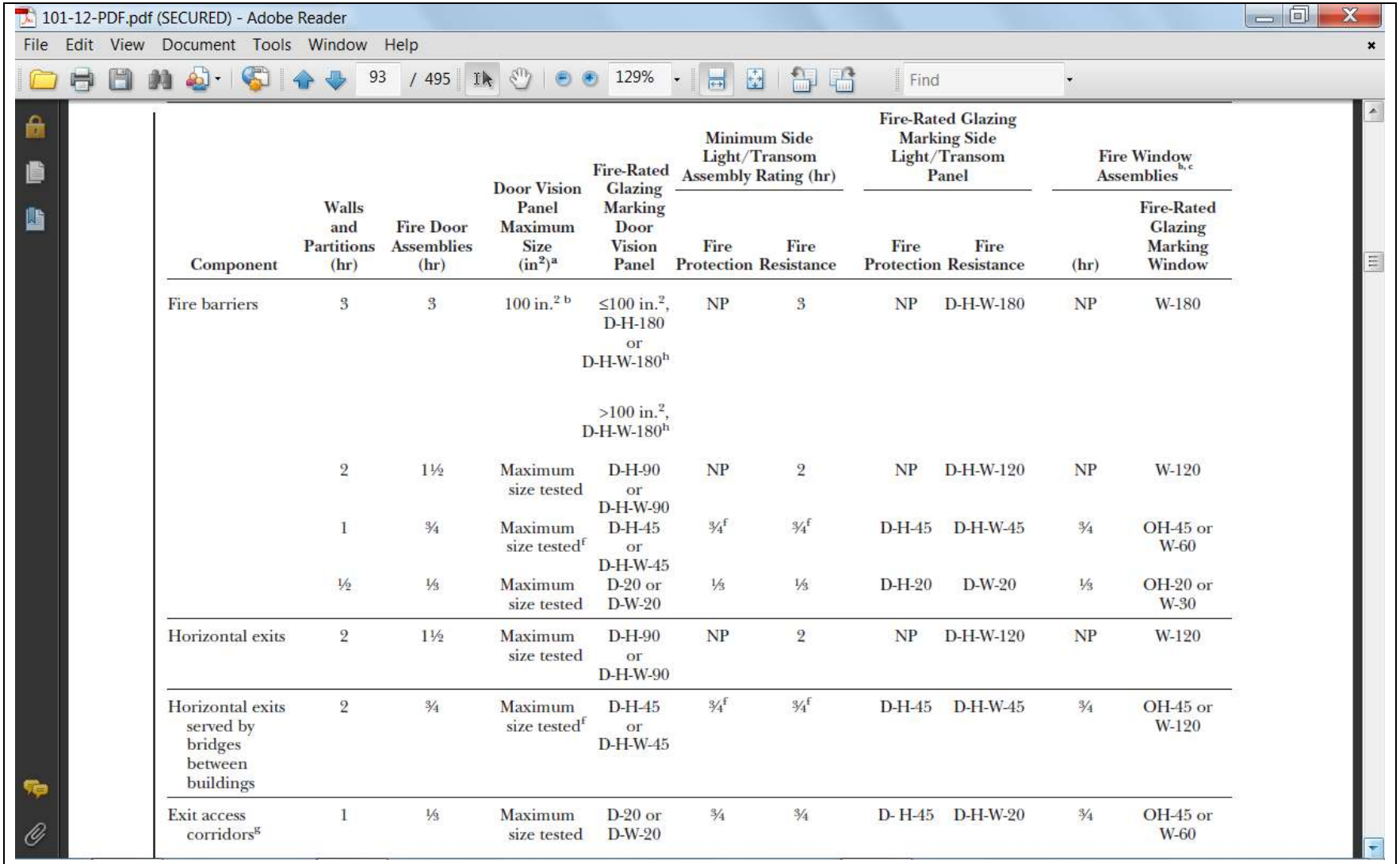

Component	Walls and Partitions (hr)	Fire Door Assemblies (hr)	Door Vision Panel Maximum Size (in^2)[a]	Fire-Rated Glazing Marking Door Vision Panel	Minimum Side Light/Transom Assembly Rating (hr)		Fire-Rated Glazing Marking Side Light/Transom Panel		Fire Window Assemblies[b,c]	
					Fire Protection	Fire Resistance	Fire Protection	Fire Resistance	(hr)	Fire-Rated Glazing Marking Window
Fire barriers	3	3	100 $in.^2$ [b]	≤100 $in.^2$, D-H-180 or D-H-W-180[h]	NP	3	NP	D-H-W-180	NP	W-180
				>100 $in.^2$, D-H-W-180[h]						
	2	1½	Maximum size tested	D-H-90 or D-H-W-90	NP	2	NP	D-H-W-120	NP	W-120
	1	¾	Maximum size tested[f]	D-H-45 or D-H-W-45	¾[f]	¾[f]	D-H-45	D-H-W-45	¾	OH-45 or W-60
	½	⅓	Maximum size tested	D-20 or D-W-20	⅓	⅓	D-H-20	D-W-20	⅓	OH-20 or W-30
Horizontal exits	2	1½	Maximum size tested	D-H-90 or D-H-W-90	NP	2	NP	D-H-W-120	NP	W-120
Horizontal exits served by bridges between buildings	2	¾	Maximum size tested[f]	D-H-45 or D-H-W-45	¾[f]	¾[f]	D-H-45	D-H-W-45	¾	OH-45 or W-120
Exit access corridors[g]	1	⅓	Maximum size tested	D-20 or D-W-20	¾	¾	D- H-45	D-H-W-20	¾	OH-45 or W-60

Chapter 9

[F] 901.8 Pump and riser room size. Fire pump and *automatic*	A new section has been created to ensure rooms housing fire	**NA**	**NA**

2012 IBC	Explanation	2012 NFPA 101	Recommendations
sprinkler system riser rooms shall be designed with adequate space for all equipment necessary for the installation, as defined by the manufacturer, with sufficient working room around the stationary equipment. Clearances around equipment to elements of permanent construction, including other installed equipment and appliances, shall be sufficient to allow inspection, service, repair or replacement without removing such elements of permanent construction or disabling the function of a required fire-resistance-rated assembly. Fire pump and *automatic sprinkler system* riser rooms shall be provided with a door(s) and unobstructed passageway large enough to allow removal of the largest piece of equipment.	protection system risers or fire pumps and their components have adequate space to facilitate their maintenance. This section does not require the construction of a room to house fire protection systems—however, if a room is provided, this section requires that it be adequately sized to accommodate maintenance operations.		
F] 903.2.11.1.3 Basements. Where any portion of a *basement* is located more than 75 feet (22 860 mm) from openings required by Section 903.2.11.1, or where walls, partitions or other obstructions are installed that restrict the application of water from hose streams, the *basement* shall be equipped throughout with an *approved automatic sprinkler system*.	Revised to require the installation of an automatic sprinkler system in basements greater than 1,500 square feet (139.4 m2) in area where obstructions, such as walls, partitions or similar elements, are introduced that could obstruct the application of hose streams from the exterior. When obstructions, such as walls or partitions, are installed in a basement, the ability to apply hose streams through the exterior openings and reach the entire basement area is reduced or eliminated.	**NA**	**NA**

2012 IBC	Explanation	2012 NFPA 101	Recommendations
F] 903.2.4 Group F-1. An *automatic sprinkler system* shall be provided throughout all buildings containing a Group F-1 occupancy where one of the following conditions exists: 4. A Group F-1 occupancy used for the manufacture of upholstered furniture or mattresses exceeds 2,500 square feet (232 m2).	These revised sections establish new sprinkler thresholds for the storage or display and sale of upholstered furniture or mattresses in Group F-1 [2,500 square feet (232 m2)], M [5,000 square feet (464 m2)] and S-1 [2,500 square feet (232 m2)] occupancies. These area values intend to reduce the burden on the regulated businesses while providing a reasonable threshold as to when automatic sprinkler protection is required, and are tied to the area of the occupancy rather than building fire area.	**[F] 903.2.4 Group F-1.** An automatic sprinkler system shall be provided throughout all buildings containing a Group F-1 occupancy where one of the following conditions exists: 1. A Group F-1 fire area exceeds 12,000 square feet (1115 m2). 2. A Group F-1 fire area is located more than three stories above grade plane. 3. The combined area of all Group F-1 fire areas on all floors, including any mezzanines, exceeds 24,000 square feet (2230 m2). 4. A Group F-1 occupancy used for the manufacture of upholstered furniture or mattresses exceeds 2,500 square feet (232 m2).	**NA**
[F] 903.2.7 Group M. An *automatic sprinkler system* shall be provided throughout buildings containing a Group M occupancy where one of the following conditions exists: 4. A Group M occupancy used for the display and sale of upholstered furniture or mattresses exceeds 5,000 square feet (464 m2).		**[F] 903.2.7 Group M.** An automatic sprinkler system shall be provided throughout buildings containing a Group M occupancy where one of the following conditions exists: 1. A Group M fire area exceeds 12,000 square feet (1115 m2). 2. A Group M fire area is located more than three stories above grade plane. 3. The combined area of all Group M fire areas on all floors, including any mezzanines, exceeds 24,000 square feet (2230 m2). 4. A Group M occupancy used for the display and sale of upholstered furniture or mattresses exceeds 5,000 square	**NA**

2012 IBC	Explanation	2012 NFPA 101	Recommendations
		feet (464 m2).	
[F] 903.2.9 Group S-1. An *automatic sprinkler system* shall be provided throughout all buildings containing a Group S-1 occupancy where one of the following conditions exists: 5. A Group S-1 occupancy used for the storage of upholstered furniture or mattresses exceeds 2,500 square feet (232 m2).		**[F] 903.2.9 Group S-1.** An automatic sprinkler system shall be provided throughout all buildings containing a Group S-1 occupancy where one of the following conditions exists: 1. A Group S-1 fire area exceeds 12,000 square feet (1115 m2). 2. A Group S-1 fire area is located more than three stories above grade plane. 3. The combined area of all Group S-1 fire areas on all floors, including any mezzanines, exceeds 24,000 square feet (2230 m2). 4. A Group S-1 fire area used for the storage of commercial trucks or buses where the fire area exceeds 5,000 square feet (464 m2). 5. A Group S-1 occupancy used for the storage of upholstered furniture or mattresses exceeds 2,500 square feet (232 m2).	**NA**
[F] 904.3.2 Actuation. Automatic fire-extinguishing systems shall be automatically actuated and provided with a manual means of actuation in accordance with Section 904.11.1. Where more than one hazard could be simultaneously involved in fire due to their proximity, all hazards shall be protected by a single system designed to protect all hazards that could become involved.	Revised the requirements for fire-extinguishing system actuation in this section to correlate the requirements in the IFC with provisions in NFPA 17 and NFPA 17A. The new requirement prescribes that when multiple adjacent hazards are required to be protected, they must be protected by a single fire extinguishing system. An exception allows for multiple	**NA**	**NA**

2012 IBC	Explanation	2012 NFPA 101	Recommendations
Exception: Multiple systems shall be permitted to be installed if they are designed to operate simultaneously.	system installations to protect such hazards but requires the simultaneous discharge of all systems.		
[F] 907.2.1 Group A. A manual fire alarm system that activates the occupant notification system in accordance with Section 907.5 shall be installed in Group A occupancies where the occupant load due to the assembly occupancy is 300 or more. Group A occupancies not separated from one another in accordance with Section 707.3.9 shall be considered as a single occupancy for the purposes of applying this section. Portions of Group E occupancies occupied for assembly purposes shall be provided with a fire alarm system as required for the Group E occupancy. **Exception:** Manual fire alarm boxes are not required where the building is equipped throughout with an *automatic sprinkler system* installed in accordance with Section 903.3.1.1 and the occupant notification appliances will activate throughout the notification zones upon sprinkler waterflow.	Revised to clarify what occupant load is appropriate to use when determining the fire alarm requirements for assembly occupancies. The revised provisions address three separate situations regarding the application of the alarm requirements for assembly areas: (1) where an assembly occupancy and another occupancy are involved, (2) where multiple assembly areas exist in a building, and (3) where the assembly use occurs in and is a part of a Group E occupancy. In situations where an assembly area and another occupancy are involved, this code now specifies that it is the occupant load "due to the assembly occupancy" that would need to be 300 or more before the manual fire alarm system is required.	**12.3.4.1 General.** **12.3.4.1.1** Assembly occupancies with occupant loads of more than 300 and all theaters with more than one audience viewing room shall be provided with an approved fire alarm system in accordance with 9.6.1 and 12.3.4, unless otherwise permitted by 12.3.4.1.2. **12.3.4.1.2** Assembly occupancies that are a part of a multiple occupancy protected as a mixed occupancy (see 6.1.14) shall be permitted to be served by a common fire alarm system, provided that the individual requirements of each occupancy are met.	**NA**
[F] 907.2.9.3 Group R-2 college and university buildings. An automatic smoke detection system that activates the occupant notification system in accordance	Added requirements for Group R-2 college and university buildings to have an automatic smoke detection system with an occupant notification system. The location	**28.3.4.3 Notification.** **28.3.4.3.1*** Occupant notification shall be provided automatically in accordance with 9.6.3. **28.3.4.3.2** Positive alarm	**NA**

2012 IBC	Explanation	2012 NFPA 101	Recommendations
with Section 907.5 shall be installed in Group R- 2 college and university buildings in the following locations: 1. Common spaces outside of *dwelling units* and *sleeping units*. 2. Laundry rooms, mechanical equipment rooms, and storage rooms. 3. All interior corridors serving *sleeping units* or *dwelling units*. Required smoke alarms in *dwelling units* and *sleeping units* in Group R-2 college and university buildings shall be interconnected with the fire alarm system in accordance with NFPA 72. **Exception:** An automatic smoke detection system is not required in buildings that do not have interior *corridors* serving *sleeping units* or *dwelling units* and where each *sleeping unit* or *dwelling unit* either has a *means of egress* door opening directly to an exterior *exit access* that leads directly to an *exit* or a *means of egress* door opening directly to an exit.	for the detectors include common spaces outside of dwelling and sleeping units, laundry rooms, mechanical rooms, storage rooms, and all interior corridors serving sleeping units and dwelling units. The focus is on dormitory-type buildings and, while the ownership of such buildings is not specified, the context strongly suggests that the buildings would be those owned/operated by a college or university.	sequence in accordance with 9.6.3.4 shall be permitted. **28.3.4.3.3*** Guest rooms and guest suites specifically required and equipped to accommodate hearing-impaired individuals shall be provided with a visible notification appliance. **28.3.4.3.4** In occupiable areas, other than guest rooms and guest suites, visible notification appliances shall be provided. **28.3.4.3.5** Annunciation and annunciation zoning in accordance with 9.6.7 shall be provided in buildings three or more stories in height or having more than 50 guest rooms or guest suites. Annunciation shall be provided at a location readily accessible from the primary point of entry for emergency response personnel. **28.3.4.3.6** Emergency forces notification shall be provided in accordance with 9.6.4. **28.3.4.4 Detection.** A corridor smoke detection system in accordance with Section 9.6 shall be provided in buildings other than those protected throughout by an approved, supervised automatic sprinkler system in accordance with 28.3.5.3. **28.3.4.5* Smoke Alarms.** An approved single-station smoke alarm shall be installed in accordance with 9.6.2.10 in every guest room and every living area and sleeping room within a guest	

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		suite.	
[F] 908.7 Carbon monoxide alarms. Group I or R occupancies located in a building containing a fuel-burning appliance or in a building which has an attached garage shall be equipped with single-station carbon monoxide alarms. The carbon monoxide alarms shall be listed as complying with UL 2034 and be installed and maintained in accordance with NFPA 720 and the manufacturer's instructions. An open parking garage, as defined in Chapter 2, or an enclosed parking garage ventilated in accordance with Section 404 of the *International Mechanical Code* shall not be considered an attached garage. **Exception:** *Sleeping units* or *dwelling units* which do not themselves contain a fuel-burning appliance or have an attached garage, but which are located in a building with a fuel-burning appliance or an attached garage, need not be equipped with single-station carbon monoxide alarms provided that: 1. The *sleeping unit* or *dwelling unit* is located more than one story above or below any story which contains a fuel-burning appliance or an	Added requirements for carbon monoxide (CO) alarms in all new residential (Group R) and institutional (Group I) occupancies [and in Section 1103.9 for existing residential (Group R) and institutional (Group I) occupancies]. These provisions were added to this code to be consistent with the requirements to include CO detectors in all new construction of one- and two-family dwellings that had been added to the 2009 edition of the IRC. CO alarms are only required when the Group R or I occupancy contains a fuel-burning appliance or has an attached garage.	**30.3.4.6 Carbon Monoxide Alarms and Carbon Monoxide Detection Systems.** **30.3.4.6.1** Carbon monoxide alarms or carbon monoxide detectors in accordance with Section 9.8 and 30.3.4.6 shall be provided in new apartment buildings where either of the following conditions exists: (1) Dwelling units with communicating attached garages, unless otherwise exempted by 30.3.4.6.3 (2) Dwelling units containing a permanently installed fuelburning appliance 30.3.4.6.2 Where required by 30.3.4.6.1, carbon monoxide alarms or carbon monoxide detectors shall be installed in the following locations: (1) Outside of each separate dwelling unit sleeping area in the immediate vicinity of the sleeping rooms (2) On every occupiable level of a dwelling unit 30.3.4.6.3 Carbon monoxide alarms and carbon monoxide detectors as specified in 30.3.4.6.1(1) shall not be required in the following locations: (1) In garages (2) Within dwelling units with communicating attached garages that are open parking structures as defined by the	**NA**

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attached garage; 2. The *sleeping unit* or *dwelling unit* is not connected by duct work or ventilation shafts to any room containing a fuel-burning appliance or to an attached garage; and 3. The building is equipped with a common area carbon monoxide alarm system.		building code (3) Within dwelling units with communicating attached garages that are mechanically ventilated in accordance with the mechanical code **30.3.4.6.4** Carbon monoxide alarms or carbon monoxide detectors shall be provided in areas other than dwelling units in accordance with Section 9.8, as modified by 30.3.4.7.5**.** **30.3.4.6.5** Carbon monoxide alarms or carbon monoxide detectors shall be installed in accordance with the manufacturer's published instructions in the locations specified as follows: (1) On the ceilings of rooms containing permanently installed fuel-burning appliances (2) Centrally located within occupiable spaces served by the first supply air register from a permanently installed, fuel-burning HVAC system **26.3.4.6 Carbon Monoxide Alarms and Carbon Monoxide Detection Systems.** **26.3.4.6.1** Carbon monoxide alarms or carbon monoxide detectors in accordance with Section 9.8 and 26.3.4.6 shall be provided in new lodging or rooming houses where either of the following conditions exists: **(**1) Lodging or rooming houses with communicating attached	

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		garages, unless otherwise exempted by 26.3.4.6.3 (2) Lodging or rooming houses containing fuel-burning appliances 26.3.4.6.2* Where required by 26.3.4.6.1, carbon monoxide alarms or carbon monoxide detectors shall be installed in the following locations: (1) Outside of each separate sleeping area in the immediate vicinity of the sleeping rooms (2) On every occupiable level, including basements, and excluding attics and crawl spaces A.26.3.4.6.2 The placement requirements of NFPA 720, Standard for the Installation of Carbon Monoxide (CO) Detection and Warning Equipment, are modified to accommodate lodging or rooming house occupancies that are part of multiple occupancy buildings (e.g., an on-call physicians' sleeping room in a hospital). The placement requirements of NFPA 720 are modified specifically for lodging or rooming houses as required by this Code and do not affect other regulations within a jurisdiction. 26.3.4.6.3 Carbon monoxide alarms and carbon monoxide detectors as specified in 26.3.4.6.1(1) shall not be required in the following locations: (1) In garages (2) Within lodging or rooming	

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		houses with communicating attached garages that are open parking structures as defined by the building code (3) Within lodging or rooming houses with communicating attached garages that are mechanically ventilated in accordance with the mechanical code **28.3.4.6 Carbon Monoxide Alarms and Carbon Monoxide Detection Systems.** 28.3.4.6.1 Carbon monoxide alarms or carbon monoxide detectors in accordance with Section 9.8 and 28.3.4.6 shall be provided in new hotels and dormitories where either of the following conditions exists: (1) Guest rooms or guest suites with communicating attached garages, unless otherwise exempted by 28.3.4.6.3 (2) Guest rooms or guest suites containing a permanently installed fuel-burning appliance **28.3.4.6.2** Where required by 28.3.4.6.1, carbon monoxide alarms or carbon monoxide detectors shall be installed in the following locations: (1) Outside of each separate guest room or guest suite sleeping area in the immediate vicinity of the sleeping rooms (2) On every occupiable level of a guest room and guest suite	

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		28.3.4.6.3 Carbon monoxide alarms and carbon monoxide detectors as specified in 28.3.4.6.1(1) shall not be required in the following locations: (1) In garages (2) Within guest rooms or guest suites with communicating attached garages that are open parking structures as defined by the building code (3) Within guest rooms or guest suites with communicating attached garages that are mechanically ventilated in accordance with the mechanical code 28.3.4.6.4 Carbon monoxide alarms or carbon monoxide detectors shall be provided in areas other than guest rooms and guest suites in accordance with Section 9.8, as modified by 28.3.4.6.5. 28.3.4.6.5 Carbon monoxide alarms or carbon monoxide detectors shall be installed in accordance with the manufacturer's published instructions in the locations specified as follows: (1) On the ceilings of rooms containing permanently installed fuel-burning appliances (2) Centrally located within occupiable spaces served by the first supply air register from a permanently installed, fuel-burning HVAC system	

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		(3) Centrally located within occupiable spaces adjacent to a communicating attached garage	
Chapter 10			
[F] 1001.4 Fire safety and evacuation plans. Fire safety and evacuation plans shall be provided for all occupancies and buildings where required by the *International Fire Code*. Such fire safety and evacuation plans shall comply with the applicable provisions of Sections 401.2 and 404 of the *International Fire Code*.	Added provision references the IFC provisions addressing emergency planning, procedures and training programs in order to have consistent requirements for the development of evacuation plans.	**12.7.13 Emergency Plans.** **12.7.13.1** Emergency plans shall be provided in accordance with Section 4.8. **12.7.13.2** Where assembly occupancies are located in the high-rise portion of a building, the emergency plan shall include egress procedures, methods, and preferred evacuation routes for each event considered to be a life safety hazard that could impact the building, including the appropriateness of the use of elevators. 18.7.1 Evacuation and Relocation Plan and Fire Drills. 18.7.1.1 The administration of every health care occupancy shall have, in effect and available to all supervisory personnel, written copies of a plan for the protection of all persons in the event of fire, for their evacuation to areas of refuge, and for their evacuation from the building when necessary. 20.7.1 Evacuation and Relocation Plan and Fire Drills. 20.7.1.1 The administration of every ambulatory health care	**NA**

2012 IBC	Explanation	2012 NFPA 101	Recommendations
		facility shall have, in effect and available to all supervisory personnel, written copies of a plan for the protection of all persons in the event of fire, for their evacuation to areas of refuge, and for their evacuation from the building when necessary. 22.7.1.3* The administration of every detention or correctional facility shall have, in effect and available to all supervisory personnel, written copies of a plan for the protection of all persons in the event of fire, for their evacuation to areas of refuge, and for evacuation from the building when necessary.	
1004.1.2 Areas without fixed seating. The number of occupants shall be computed at the rate of one occupant per unit of area as prescribed in Table 1004.1.2. For areas without *fixed seating*, the occupant load shall not be less than that number determined by dividing the floor area under consideration by the *occupant load* factor assigned to the function of the space as set forth in Table 1004.1.2. Where an intended function is not listed in Table 1004.1.2, the *building official* shall establish a function based on a listed function that most nearly resembles the intended function.	Revised to clarify that the occupant load is based on the function of the space, rather than the use or occupancy of the building.	**3.3.162.2 *Occupant Load.*** The total number of persons that might occupy a building or portion thereof at any one time. **7.3.1.2* Occupant Load Factor.** The occupant load in any building or portion thereof shall be not less than the number of persons determined by dividing the floor area assigned to that use by the occupant load factor for that use as specified in Table 7.3.1.2, Figure 7.3.1.2(a), and Figure 7.3.1.2(b). Where both gross and net area figures are given for the same occupancy, calculations shall be made by applying the gross area figure to the gross area of the portion of the building devoted to	**NA**

		the use for which the gross area figure is specified and by applying the net area figure to the net area of the portion of the building devoted to the use for which the net area figure is specified. **7.3.1.3.1** The occupant load in any building or portion thereof shall be permitted to be increased from the occupant load established for the given use in accordance with 7.3.1.2 where all other requirements of this *Code* are also met, based on such increased occupant load. **7.3.1.3.2** The authority having jurisdiction shall be permitted to require an approved aisle, seating, or fixed equipment diagram to substantiate any increase in occupant load and shall be permitted to require that such a diagram be posted in an approved location.	
Table 1004.1.2	Revised, an occupant load factor for museums and exhibit galleries has been established at 30 square feet (2.8 m2) per occupant.	No equal change in NFPA 101 Table 7.3.1.2	**NA**

TABLE 1004.1.2 MAXIMUM FLOOR AREA ALLOWANCES PER OCCUPANT

FUNCTION OF SPACE	OCCUPANT LOAD FACTOR[a]
Accessory storage areas, mechanical equipment room	300 gross
Agricultural building	300 gross
Aircraft hangars	500 gross
Airport terminal Baggage claim Baggage handling	 20 gross 300 gross

	Concourse Waiting areas	100 gross 15 gross	
	Assembly Gaming floors (keno, slots, etc.) Exhibit Gallery and Museum	 11 gross 30 net	
	Assembly with fixed seats	See Section 1004.4	
	Assembly without fixed seats Concentrated (chairs only-not fixed) Standing space Unconcentrated (tables and chairs)	 7 net 5 net 15 net	
	Bowling centers, allow 5 persons for each lane including 15 feet of runway, and for additional areas	7 net	
	Business areas	100 gross	
	Courtrooms-other than fixed seating areas	40 net	
	Day care	35 net	
	Dormitories	50 gross	
	Educational Classroom area Shops and other vocational room areas	 20 net 50 net	
	Exercise rooms	50 gross	
	Group H-5 Fabrication and manufacturing areas	200 gross	
	Industrial areas Inpatient treatment areas Outpatient areas Sleeping areas	 240 gross 100 gross 120 gross	
	Kitchens, commercial	200 gross	
	Library Reading rooms Stack area	 50 net 100 gross	
	Mall buildings-covered and open	See Section 402.8.2	
	Mercantile Areas on other floors Basement and grade floor areas Storage, stock, shipping areas	 60 gross 30 gross 300 gross	
	Parking garages	200 gross	

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Residential	200 gross	
Skating rinks, swimming pools Rink and pool Decks	 50 gross 15 gross	
Stages and platforms	15 net	
Warehouses	500 gross	

1004.4 Fixed seating. For areas having fixed seats and *aisles*, the *occupant load* shall be determined by the number of *fixed seats* installed therein. The *occupant load* for areas in which *fixed seating* is not installed, such as waiting spaces, shall be determined in accordance with Section 1004.1.2 and added to the number of *fixed seats*. The *occupant load* of *wheelchair spaces* and the associated companion seat shall be based on one occupant for each *wheelchair space* and one occupant for the associated companion seat provided in accordance with Section 1108.2.3.	Reorganized and clarified the multiple requirements related to egress width that were previously contained in a single paragraph in Section 1005.1. Also, the related provisions from Sections 1004.4 and 1004.5 have been relocated to a more logical location with the other egress width/capacity provisions. Reduced exit width factors have been established for sprinklered buildings provided with an emergency voice/alarm communication system, and the exit width/capacity requirements are now presented in a more logical and organized layout.	**Table 7.3.1.2 Occupant Load Factor.** Under Assembly Use, Fixed seating-Use number of fixed seats **7.3.1.2* Occupant Load Factor.** The occupant load in any building or portion thereof shall be not less than the number of persons determined by dividing the floor area assigned to that use by the occupant load factor for that use as specified in Table 7.3.1.2, Figure 7.3.1.2(a), and Figure 7.3.1.2(b). Where both gross and net area figures are given for the same occupancy, calculations shall be made by applying the gross area figure to the gross area of the portion of the building devoted to the use for which the gross area figure is specified and by applying the net area figure to the net area of the portion of the building devoted to the use for which the net area figure is specified.	**NA**

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1005.1 General. All portions of the *means of egress* system shall be sized in accordance with this section. **Exception:** *Means of egress* complying with Section 1028.	Reorganized and clarified the multiple requirements related to egress width that were previously contained in a single paragraph in Section 1005.1. Also, the related provisions from Sections 1004.4 and 1004.5 have been relocated to a more logical location with the other egress width/capacity provisions. Reduced exit width factors have been established for sprinklered buildings provided with an emergency voice/alarm communication system, and the exit width/capacity requirements are now presented in a more logical and organized layout.	**7.3 Capacity of Means of Egress.** **7.3.1.1.1** The total capacity of the means of egress for any story, balcony, tier, or other occupied space shall be sufficient for the occupant load thereof.	**NA**
1005.2 Minimum width based on component. The minimum width, in inches (mm), of any *means of egress* components shall not be less than that specified for such component, elsewhere in this code.		**7.3.3.1** Egress capacity for approved components of means of egress shall be based on the capacity factors shown in Table 7.3.3.1, unless otherwise provided in 7.3.3.2.No equal change in NFPA 101 **7.3.1.1.1** The total capacity of the means of egress for any story, balcony, tier, or other occupied space shall be sufficient for the occupant load thereof. **7.3.1.1.2** For other than existing means of egress, where more than one means of egress is required, the means of egress shall be of such width and capacity that the loss of any one means of egress leaves available not less than 50 percent of the required capacity. **7.3.2 Measurement of Means of Egress.** **7.3.2.1** The width of means of egress shall be measured in the clear at the narrowest point of the egress component under consideration, unless otherwise provided in 7.3.2.2 or 7.3.2.3. **7.3.2.2** Projections within the	**NA**

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		means of egress of not more than 4½ in. (114 mm) on each side shall be permitted at a height of 38 in. (965 mm) and below. In the case of stair and landing handrails forming part of a guard, in accordance with 7.2.2.4.4.3, such projections shall be permitted at a height of 42 in. (1065 mm) and below.	
1005.3 Required capacity based on occupant load. The required capacity, in inches (mm), of the *means of egress* for any room, area, space or story shall not be less than that determined in accordance with Sections 1005.3.1 and 1005.3.2:		**7.3.1.2* Occupant Load Factor.** The occupant load in any building or portion thereof shall be not less than the number of persons determined by dividing the floor area assigned to that use by the occupant load factor for that use as specified in Table 7.3.1.2, Figure 7.3.1.2(a), and Figure 7.3.1.2(b). Where both gross and net area figures are given for the same occupancy, calculations shall be made by applying the gross area figure to the gross area of the portion of the building devoted to the use for which the gross area figure is specified and by applying the net area figure to the net area of the portion of the building devoted to the use for which the net area figure is specified. **7.3.3* Egress Capacity.** **7.3.3.1** Egress capacity for approved components of means of egress shall be based on the capacity factors shown in Table 7.3.3.1, unless otherwise provided in 7.3.3.2 .	**NA**

2012 IBC	Explanation	2012 NFPA 101	Recommendations
1005.3.1 Stairways. The capacity, in inches (mm), of *means of egress stairways* shall be calculated by multiplying the *occupant load* served by such *stairway* by a means *of egress* capacity factor of 0.3 inch (7.6 mm) per occupant. Where *stairways* serve more than one story, only the *occupant load* of each story considered individually shall be used in calculating the required capacity of the *stairways* serving that story. **Exception:** For other than Group H and I-2 occupancies, the capacity, in inches (mm), of *means of egress stairways* shall be calculated by multiplying the *occupant load* served by such *stairway* by a *means of egress* capacity factor of 0.2 inch (5.1 mm) per occupant in buildings equipped throughout with an *automatic sprinkler system* installed in accordance with Section 903.3.1.1 or 903.3.1.2 and an *emergency voice/alarm communication system* in accordance with Section 907.5.2.2.		**7.3.3.1** Egress capacity for approved components of means of egress shall be based on the capacity factors shown in Table 7.3.3.1, unless otherwise provided in 7.3.3.2.No equal change in NFPA 101	**NA**

Table 7.3.3.1 Capacity Factors

Area	Stairways (width/person) in.	Stairways (width/person) mm	Level Components and Ramps (width/person) in.	Level Components and Ramps (width/person) mm
Board and care	0.4	10	0.2	5
Health care, sprinklered	0.3	7.6	0.2	5
Health care, nonsprinklered	0.6	15	0.5	13
High hazard contents	0.7	18	0.4	10
All others	0.3	7.6	0.2	5

1005.3.2 Other egress components. The capacity, in inches (mm), of *means of egress* components other than *stairways* shall be calculated by multiplying the *occupant load* served by such component by a *means of egress* capacity factor of 0.2 inch (5.1 mm) per occupant. **Exception:** For other than Group H and I-2 occupancies, the capacity, in inches (mm), of *means of egress* components other than *stairways* shall be calculated by multiplying the *occupant load* served by such component by a *means of egress* capacity factor of 0.15 inch (3.8 mm) per occupant in buildings equipped throughout		**7.3.3.1** Egress capacity for approved components of means of egress shall be based on the capacity factors shown in Table 7.3.3.1, unless otherwise provided in 7.3.3.2.	**NA**

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with an *automatic sprinkler system* installed in accordance with Section 903.3.1.1 or 903.3.1.2 and an *emergency voice/alarm communication system* in accordance with Section 907.5.2.2.			
1005.4 Continuity. The capacity of the *means of egress* required from any story of a building shall not be reduced along the path of egress travel until arrival at the *public way*.		**7.3.4.2** Where a single exit access leads to an exit, its capacity in terms of width shall be not less than the required capacity of the exit to which it leads. **7.3.4.3** Where more than one exit access leads to an exit, each shall have a width adequate for the number of persons it accommodates. **7.7.1* Exit Termination.** Exits shall terminate directly, at a public way or at an exterior exit discharge, unless otherwise provided in 7.7.1.2 through 7.7.1.4.	**NA**
1005.5. Distribution of egress capacity. Where more than one *exit*, or access to more than one *exit*, is required, the *means of egress* shall be configured such that the loss of any one *exit*, or access to one *exit*, shall not reduce the available capacity to less than 50 percent of the required capacity.		**7.3.1.1.2** For other than existing means of egress, where more than one means of egress is required, the means of egress shall be of such width and capacity that the loss of any one means of egress leaves available not less than 50 percent of the required capacity.	**NA**
1005.6 Egress convergence. Where the *means of egress* from		**7.3.1.5 Capacity from a Point of Convergence.** Where means of	**NA**

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stories above and below converge at an intermediate level, the capacity of the *means of egress* from the point of convergence shall not be less than the sum of the required capacities for the two adjacent stories.		egress from a story above and a story below converge at an intermediate story, the capacity of the means of egress from the point of convergence shall be not less than the sum of the required capacity of the two means of egress.	
1005.7 Encroachment. Encroachments into the required *means of egress* width shall be in accordance with the provisions of this section.	Revised to clarify door encroachment into required egress width, as well as other encroachments into the required width, such as protruding objects, trim (i.e., wainscoting) and handrails along hallways. The maximum encroachment is measured to the door itself, and does not include hardware. This section is referenced from corridors, aisles, exit passageways and exit discharge.		
1005.7.1 Doors. Doors, when fully opened, shall not reduce the required width by more than 7 inches (178 mm). Doors in any position shall not reduce the required width by more than one-half. **Exceptions:** 1. Surface-mounted latch release hardware shall be exempt from inclusion in the 7-inch maximum (178 mm) encroachment where: 1.1. The hardware is mounted to the side of the door facing away from the adjacent wall where the door is in the open position; and 1.2. The hardware is mounted not less than 34 inches (865 mm) nor more than 48 inches (1219 mm) above the finished floor. 2. The restrictions on door swing shall not apply to doors within individual *dwelling units* and *sleeping units* of Group R-2 occupancies and *dwelling units* of		**7.2.1.4.3.1*** During its swing, any door leaf in a means of egress shall leave not less than one-half of the required width of an aisle, a corridor, a passageway, or a landing unobstructed and shall project not more than 7 in. (180 mm) into the required width of an aisle, a corridor, a passageway, or a landing, when fully open, unless both of the following conditions are met: (1) The door opening provides access to a stair in an existing building. (2) The door opening meets the requirement that limits projection to not more than 7 in. (180 mm) into the required width of the stair landing when the door leaf is fully open. **7.2.1.4.3.2** Surface-mounted latch release hardware on the door leaf shall be exempt from being included in the maximum 7 in.	**NA**

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Group R-3 occupancies.		(180 mm) projection requirement of 7.2.1.4.3.1, provided that both of the following criteria are met: (1) The hardware is mounted to the side of the door leaf that faces the aisle, corridor, passageway, or landing when the door leaf is in the open position. (2) The hardware is mounted not less than 34 in. (865 mm), and not more than 48 in. (1220 mm), above the floor.	
1005.7.2 Other projections. *Handrail* projections shall be in accordance with the provisions of Section 1012.8. Other nonstructural projections such as trim and similar decorative features shall be permitted to project into the required width a maximum of 1½ inches (38 mm) on each side. ***1012.8 Projections.*** *On ramps, the clear width between handrails shall be 36 inches (914 mm) minimum. Projections into the required width of stairways and ramps at each side shall not exceed 41/2 inches (114 mm) at or below the handrail height. Projections into the required width shall not be limited above the minimum headroom height required in Section 1009.5. Projections due to intermediate handrails shall not constitute a reduction in the egress width.*		**7.3.2.2** Projections within the means of egress of not more than 4½ in. (114 mm) on each side shall be permitted at a height of 38 in. (965 mm) and below. In the case of stair and landing handrails forming part of a guard, in accordance with 7.2.2.4.4.3, such projections shall be permitted at a height of 42 in. (1065 mm) and below.	**NA**

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1005.7.3 Protruding objects. Protruding objects shall comply with the applicable requirements of Section 1003.3. ***1003.3.3 Horizontal projections.*** *Structural elements, fixtures or furnishings shall not project horizontally from either side more than 4 inches (102 mm) over any walking surface between the heights of 27 inches (686 mm) and 80 inches (2032 mm) above the walking surface.* ***Exception:*** *Handrails are permitted to protrude 41/2 inches (114 mm) from the wall.*		**7.3.2.2** Projections within the means of egress of not more than 4½ in. (114 mm) on each side shall be permitted at a height of 38 in. (965 mm) and below. In the case of stair and landing handrails forming part of a guard, in accordance with 7.2.2.4.4.3, such projections shall be permitted at a height of 42 in. (1065 mm) and below. **7.2.2.4.3 Projections.** The design of guards and handrails and the hardware for attaching handrails to guards, balusters, or walls shall be such that there are no projections that might engage loose clothing. Openings in guards shall be designed to prevent loose clothing from becoming wedged in such openings.	**NA**
1007.2 Continuity and components. Each required *accessible means of egress* shall be continuous to a *public way* and shall consist of one or more of the following components: 1. *Accessible* routes complying with Section 1104. 2. *Interior exit stairways* complying with Sections 1007.3 and 1022. 3. Interior *exit access stairways* complying with Sections 1007.3 and 1009.3. 4. Exterior *exit stairways* complying with Sections 1007.3 and 1026 and serving levels other than the *level of exit discharge*.	Clarified that limited open exit access stairways can be part of an accessible means of egress. Exterior areas of assisted rescue are an option for the accessible route, rather than an exception.	**7.5.4.3** Each required accessible means of egress shall be continuous from each accessible occupied area to a public way or area of refuge in accordance with 7.2.12.2.2. **7.5.4.4** Where an exit stair is used in an accessible means of egress, it shall comply with 7.2.12 and either shall incorporate an area of refuge within an enlarged story-level landing or shall be accessed from an area of refuge. **7.5.4.5** To be considered part of an accessible means of egress, an elevator shall be in	**NA**

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5. Elevators complying with Section 1007.4. 6. Platform lifts complying with Section 1007.5. 7. *Horizontal exits* complying with Section 1025. 8. *Ramps* complying with Section 1010. 9. *Areas of refuge* complying with Section 1007.6. 10. Exterior area for assisted rescue complying with Section 1007.7.		accordance with 7.2.12.2.4. **7.5.4.6** To be considered part of an accessible means of egress, a smoke barrier in accordance with Section 8.5 with not less than a 1-hour fire resistance rating, or a horizontal exit in accordance with 7.2.4, shall discharge to an area of refuge in accordance with 7.2.12. **7.5.4.7** Accessible stories that are four or more stories above or below a story of exit discharge shall have not less than one elevator complying with 7.5.4.5, except as modified in 7.5.4.8. **7.5.4.8** Where elevators are required by 7.5.4.7, the smokeproof enclosure required by 7.2.12.2.4 shall not be required in buildings protected throughout by an approved, supervised automatic sprinkler system in accordance with 9.7.1.1(1). **7.5.4.9** An area of refuge used as part of a required accessible means of egress shall be in accordance with 7.2.12.	
1007.3 Stairways. In order to be considered part of an *accessible means of egress*, a *stairway* between stories shall have a clear width of 48 inches (1219 mm) minimum between *handrails* and shall either incorporate an *area of refuge* within an enlarged floor-level landing or shall be accessed	Clarified that limited exit access stairways between floors can count as part of an accessible means of egress, but not exit access steps between levels on the same story.	**7.5.4.4** Where an exit stair is used in an accessible means of egress, it shall comply with 7.2.12 and either shall incorporate an area of refuge within an enlarged story-level landing or shall be accessed from an area of refuge. **7.2.12.2.3*** Where the exit providing egress from an area of	**NA**

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from either an *area of refuge* complying with Section 1007.6 or a *horizontal exit*. *Exit access stairways* that connect levels in the same story are not permitted as part an *accessible means of egress*. **Exceptions:** 1. The clear width of 48 inches (1219 mm) between *handrails* is not required in buildings equipped throughout with an *automatic sprinkler system* installed in accordance with Section 903.3.1.1 or 903.3.1.2. 2. *Areas of refuge* are not required at *stairways* in buildings equipped throughout by an *automatic sprinkler system* installed in accordance with Section 903.3.1.1 or 903.3.1.2. 3. The clear width of 48 inches (1219 mm) between *handrails* is not required for *stairways* accessed from a *horizontal exit*. 4. *Areas of refuge* are not required at *stairways* serving *open parking garages*.		refuge to a public way that is in accordance with 7.2.12.2.2 includes stairs, the clear width of landings and stair flights, measured between handrails and at all points below handrail height, shall be not less than 48 in. (1220 mm), unless otherwise permitted by the following: (1) The minimum 48 in. (1220 mm) clear width shall not be required where the area of refuge is separated from the remainder of the story by a horizontal exit meeting the requirements of 7.2.4. *(See also 7.2.12.3.4.)* (2) Existing stairs and landings that provide a clear width of not less than 37 in. (940 mm), measured at and below handrail height, shall be permitted.	
1007.7 Exterior area for assisted rescue. Exterior areas for assisted rescue shall be accessed by an *accessible route* from the area served. Exterior areas for assisted rescue shall be permitted in accordance with Section 1007.7.1 or 1007.7.2.	Clarified that exterior areas for assisted rescue at grade level can be located next to a large opening, such as a garage door, when protected by a wing wall. Exterior areas of assisted rescue can be located at the exit stairway on upper levels in outdoor facilities.	Not addressed in NFPA 101	**NA**
1007.7.1 Level of exit discharge. Where the *exit discharge* does not include an *accessible route* from		Not addressed in NFPA 101	**NA**

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an *exit* located on a *level of exit discharge* to a *public way*, an exterior area of assisted rescue shall be provided on the exterior landing in accordance with Sections 1007.7.3 through 1007.7.6.			
1007.7.2 Outdoor facilities. Where *exit access* from the area serving outdoor facilities is essentially open to the outside, an exterior area of assisted rescue is permitted as an alternative to an *area of refuge*. Every required exterior area of assisted recue shall have direct access to an *interior exit stairway*, exterior *stairway*, or elevator serving as an *accessible means of egress* component. The exterior area of assisted rescue shall comply with Sections 1007.7.3 through 1007.7.6 and shall be provided with a two-way communication system complying with Sections 1007.8.1and 1007.8.2.		Not addressed in NFPA 101	**NA**
1007.7.3 Size. Each exterior area for assisted rescue shall be sized to accommodate *wheelchair spaces* in accordance with Section 1007.6.1		Not addressed in NFPA 101	**NA**
1007.7.4 Separation. Exterior walls separating the exterior area of assisted rescue from the interior of the building shall have a minimum *fire-resistance rating* of 1 hour, rated for exposure to fire		Not addressed in NFPA 101	**NA**

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from the inside. The fire-resistance- rated *exterior wall* construction shall extend horizontally 10 feet (3048 mm) beyond the landing on either side of the landing or equivalent fire-resistance-rated construction is permitted to extend out perpendicular to the *exterior wall* 4 feet (1219 mm) minimum on the side of the landing. The fire-resistance-rated construction shall extend vertically from the ground to a point 10 feet (3048 mm) above the floor level of the area for assisted rescue or to the roof line, whichever is lower. Openings within such fire-resistance-rated *exterior walls* shall be protected in accordance with Section 716.			
1007.7.5 Openness. The exterior area for assisted rescue shall be open to the outside air. The sides other than the Separation walls shall be at least 50 percent open, and the open area shall be distributed so as to minimize the accumulation of smoke or toxic gases.		Not addressed in NFPA 101	**NA**
1007.7.6 Stairway. *Stairways* that are part of the *means of egress* for the exterior area for assisted rescue shall provide a clear width of 48 inches (1219 mm) between *handrails*. **Exception:** The clear width of 48 inches (1219 mm) between *handrails* is not required at		Not addressed in NFPA 101	

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stairways serving buildings equipped throughout with an *automatic sprinkler system* installed in accordance with Section 903.3.1.1 or 903.3.1.2.			
1008.1.2 Door swing. Egress doors shall be of the pivoted or side-hinged swinging type. Doors shall swing in the direction of egress travel where serving a room or area containing an *occupant load* of 50 or more persons or a Group H occupancy.	Clarified that the occupant load used to determine the doorswing requirement is not to be based on an assigned or distributed occupant load, but on the entire occupant load of the space served by the door.	**7.2.1.4.2 Door Leaf Swing Direction.** Door leaves required to be of the side-hinged or pivoted-swinging type shall swing in the direction of egress travel under any of the following conditions: (1) Where serving a room or area with an occupant load of 50 or more, except under any of the following conditions: (a) Door leaves in horizontal exits shall not be required to swing in the direction of egress travel where permitted by 7.2.4.3.8.1 or 7.2.4.3.8.2. (b) Door leaves in smoke barriers shall not be required to swing in the direction of egress travel in existing health care occupancies, as provided in Chapter 19. (2) Where the door assembly is used in an exit enclosure, unless the door opening serves an individual living unit that opens directly into an exit enclosure (3) Where the door opening serves a high hazard contents Area	**NA**
1009.1 General. *Stairways* serving occupied portions of a building shall comply with the requirements of this section.		**7.2.2.1.1** Stairs used as a component in the means of egress shall conform to the general requirements of Section 7.1 and	**NA**

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		to the special requirements of 7.2.2, unless otherwise specified in 7.2.2.1.2.	
1009.2 Interior exit stairways. *Interior exit stairways* shall lead directly to the exterior of the building or shall be extended to the exterior of the building with an *exit passageway* conforming to the requirements of Section 1023, except as permitted in Section 1027.1.	Added scoping that stairway provisions are applicable to all stairways, including required means-of-egress stairways, and "convenience" stairways that are not a portion of a required means of egress.	**7.1.3.2.2** An exit enclosure shall provide a continuous protected path of travel to an exit discharge. **7.2.6.3 Stair Discharge.** An exit passageway that serves as a discharge from a stair enclosure shall have not less than the same fire resistance rating and opening protective fire protection rating as those required for the stair enclosure. **7.7.1* Exit Termination.** Exits shall terminate directly, at a public way or at an exterior exit discharge, unless otherwise provided in 7.7.1.2 through 7.7.1.4. **7.7.1.2** The requirement of 7.7.1 shall not apply to interior exit discharge as otherwise provided in 7.7.2. **7.7.2 Exit Discharge Through Interior Building Areas.** Exits shall be permitted to discharge through interior building areas, provided that all of the following are met: (1) Not more than 50 percent of the required number of exits, and not more than 50 percent of the required egress capacity, shall discharge through areas on any level of discharge, except as	**NA**

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		otherwise permitted by one of the following: (a) One hundred percent of the exits shall be permitted to discharge through areas on any level of discharge in detention and correctional occupancies as otherwise provided in Chapters 22 and 23. (b) In existing buildings, the 50 percent limit on egress capacity shall not apply if the 50 percent limit on the required number of exits is met. (2) Each level of discharge shall discharge directly outside at the finished ground level or discharge directly outside and provide access to the finished ground level by outside stairs or outside ramps. (3) The interior exit discharge shall lead to a free and unobstructed way to the exterior of the building, and such way shall be readily visible and identifiable from the point of discharge from the exit. (4) The interior exit discharge shall be protected by one of the following methods: (a) The level of discharge shall be protected throughout by an approved automatic sprinkler system in accordance with Section 9.7, or the portion of the level of discharge used for interior exit discharge shall be protected by an approved automatic sprinkler system in accordance with Section 9.7 and shall be separated from the	

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		nonsprinklered portion of the floor by fire barriers with a fire resistance rating meeting the requirements for the enclosure of exits. *(See 7.1.3.2.1.)* (b) The interior exit discharge area shall be in a vestibule or foyer that meets all of the following criteria: i. The depth from the exterior of the building shall be not more than 10 ft (3050 mm), and the length shall be not more than 30 ft (9.1 m). ii. The foyer shall be separated from the remainder of the level of discharge by construction providing protection not less than the equivalent of wired glass in steel frames or 45 minutes fire-resistive construction. iii. The foyer shall serve only as means of egress and shall include an exit directly to the outside. (5) The entire area on the level of discharge shall be separated from areas below by construction having a fire resistance rating not less than that required for the exit enclosure, unless otherwise provided in 7.7.2(6). (6) Levels below the level of discharge in an atrium shall be permitted to be open to the level of discharge where such level of discharge is protected in accordance with 8.6.7.	
1009.2.1 Where required. *Interior exit stairways* shall be included, as necessary, to meet one or more	Added requirements to coordinate with the exit access travel distance and numbers of exits.		

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means of egress design requirements, such as required number of *exits* or *exit access* travel distance.	Interior exit stairways are required to be enclosed in accordance with Section 1022. Requirements are coordinated with exit access travel distance and number of exits.		
1009.2.2 Enclosure. All *interior exit stairways* shall be enclosed in accordance with the provisions of Section 1022.		**7.2.2.5.1 Enclosures.** **7.2.2.5.1.1** All inside stairs serving as an exit or exit component shall be enclosed in accordance with 7.1.3.2. **7.2.2.5.1.2** Inside stairs, other than those serving as an exit or exit component, shall be protected in accordance with Section 8.6.	**NA**
1009.3 Exit access stairways. Floor openings between stories created by *exit access stairways* shall be enclosed. **Exceptions:** 1. In other than Group I-2 and I-3 occupancies, *exit access stairways* that serve, or atmospherically communicate between, only two stories are not required to be enclosed. 2. *Exit access stairways* serving and contained within a single residential *dwelling unit* or *sleeping unit* in Group R-1, R-2 or R-3 occupancies are not required to be enclosed. 3. In buildings with only Group B or M occupancies, *exit access stairway* openings are not required to be enclosed provided that the building is equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1, the area of the floor		**8.6.5* Required Fire Resistance Rating.** The minimum fire resistance rating for the enclosure of floor openings shall be as follows *(see 7.1.3.2.1 for enclosure of exits):* (1) Enclosures connecting four or more stories in new construction — 2-hour fire barriers (2) Other enclosures in new construction—1-hour fire barriers (3) Existing enclosures in existing buildings — 1/2-hour fire barriers (4) Enclosures for lodging and rooming houses — as specified in Chapter 26 (5) Enclosures for new hotels — as specified in Chapter 28 (6) Enclosures for new apartment buildings—as specified in Chapter 30 **8.6.5* Required Fire Resistance Rating.** The minimum fire resistance rating for the enclosure of floor openings shall be as	**NA**

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opening between stories does not exceed twice the horizontal projected area of the *exit access stairway*, and the opening is protected by a draft curtain and closely spaced sprinklers in accordance with NFPA 13. 4. In other than Group B and M occupancies, *exit access stairway* openings are not required to be enclosed provided that the building is equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1, the floor opening does not connect more than four stories, the area of the floor opening between stories does not exceed twice the horizontal projected area of the *exit access stairway*, and the opening is protected by a draft curtain and closely spaced sprinklers in accordance with NFPA 13.		follows *(see 7.1.3.2.1 for enclosure of exits):* (1) Enclosures connecting four or more stories in new construction — 2-hour fire barriers (2) Other enclosures in new construction— 1-hour fire barriers (3) Existing enclosures in existing buildings — *1⁄2*-hour fire barriers (4) Enclosures for lodging and rooming houses — as specified in Chapter 26 (5) Enclosures for new hotels — as specified in Chapter 28 (6) Enclosures for new apartment buildings—as specified in Chapter 30 **8.6.6 Communicating Space.** Unless prohibited by Chapters 11 through 43, unenclosed floor openings forming a communicating space between floor levels shall be permitted, provided that the following conditions are met: (1) The communicating space does not connect more than three contiguous stories. (2) The lowest or next-to-lowest story within the communicating space is a street floor. (3) The entire floor area of the communicating space is open and unobstructed, such that a fire in any part of the space will be readily obvious to the occupants of the space prior to the time it becomes an occupant hazard.	

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		(4) The communicating space is separated from the remainder of the building by fire barriers with not less than a 1-hour fire resistance rating, unless one of the following is met: (a) In buildings protected throughout by an approved automatic sprinkler system in accordance with Section 9.7, a smoke barrier in accordance with Section 8.5 shall be permitted to serve as the separation required by 8.6.6(4). (b) The requirement of 8.6.6(4) shall not apply to fully sprinklered residential housing units of detention and correctional occupancies in accordance with 22.3.1(2) and 23.3.1.1(2). (5) The communicating space has ordinary hazard contents protected throughout by an approved automatic sprinkler system in accordance with Section 9.7 or has only low hazard contents. *(See 6.2.2.)* (6) Egress capacity is sufficient to allow all the occupants of all levels within the communicating space to simultaneously egress the communicating space by considering it as a single floor area in determining the required egress capacity. (7)*Each occupant within the communicating space has access to not less than one exit without	

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		having to traverse another story within the communicating space. (8) Each occupant not in the communicating space has access to not less than one exit without having to enter the communicating space.	
1008.1.9.9 Electromagnetically locked egress doors. Doors in the *means of egress* in buildings with an occupancy in Group A, B, E, M, R-1 or R-2, and doors to tenant spaces in Group A, B, E, M, R-1 or R-2, shall be permitted to be electromagnetically locked if equipped with listed hardware that incorporates a built-in switch and meet the requirements below: 1. The listed hardware that is affixed to the door leaf has an obvious method of operation that is readily operated under all lighting conditions. 2. The listed hardware is capable of being operated with one hand. 3. Operation of the listed hardware directly interrupts the power to the electromagnetic lock and unlocks the door immediately. 4. Loss of power to the listed hardware automatically unlocks the door. 5. Where panic or *fire exit hardware* is required by Section 1008.1.10, operation of the listed panic or *fire exit hardware* also releases the electromagnetic lock.	Clarified that electromagnetically locked egress doors may now be used at locations that require panic hardware, provided the operation of the hardware releases the magnetic lock by interrupting the power to the electromagnet.	**7.2.1.5.6 Electrically Controlled Egress Door Assemblies.** Door assemblies in the means of egress shall be permitted to be electrically locked if equipped with approved, listed hardware, provided that all of the following conditions are met: (1) The hardware for occupant release of the lock is affixed to the door leaf. (2) The hardware has an obvious method of operation that is readily operated in the direction of egress. (3) The hardware is capable of being operated with one hand in the direction of egress. (4) Operation of the hardware interrupts the power supply directly to the electric lock and unlocks the door assembly in the direction of egress. (5)*Loss of power to the listed releasing hardware automatically unlocks the door assembly in the direction of egress. (6) Hardware for new installations is listed in accordance with ANSI/UL 294, *Standard for Access Control System Units*.	**NA**

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1010.2 Enclosure. All *interior exit ramps* shall be enclosed in accordance with the applicable provisions of Section 1022. *Exit access ramps* shall be enclosed in accordance with the provisions of Section 1009.3 for enclosure of *stairways*.	Added a provision that interior exit access ramps are handled the same as interior exit access stairways in accordance with Section 1009.3.	**7.2.5.1 General.** Every ramp used as a component in a means of egress shall conform to the general requirements of Section 7.1 and to the special requirements of 7.2.5. **7.2.5.5 Enclosure and Protection of Ramps.** Ramps in a required means of egress shall be enclosed or protected as a stair in accordance with 7.2.2.5 and 7.2.2.6.	**NA**
1011.2 Floor-level exit signs in Group R-1. Where exit signs are required in Group R-1 occupancies by Section 1011.1, additional low-level exit signs shall be provided in all areas serving guestrooms in Group R-1 occupancies and shall comply with Section 1011.5. The bottom of the sign shall be not less than 10 inches (254 mm) nor more than 12 inches (305 mm) above the floor level. The sign shall be flush mounted to the door or wall. Where mounted on the wall, the edge of the sign shall be within 4 inches (102 mm) of the door frame on the latch side.	Added a provision that where general-use exit signs are required in Group R-1 occupancies, low-level exit signs must also be provided in the means of egress serving the guestrooms.	No equal requirement in NFPA 101	**NA**
1012.2 Height. *Handrail* height, measured above *stair* tread *nosings*, or finish surface of *ramp* slope, shall be uniform, not less than 34 inches (864 mm) and not more than 38 inches (965 mm). *Handrail* height of *alternating tread devices* and	Clarified the provision that transition pieces of a continuous handrail are now permitted to exceed the maximum permitted handrail height. The use of the new exceptions will permit a more gradual variation in the height even though it will allow for	**7.2.2.4.4.1** New handrails on stairs shall be not less than 34 in. (865 mm), and not more than 38 in. (965 mm), above the surface of the tread, measured vertically to the top of the rail from the leading edge of the tread. **7.2.2.4.4.3** The height of required	**NA**

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ship ladders, measured above tread *nosings*, shall be uniform, not less than 30 inches (762 mm) and not more than 34 inches (864 mm). **Exceptions:** 1. When handrail fittings or endings are used to provide continuous transition between *flights*, the fittings or bendings shall be permitted to exceed the maximum height. 2. In Group R-3 occupancies; within *dwelling units* in Group R-2 occupancies; and in Group U occupancies that are associated with a Group R-3 occupancy or associated with individual *dwelling units* in Group R-2 occupancies; when handrail fittings or bendings are used to provide continuous transition between *flights*, transition at *winder* treads, transition from *handrail* to *guard*, or when used at the start of a *flight*, the *handrail* height at the fittings or bendings shall be permitted to exceed the maximum height.	portions of the handrail to exceed the normal 38-inch-maximum (965 mm) height—the belief being that a “continuous” handrail is more important than staying within the height limitation.	handrails that form part of a guard shall be permitted to exceed 38 in. (965 mm), but shall not exceed 42 in. (1065 mm), measured vertically to the top of the rail from the leading edge of the tread.	
1012.3.1 Type I. *Handrails* with a circular cross section shall have an outside diameter of at least 11/4 inches (32 mm) and not greater than 2 inches (51 mm). Where the *handrail* is not circular, it shall have a perimeter dimension of at least 4 inches (102 mm) and not greater than 61/4 inches (160 mm) with a	Added a provision that a minimum cross-section dimension for the graspability of noncircular Type I handrails	**7.2.2.4.4.6** Handrails shall include one of the following features: (1) Circular cross section with an outside diameter of not less than 1¼ in. (32 mm) and not more than 2 in. (51 mm) (2)*Shape that is other than circular with a perimeter dimension of not less than 4 in. (100 mm), but not more than 6¼	**NA**

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maximum cross-sectional dimension of 21/4 inches (57 mm) and minimum cross-sectional dimension of 1 inch (25 mm). Edges shall have a minimum radius of 0.01 inch (0.25 mm).		in. (160 mm), and with the largest cross-sectional dimension not more than 21⁄4 in. (57 mm), provided that graspable edges are rounded so as to provide a radius of not less than 1⁄8 in. (3.2 mm)	
1012.8 Projections. On *ramps*, the clear width between *handrails* shall be 36 inches (914 mm) minimum. Projections into the required width of *stairways* and *ramps* at each side shall not exceed 41/2 inches (114 mm) at or below the *handrail* height. Projections into the required width shall not be limited above the minimum headroom height required in Section 1009.5. Projections due to intermediate *handrails* shall not constitute a reduction in the egress width.	Clarified a provision that an intermediate handrail on a stair or in an aisle is considered a permitted projection and not a reduction in the required egress width.	**7.2.2.4.1.3** Where new intermediate handrails are provided in accordance with 7.2.2.4.1.2, the minimum clear width between handrails shall be 20 in. (510 mm) No equivalent provision in NFPA 101.	**NA**
1013.1 General. *Guards* shall comply with the provisions of Sections 1013.2 through 1013.7. Operable windows with sills located more than 72 inches (1.83 m) above finished grade or other surface below shall comply with Section 1013.8. **1013.8 Window sills.** In Occupancy Groups R-2 and R-3, one- and two-family and multiple-family dwellings, where the opening of the sill portion of an operable window is located more than 72 inches (1829 mm) above the finished grade or other surface	Revised the scoping for guards to reflect that the guard requirements for operable windows have been relocated from Chapter 14, that deals with windows having a sill height more than 72 inches (1.83 mm) above the finished grade. The minimum window sill height at which a guard is not required has been increased from 24 inches to 36 inches (610 mm to 914 mm).	**NA**	**NA**

2012 IBC	Explanation	2012 NFPA 101	Recommendations
below, the lowest part of the clear opening of the window shall be at a height not less than 36 inches (915 mm) above the finished floor surface of the room in which the window is located. Operable sections of windows shall not permit openings that allow passage of a 4- inch-diameter (102 mm) sphere where such openings are located within 36 inches (915 mm) of the finished floor. **Exceptions:** 1. Operable windows where the sill portion of the opening is located more than 75 feet (22 860 mm) above the finished grade or other surface below and that are provided with window fall prevention devices that comply with ASTM F 2006. 2. Windows whose openings will not allow a 4-inch diameter (102 mm) sphere to pass through the opening when the window is in its largest opened position. 3. Openings that are provided with window fall prevention devices that comply with ASTM F 2090. 4. Windows that are provided with window opening control devices that comply with Section 1013.8.1.			
1013.8 Window sills. In Occupancy Groups R-2 and R-3, one- and two-family and multiple-family dwellings, where the opening of the sill portion of an operable window is located more		**NA**	**NA**

2012 IBC	Explanation	2012 NFPA 101	Recommendations
than 72 inches (1829 mm) above the finished grade or other surface below, the lowest part of the clear opening of the window shall be at a height not less than 36 inches (915 mm) above the finished floor surface of the room in which the window is located. Operable sections of windows shall not permit openings that allow passage of a 4- inch-diameter (102 mm) sphere where such openings are located within 36 inches (915 mm) of the finished floor. **Exceptions:** 1. Operable windows where the sill portion of the opening is located more than 75 feet (22 860 mm) above the finished grade or other surface below and that are provided with window fall prevention devices that comply with ASTM F 2006. 2. Windows whose openings will not allow a 4-inchdiameter (102 mm) sphere to pass through the opening when the window is in its largest opened position. 3. Openings that are provided with window fall prevention devices that comply with ASTM F 2090. 4. Windows that are provided with window opening control devices that comply with Section 1013.8.1.			
1013.8.1 Window opening control devices. Window opening control devices shall comply with ASTM F 2090. The window		Not a subject in NFPA 101	**NA**

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opening control device, after operation to release the control device allowing the window to fully open, shall not reduce the, minimum net clear opening area of the window unit to less than the area required by Section 1029.2.			
1013.3 Height. Required *guards* shall not be less than 42 inches (1067 mm) high, measured vertically as follows: 1. From the adjacent walking surfaces; 2. On *stairs*, from the line connecting the leading edges of the tread *nosings*; and 3. On *ramps*, from the *ramp* surface at the *guard*. **Exceptions:** 1. For occupancies in Group R-3 not more than three stories above grade in height and within individual dwelling units in occupancies in Group R-2 not more than three stories above grade in height with separate *means of egress*, required *guards* shall not be less than 36 inches (914 mm) in height measured vertically above the adjacent walking surfaces or adjacent *fixed seating*. 2. For occupancies in Group R-3, and within individual *dwelling units* in occupancies in Group R-2, *guards* on the open sides of *stairs* shall have a height not less than 34 inches (864 mm) measured	Revised to clarify the height of the guard is to be measured from the floor surface, even when a fixed seat is provided adjacent to the guard. With the new exception, the minimum required height for guards in Group R-3 occupancies and within individual Group R-2 dwelling units has been decreased from 42 inches to 36 inches (1067 mm to 914 mm). However, in these residential situations, the height for the guard would be measured from any adjacent fixed seat.	**7.2.2.4.5.1** The height of guards required in 7.1.8 shall be measured vertically to the top of the guard from the surface adjacent thereto. **7.2.2.4.5.2** Guards shall be not less than 42 in. (1065 mm) high, except as permitted by one of the following: (1) Existing guards within dwelling units shall be permitted to be not less than 36 in. (915 mm) high. (2) The requirement of 7.2.2.4.5.2 shall not apply in assembly occupancies where otherwise provided in Chapters 12 and 13. (3)*Existing guards on existing stairs shall be permitted to be not less than 30 in. (760 mm) high.	**NA**

vertically from a line connecting the leading edges of the treads.			
	Moved the requirements from the text into a table for clarification.		

NFPA Common Paths of Travel	
Assembly	**12.2.5.1.2** A common path of travel shall be permitted for the first 20 ft (6100 mm) from any point where the common path serves any number of occupants, and for the first 75 ft (23 m) from any point where the common path serves not more than 50 occupants. **12.4.2.9** Smoke-protected assembly seating conforming with the requirements of 12.4.2 shall be permitted to have a common path of travel of 50 ft (15 m) from any seat to a point where a person has a choice of two directions of egress travel. **13.2.5.1.2** A common path of travel shall be permitted for the first 20 ft (6100 mm) from any point where the common path serves any number of occupants, and for the first 75 ft (23 m) from any point where the common path serves not more than 50 occupants.
Educational	**14.2.5.3.1** Common path of travel shall not exceed 100 ft (30 m) in a building protected throughout by an approved, supervised automatic sprinkler system in accordance with Section 9.7. **14.2.5.3.2** Common path of travel shall not exceed 75 ft (23 m) in a building not protected throughout by an approved, supervised automatic sprinkler s **15.2.5.3.1** Common path of travel shall not exceed 100 ft (30 m) in a building protected throughout by an approved, supervised automatic sprinkler system in accordance with Section 9.7. **15.2.5.3.2** Common path of travel shall not exceed 75 ft (23 m) in a building not protected throughout by an approved, supervised automatic sprinkler system in accordance with Section 9.7.ystem in accordance with Section 9.7.
Day Care	**16.2.5.3.1** Common path of travel shall not exceed 100 ft (30 m) in a building protected throughout by an approved, supervised automatic sprinkler system in accordance with Section 9.7. **16.2.5.3.2** Common path of travel shall not exceed 75 ft (23 m) in a building not protected throughout by an approved, supervised automatic sprinkler system in accordance with Section 9.7. **17.2.5.3.1** Common path of travel shall not exceed 100 ft (30 m) in a building protected throughout by an approved, supervised automatic sprinkler system in accordance with Section 9.7. **17.2.5.3.2** Common path of travel shall not exceed 75 ft (23 m) in a building

	not protected throughout by an approved, supervised automatic sprinkler system in accordance with Section 9.7.		
Health Care	**18.2.5.3 Common Path of Travel.** Common path of travel shall not exceed 100 ft (30 m).		
Ambulatory Health	**22.2.5.3** A common path of travel shall not exceed 100 ft (30 m). **22.2.5.3** A common path of travel shall not exceed 100 ft (30 m).		
Detention and Correction	**22.2.5.3** A common path of travel shall not exceed 100 ft (30 m). **22.2.5.3** A common path of travel shall not exceed 100 ft (30 m). **23.2.5.3** A common path of travel shall not exceed 50 ft (15 m), unless otherwise permitted by one of the following: (1) A common path of travel shall be permitted for the first 100 ft (30 m) in smoke compartments protected throughout by an approved automatic sprinkler system in accordance with 23.3.5.3. (2) A common path of travel shall be permitted to exceed 50 ft (15 m) in multilevel residential housing units in which each floor level, considered separately, has not less than one-half of its individual required egress capacity accessible by exit access leading directly out of that level without traversing another communicating floor level. (3)*Approved existing common paths of travel that exceed 50 ft (15 m) shall be permitted to continue to be used.		
Hotels and Dorms	**28.2.5.3** In buildings not protected throughout by an approved, supervised automatic sprinkler system in accordance with 28.3.5, common paths of travel shall not exceed 35 ft (10.7 m); travel within a guest room or guest suite shall not be included when calculating common path of travel. **28.2.5.4** In buildings protected throughout by an approved, supervised automatic sprinkler system in accordance with 28.3.5, common path of travel shall not exceed 50 ft (15 m); travel within a guest room or guest suite shall not be included when determining common path of travel. **28.2.5.3** In buildings not protected throughout by an approved, supervised automatic sprinkler system in accordance with 28.3.5, common paths of travel shall not exceed 35 ft (10.7 m); travel within a guest room or guest suite shall not be included when calculating common path of travel. **28.2.5.4** In buildings protected throughout by an approved, supervised automatic sprinkler system in accordance with 28.3.5, common path of travel shall not exceed 50 ft (15 m); travel within a guest room or guest suite shall not be included when determining common path of travel. **29.2.5.4** In buildings protected throughout by an approved, supervised		

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	automatic sprinkler system in accordance with 29.3.5, common path of travel shall not exceed 50 ft (15 m); travel within a guest room or guest suite shall not be included when determining common path of travel.		
Apartments	**30.2.5.3.1** No common path of travel shall exceed 35 ft (10.7 m) in buildings not protected throughout by an approved, supervised automatic sprinkler system installed in accordance with 30.3.5. Travel within a dwelling unit shall not be included when calculating common path of travel. **30.2.5.3.2** No common path of travel shall exceed 50 ft (15 m) in buildings protected throughout by an approved, supervised automatic sprinkler system installed in accordance with 30.3.5. Travel within a dwelling unit shall not be included when determining common path of travel. **31.2.5.3.1** No common path of travel shall exceed 35 ft (10.7 m) in buildings not protected throughout by an approved, supervised automatic sprinkler system installed in accordance with 31.3.5. Travel within a dwelling unit shall not be included when calculating common path of travel. **31.2.5.3.2** No common path of travel shall exceed 50 ft (15 m) in buildings protected throughout by an approved, supervised automatic sprinkler system installed in accordance with 31.3.5. Travel within a dwelling unit shall not be included when calculating common path of travel.		
Residential Board and Care	**32.3.2.5.2** Common paths of travel shall not exceed 75 ft (23 m).		
Mercantile	**36.2.5.3** Common paths of travel shall be limited by any of the following: (1) Common paths of travel shall not exceed 75 ft (23 m) in mercantile occupancies classified as low or ordinary hazard. (2) Common paths of travel shall not exceed 100 ft (30 m) in mercantile occupancies classified as low or ordinary hazard where the building is protected throughout by an approved, supervised automatic sprinkler system in accordance with 9.7.1.1(1). (3) Common paths of travel shall not be permitted in mercantile occupancies classified as high hazard.		

Business	**38.2.5.3.1** Common path of travel shall not exceed 100 ft (30 m) in a building protected throughout by an approved, supervised automatic sprinkler system in accordance with 9.7.1.1(1). **38.2.5.3.2** Common path of travel shall not exceed 100 ft (30 m) within a single tenant space having an occupant load not exceeding 30 persons. **38.2.5.3.3** In buildings other than those complying with 38.2.5.3.1 or 38.2.5.3.2, common path of travel shall not exceed 75 ft (23 m). **39.2.4.5** A single means of egress shall be permitted from a mezzanine within a business occupancy, provided that the common path of travel does not exceed 75 ft (23 m), or 100 ft (30 m) if protected throughout by an approved automatic sprinkler system in accordance with 9.7.1.1(1).
Industrial	**Tables 40.2.5 and 40.2.6**
Storage	**Table 42.2.5**

1014.3 Common path of egress travel. The *common path of egress travel* shall not exceed the *common path of egress travel* distances in Table

TABLE 1014.3 COMMON PATH OF EGRESS TRAVEL

OCCUPANCY	WITHOUT SPRINKLER SYSTEM (feet)		WITH SPRINKLER SYSTEM (feet)	
	Occupant Load			
	≤ 30	> 30		
B, S[d]	100	75	100[a]	B = NL SPL S = 100’ NS
U	100	75	75[a]	
F	75	75	100[a]	F = 50” NS
H-1, H-2, H-3	Not Permitted	Not Permitted	25[a]	
R-2	75	75	125[b]	Differs Limits on in room
R-3[e]	75	75	125[b]	Differs Limits on in room
I-2 407.4	Max distance sleeping room 50” Care suite 100’ but not listed common path			100”
I-3	100	100	100[a]	
All others[c, f]	75	75	75[a]	E = 100’ SPL Amb Health = 100’ D and C = 100’

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For SI: 1 oot = 304.8 mm. a. Buildings equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1. b. Buildings equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1 or 903.3.1.2. See Section 903 for occupancies where *automatic sprinkler systems* are permitted in accordance with Section 903.3.1.2. c. For a room or space used for assembly purposes having *fixed seating*, see Section 1028.8. d. The length of a *common path of egress travel* in a Group S-2 *open parking garage* shall not be more than 100 feet (30 480 mm). e. The length of a *common path of egress travel* in a Group R-3 occupancy located in a mixed occupancy building. f. For the distance limitations in Group I-2, see Section 407.4.			
Table 1015.1	Added Group I-2 to the table to address areas that are not covered in care suites in Section 407.	Not a subject in NFPA 101 **7.4.1.1** The number of means of egress from any balcony, mezzanine, story, or portion thereof shall be not less than two, except under one of the following conditions: (1) A single means of egress shall be permitted where permitted in Chapters 11 through 43. (2) A single means of egress shall be permitted for a mezzanine or balcony where the common path of travel limitations of Chapters 11 through 43 are met. **18.2.4 Number of Means of Egress.** **18.2.4.1** The number of means of egress shall be in accordance with Section 7.4. **18.2.4.2** Not less than two exits shall be provided on every story. **18.2.4.3** Not less than two	**NA**

2012 IBC	Explanation	2012 NFPA 101	Recommendations
		separate exits shall be accessible from every part of every story. **18.2.4.4*** Not less than two exits shall be accessible from each smoke compartment, and egress shall be permitted through an adjacent compartment(s), provided that the two required egress paths are arranged so that both do not pass through the same adjacent smoke compartment. **18.2.5.5 Two Means of Egress.** **18.2.5.5.1** Sleeping rooms of more than 1000 ft2 (93 m2) shall have not less than two exit access doors remotely located from each other. **18.2.5.5.2** Non-sleeping rooms of more than 2500 ft2 (230 m2) shall have not less than two exit access doors remotely located from each other. **18.2.5.6 Corridor Access.** **18.2.5.6.1*** Every habitable room shall have an exit access door leading directly to an exit access corridor, unless otherwise provided in 18.2.5.6.2, 18.2.5.6.3, and 18.2.5.6.4. **18.2.5.6.2** Exit access from a patient sleeping room with not more than eight patient beds shall be permitted to pass through one intervening room to reach an exit access corridor, provided that the intervening room is equipped with an approved automatic smoke detection system in accordance with Section 9.6.	

2012 IBC	Explanation	2012 NFPA 101	Recommendations
		18.2.5.6.3 Rooms having an exit door opening directly to the outside from the room at the finished ground level shall not be required to have an exit access door leading directly to an exit access corridor. **18.2.5.6.4** Rooms within suites complying with 18.2.5.7 shall not be required to have an exit access door leading directly to an exit access corridor. **18.2.5.7.2.2 Sleeping Suite Number of Means of Egress.** **(A)** Sleeping suites of more than 1000 ft2 (93 m2) shall have not less than two exit access doors remotely located from each other. **(B)*** One means of egress from the suite shall be directly to a corridor complying with 18.3.6. **(C)*** For suites requiring two means of egress, one means of egress from the suite shall be permitted to be into another suite, provided that the separation between the suites complies with the corridor requirements of 18.3.6.2 through 18.3.6.5.	

TABLE 1015.1 SPACES WITH ONE EXIT OR EXIT ACCESS DOORWAY

OCCUPANCY	MAXIMUM OCCUPANT LOAD
A, B, E, F, M, U	49
H-1, H-2, H-3	3
H-4, H-5, I-1, I-2, I-3, I-4, R	10
S	29

2012 IBC	Explanation	2012 NFPA 101	Recommendations
1016.1 General. Travel distance within the *exit access* portion of the *means of egress* system shall be in accordance with this section.	Added a new section dealing with the daycare facilities to clarify the footnote deleted from Table 1015.1 that was deleted and clarified here. Rooms where infants or toddlers are cared for are limited to 10 children maximum when the room has only one exit. Spaces that house older children (Group E) can use the 49-maximum occupant load in Table 1015.1.	Not a subject in NFPA 101 **7.6* Measurement of Travel Distance to Exits.** **14.2.5.5** Every room that is normally subject to student occupancy shall have an exit access door leading directly to an exit access corridor or exit, unless otherwise permitted by one of the following: (1) This requirement shall not apply where an exit door opens directly to the outside or to an exterior balcony or corridor as described in 14.2.5.9. (2) One room shall be permitted to intervene between a normally occupied student room and an exit access corridor, provided that all of the following criteria are met: (a) The travel from a room served by an intervening room to the corridor door or exit shall not exceed 75 ft (23 m).	**NA**
1016.2 Limitations. *Exit access* travel distance shall not exceed the values given in Table 1016.2. **1016.2.1 Exterior egress balcony increase.** *Exit access* travel distances specified in Table 1016.2 shall be increased up to an additional 100 feet (30 480 mm) provided the last portion of the *exit access* leading to the *exit* occurs on an exterior egress balcony constructed in accordance with Section 1019. The length of such balcony shall not be less than the amount of the increase taken.	Revised to clarify the measurement of the exit access travel distance. The measurement would be from any point on the floor to the closest doorway leading to an exit stairway or ramp. When exit access stairways or ramps are part of the route, they will be included in the exit access travel distance. The exceptions being open parking garages and outdoor stadiums.	Not a subject in NFPA 101 **7.5.3.1** Exit access shall be permitted to be by means of any exterior balcony, porch, gallery, or roof that conforms to the requirements of this chapter. **7.5.3.2** The long side of the balcony, porch, gallery, or similar space shall be at least 50 percent open and shall be arranged to restrict the accumulation of smoke. **7.5.3.3** Exterior exit access balconies shall be separated from the interior of the building by walls	**NA**

2012 IBC	Explanation	2012 NFPA 101	Recommendations
		and opening protectives as required for corridors, unless the exterior exit access balcony is served by at least two remote stairs that can be accessed without any occupant traveling past an unprotected opening to reach one of the stairs, or unless dead ends on the exterior exit access do not exceed 20 ft (6100 mm).	
1016.3 Measurement. *Exit access* travel distance shall be measured from the most remote point within a story along the natural and unobstructed path of horizontal and vertical egress travel to the entrance to an *exit*. **Exceptions:** 1. In *open parking garages*, *exit access* travel distance is permitted to be measured to the closest riser of an *exit access stairway* or the closest slope of an *exit access ramp*. 2. In outdoor facilities with open *exit access* components, *exit access* travel distance is permitted to be measured to the closest riser of an *exit access stairway* or the closest slope of an *exit access ramp*.		**7.6.1*** The travel distance to an exit shall be measured on the floor or other walking surface as follows: (1) Along the centerline of the natural path of travel, starting from the most remote point subject to occupancy (2) Curving around any corners or obstructions, with a 12 in. (305 mm) clearance there from (3) Terminating at one of the following: (a) Center of the doorway (b) Other point at which the exit begins (c) Smoke barrier in an existing detention and correctional occupancy as provided in Chapter 23 **7.6.2** Where outside stairs that are not separated from the building are permitted as required exits, the travel distance shall be measured from the most remote point subject to occupancy to the leading nosing of the stair landing at the floor level under consideration.	**NA**

2012 IBC	Explanation	2012 NFPA 101	Recommendations
		7.6.3* Where open stairways or ramps are permitted as a path of travel to required exits, the distance shall include the travel on the stairway or ramp and the travel from the end of the stairway or ramp to an outside door or other exit in addition to the distance traveled to reach the stairway or ramp.	
1016.3.1 Exit access stairways and ramps. Travel distance on *exit access stairways* or *ramps* shall be included in the *exit access* travel distance measurement. The measurement along *stairways* shall be made on a plane parallel and tangent to the *stair* tread *nosings* in the center of the *stair* and landings. The measurement along *ramps* shall be made on the walking surface in the center of the *ramp* and landings.		**7.6.5** Where measurement includes stairs, the measurement shall be taken in the plane of the tread nosing.	**NA**
1018.2 Width. The minimum width of *corridors* specified in Table 1018.2 shall be as determined in Section 1005.1.	Moved the requirements for corridor width into table format.	**7.3.4 Minimum Width.** **7.3.4.1** The width of any means of egress, unless otherwise provided in 7.3.4.1.1 through 7.3.4.1.3, shall be as follows: (1) Not less than that required for a given egress component in this chapter or Chapters 11 through 43 (2) Not less than 36 in. (915 mm) where another part of this chapter and Chapters 11 through 43 do not specify a minimum width **12.2.3.8 Minimum Corridor**	

<table>
<tr><th>2012 IBC</th><th>Explanation</th><th>2012 NFPA 101</th><th>Recommendations</th></tr>
<tr><td></td><td></td><td>Width. The width of any exit access corridor serving 50 or more persons shall be not less than 44 in. (1120 mm).
14.2.3.2 Minimum Corridor Width. Exit access corridors shall have not less than 6 ft (1830 mm) of clear width.
15.2.3.2 Minimum Corridor Width. Exit access corridors shall have not less than 6 ft (1830 mm) of clear width.</td><td></td></tr>
<tr><td colspan="4">TABLE 1018.2 MINIMUM CORRIDOR WIDTH

<table>
<tr><th>OCCUPANCY</th><th>WIDTH (minimum)</th></tr>
<tr><td>Any facilities not listed below</td><td>44 inches</td></tr>
<tr><td>Access to and utilization of mechanical, plumbing or electrical systems or equipment</td><td>24 inches</td></tr>
<tr><td>With a required occupancy capacity less than 50</td><td>36 inches</td></tr>
<tr><td>Within a dwelling unit</td><td>36 inches</td></tr>
<tr><td>In Group E with a corridor having a required capacity of 100 or more</td><td>72 inches</td></tr>
<tr><td>In corridors and areas serving gurney traffic in occupancies where patients receive outpatient medical care, which causes the patient to be incapable of self-preservation</td><td>72 inches</td></tr>
<tr><td>Group I-2 in areas where required for bed movement</td><td>96 inches</td></tr>
</table></td></tr>
<tr><td>1018.6 Corridor continuity. Fire-resistance-rated corridors shall be continuous from the point of entry to an exit, and shall not be interrupted by intervening rooms. Where the path of egress travel within a fire-resistance-rated corridor to the exit includes travel along unenclosed exit access stairways or ramps, the fire</td><td>Added additional language to clarify that if a corridor leads to an open exit access stairway, the corridor continuity requirements would still be applicable down the stairway and for the corridor leading to an exit on the adjacent floor.</td><td>7.5.1.2 Corridors shall provide exit access without passing through any intervening rooms other than corridors, lobbies, and other spaces permitted to be open to the corridor, unless otherwise provided in 7.5.1.2.1 and 7.5.1.2.2.
7.5.1.2.1 Approved existing corridors that require passage</td><td>NA</td></tr>
</table>

2012 IBC	Explanation	2012 NFPA 101	Recommendations
resistance-rating shall be continuous for the length of the *stairway* or *ramp* and for the length of the connecting *corridor* on the adjacent floor leading to the *exit*.		through a room to access an exit shall be permitted to continue to be used, provided that all of the following criteria are met: (1) The path of travel is marked in accordance with Section 7.10. (2) Doors to such rooms comply with 7.2.1. (3) Such arrangement is not prohibited by the applicable occupancy chapter. **7.5.1.2.2** Corridors that are not required to be fire resistance rated shall be permitted to discharge into open floor plan areas.	
	Added a table to address single means of egress for floors that contain uses other than Group R-2 dwelling units. See Table 1021.2(1).	Not a subject in NFPA 101 **7.4.1.1** The number of means of egress from any balcony, mezzanine, story, or portion thereof shall be not less than two, except under one of the following conditions: (1) A single means of egress shall be permitted where permitted in Chapters 11 through 43. (2) A single means of egress shall be permitted for a mezzanine or balcony where the common path of travel limitations of Chapters 11 through 43 are met.	**NA**

NFPA Single Exit	
Hotels and Dorms	**28.2.4.3** A single exit shall be permitted in buildings where the total number of stories does not exceed four, provided that all of the following conditions are met: (1) There are four or fewer guest rooms or guest suites per story.

2012 IBC	Explanation	2012 NFPA 101	Recommendations

	(2) The building is protected throughout by an approved, supervised automatic sprinkler system in accordance with 28.3.5. (3) The exit stairway does not serve more than one-half of a story below the level of exit discharge. (4) The travel distance from the entrance door of any guest room or guest suite to an exit does not exceed 35 ft (10.7 m). (5) The exit stairway is completely enclosed or separated from the rest of the building by barriers having a minimum 1-hour fire resistance rating. (6) All openings between the exit stairway enclosure and the building are protected with self-closing door assemblies having a minimum 1-hour fire protection rating. (7) All corridors serving as access to exits have a minimum 1-hour fire resistance rating. (8) Horizontal and vertical separation having a minimum 1⁄2-hour fire resistance rating	
Apartments	**30.2.4.4** Dwelling units shall be permitted to have access to a single exit, provided that one of the following conditions is met: (1) The dwelling unit has an exit door opening directly to the street or yard at the finished ground level. (2) The dwelling unit has direct access to an outside stair that complies with 7.2.2 and serves a maximum of two units, both of which are located on the same story. (3) The dwelling unit has direct access to an interior stair that serves only that unit and is separated from all other portions of the building by fire barriers having a minimum 1-hour fire resistance rating, with no opening therein.	
Residential Board and Care	**32.3.2.4.2** Exit access, as required by 32.3.2.4.1(3), shall be permitted to include a single exit access path for the distances permitted as common paths of travel by 32.3.2.5.2. **32.3.2.5.2** Common paths of travel shall not exceed 75 ft (23 m).	
Mercantile	**36.2.4.2** Exit access, as required by 36.2.4.1(3), shall be permitted to include a single exit access path for the distances permitted as common paths of travel by 36.2.5.3. **36.2.5.3** Common paths of travel shall be limited by any of the following: (1) Common paths of travel shall not exceed 75 ft (23 m) in mercantile occupancies classified as low or ordinary hazard. (2) Common paths of travel shall not exceed 100 ft (30 m) in mercantile occupancies classified as low or ordinary hazard where the building is protected throughout by an approved, supervised automatic sprinkler system in accordance	

	with 9.7.1.1(1). (3) Common paths of travel shall not be permitted in mercantile occupancies classified as high hazard.
Business	**38.2.4.2** Exit access, as required by 38.2.4.1(3), shall be permitted to include a single exit access path for the distances permitted as common paths of travel by 38.2.5.3. **38.2.4.3** A single exit shall be permitted for a room or area with a total occupant load of less than 100 persons, provided that all of the following criteria are met: (1) The exit shall discharge directly to the outside at the level of exit discharge for the building. (2) The total distance of travel from any point, including travel within the exit, shall not exceed 100 ft (30 m). **38.2.4.6** A single exit shall be permitted for a single-tenant space or building two or fewer stories in height, provided that both of the following criteria are met: (1) The building is protected throughout by an approved, supervised automatic sprinkler system in accordance with 9.7.1.1(1). (2) The total travel to the outside does not exceed 100 ft (30 m).

TABLE 1021.2(2) STORIES WITH ONE EXIT OR ACCESS TO ONE EXIT FOR OTHER OCCUPANCIES

STORY	OCCUPANCY	MAXIMUM OCCUPANTS PER STORY	MAXIMUM EXIT ACCESS TRAVEL DISTANCE
First story or basement	A, B[b] , E, F[b] , M, U, S[b]	49 occupants	75 feet
	H-2, H-3	3 occupants	25 feet
	H-4, H-5, I, R-1, R-2[a,c] , R-4	10 occupants	75 feet
	S	29 occupants	100 feet
Second story	B, F, M, S	29 occupants	75 feet
Third story and above	NP	NA	NA

2012 IBC	Explanation	2012 NFPA 101	Recommendations

For SI: 1 foot = 304.8 mm.

NP - Not Permitted

NA - Not Applicable

a. Buildings classified as Group R-2 equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1 or 903.3.1.2 and provided with *emergency escape and rescue openings* in accordance with Section 1029.

b. Group B, F and S occupancies in buildings equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1 shall have a maximum travel distance of 100 feet.

c. This table is used for R-2 occupancies consisting of *sleeping units*. For R-2 occupancies consisting of *dwelling units*, use Table 1021.2(1).

1019.4 Location. Exterior egress balconies shall have a minimum fire separation distance of 10 feet (3048 mm) measured from the exterior edge of the egress balcony to adjacent lot lines and from other buildings on the same lot unless the adjacent building exterior walls and openings are protected in accordance with Section 705 based on fire separation distance.	Added that egress balconies, as an element of exit access, must be separated from the lot lines by a minimum distance of 10 feet (3048 mm). This is consistent with what was previously indicated in Section 1027.3.	Not a subject addressed in NFPA 101	**NA**
Table 1021.2(1)	Added a table to address single means of egress for floors that contain apartment units (i.e., dwelling units). For dormitory or group homes (i.e., sleeping units) use Table 1021.2(2).		**NA**

Apartments	**30.2.4.4** Dwelling units shall be permitted to have access to a single exit, provided that one of the following conditions is met: (1) The dwelling unit has an exit door opening directly to the street or yard at the finished ground level. (2) The dwelling unit has direct access to an outside stair that complies with 7.2.2 and serves a maximum of two units, both of which are located on the same story.

	(3) The dwelling unit has direct access to an interior stair that serves only that unit and is separated from all other portions of the building by fire barriers having a minimum 1-hour fire resistance rating, with no opening therein.		

TABLE 1021.2(1) STORIES WITH ONE EXIT OR ACCESS TO ONE EXIT FOR R-2 OCCUPANCIES

STORY	OCCUPANCY	MAXIMUM NUMBER OF DWELLING UNITS	MAXIMUM EXIT ACCESS TRAVEL DISTANCE
Basement, first, second or third story	R-2[a, b]	4 dwelling units	125 feet
Fourth story and above	NP	NA	NA

For SI: 1 foot = 304.8 mm.

NP - Not Permitted

NA - Not Applicable

a. Buildings classified as Group R-2 equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1 or 903.3.1.2 and provided with *emergency escape and rescue openings* in accordance with Section 1029.

b. This table is used for R-2 occupancies consisting of *dwelling units*. For R-2 occupancies consisting of *sleeping units*, use Table 1021.2(2).

1021.1 General. Each story and occupied roof shall have the minimum number of *exits*, or access to exits, as specified in this section. The required number of *exits*, or *exit access stairways* or *ramps* providing access to exits, from any story shall be maintained until arrival at grade or a *public way*. *Exits* or access to exits from	Added, provisions that start out saying that each story has to have a certain number of means of egress. This can be via exits or access to exits on an adjacent floor via an exit access stairway or ramp. The exceptions allow for open parking garages and outdoor stadiums to use open exit access stairways from any level all the way	**7.4.1.1** The number of means of egress from any balcony, mezzanine, story, or portion thereof shall be not less than two, except under one of the following conditions: (1) A single means of egress shall be permitted where permitted in Chapters 11 through 43. (2) A single means of egress shall	**NA**

2012 IBC	Explanation	2012 NFPA 101	Recommendations
any story shall be configured in accordance with this section. Each story above the second story of a building shall have a minimum of one interior or exterior *exit stairway*, or interior or exterior *exit ramp*. At each story above the second story that requires a minimum of three or more *exits*, or access to *exits*, a minimum of 50 percent of the required *exits* shall be interior or exterior *exit stairways*, or interior or exterior *exit ramps*. **Exceptions:** 1. *Interior exit stairways* and *interior exit ramps* are not required in *open parking garages* where the *means of egress* serves only the *open parking garage*. 2. *Interior exit stairways* and *interior exit ramp*s are not required in outdoor facilities where all portions of the *means of egress* are essentially open to the outside.	to the level of exit discharge.	be permitted for a mezzanine or balcony where the common path of travel limitations of Chapters 11 through 43 are met. **7.4.1.2** The number of means of egress from any story or portion thereof, other than for existing buildings as permitted in Chapters 11 through 43, shall be as follows: (1) Occupant load more than 500 but not more than 1000 — not less than 3 (2) Occupant load more than 1000 — not less than 4	
1021.2 Exits from stories. Two *exits*, or *exit access stairways* or *ramps* providing access to *exits*, from any story or occupied roof shall be provided where one of the following conditions exists: 1. The *occupant load* or number of *dwelling units* exceeds one of the values in Table 1021.2(1) or 1021.2(2). 2. The *exit access* travel distance exceeds that specified in Table 1021.2(1) or 1021.2(2) as determined in accordance with the provisions of Section 1016.1. 3. *Helistop* landing areas located on	Added exceptions. The main body of the section allows for single exits or single exit access from floors that meet the occupant load/number of dwelling units and travel distances specified in Tables 1021.2(1) and 1021.2(2). For new Exception 3, see Section 1021.2.3. In accordance with new Exception 7, in limited circumstances, exits are now permitted to be arranged where they serve a portion of a story instead of requiring that all of the required exits from the story to be accessible	**7.4.1.1** The number of means of egress from any balcony, mezzanine, story, or portion thereof shall be not less than two, except under one of the following conditions: (1) A single means of egress shall be permitted where permitted in Chapters 11 through 43. (2) A single means of egress shall be permitted for a mezzanine or balcony where the common path of travel limitations of Chapters 11 through 43 are met. **7.4.1.2** The number of means of egress from any story or portion	**NA**

2012 IBC	Explanation	2012 NFPA 101	Recommendations
buildings or structures shall be provided with two *exits*, or *exit access stairways* or *ramps* providing access to exits. **Exceptions:** 1. Rooms, areas and spaces complying with Section 1015.1 with *exits* that discharge directly to the exterior at the *level of exit discharge*, are permitted to have one *exit*. 2. Group R-3 occupancy buildings shall be permitted to have one *exit*. 3. Parking garages where vehicles are mechanically parked shall be permitted to have one *exit*. 4. Air traffic control towers shall be provided with the minimum number of *exits* specified in Section 412.3. 5. Individual *dwelling units* in compliance with Section 1021.2.3. 6. Group R-3 and R-4 congregate residences shall be permitted to have one *exit*. 7. *Exits* serving specific spaces or areas need not be accessed by the remainder of the story when all of the following are met: 7.1. The number of *exits* from the entire story complies with Section 1021.2.4; 7.2 . The access to *exits* from each individual space in the story complies with Section 1015.1; and 7.3 . All spaces within each portion of a story shall have access to the minimum number of *approved* independent *exits* based on the *occupant loa*d of that portion of the story, but not less than two exits.	to all of the occupants.	thereof, other than for existing buildings as permitted in Chapters 11 through 43, shall be as follows: (1) Occupant load more than 500 but not more than 1000— not less than 3 (2) Occupant load more than 1000 — not less than 4where a single exit is permitted in Chapters 11 through 43	

2012 IBC	Explanation	2012 NFPA 101	Recommendations
1021.2.1 Mixed occupancies. Where one *exit*, or *exit access stairway* or *ramp* providing access to *exits* at other stories, is permitted to serve individual stories, mixed occupancies shall be permitted to be served by single *exits* provided each individual occupancy complies with the applicable requirements of Table 1021.2(1) or Table 1021.2(2) for that occupancy. Where applicable, cumulative *occupant loads* from adjacent occupancies shall be considered in accordance with the provisions of Section 1004.1. In each story of a mixed occupancy building, the maximum number of occupants served by a single *exit* shall be such that the sum of the ratios of the calculated number of occupants of the space divided by the allowable number of occupants for each occupancy does not exceed one.	Added, a ratio equation is now to be used to determine if a single exit is allowed to serve the combined occupant load from different occupancies.	**6.1.14.3 Mixed Occupancies.** **6.1.14.3.1** Each portion of the building shall be classified as to its use in accordance with Section 6.1. **6.1.14.3.2*** The building shall comply with the most restrictive requirements of the occupancies involved, unless separate safeguards are approved. **7.3.1.2* Occupant Load Factor.** The occupant load in any building or portion thereof shall be not less than the number of persons determined by dividing the floor area assigned to that use by the occupant load factor for that use as specified in Table 7.3.1.2, Figure 7.3.1.2(a), and Figure 7.3.1.2(b). Where both gross and net area figures are given for the same occupancy, calculations shall be made by applying the gross area figure to the gross area of the portion of the building devoted to the use for which the gross area figure is specified and by applying the net area figure to the net area of the portion of the building devoted to the use for which the net area figure is specified. **7.3.1.3 Occupant Load Increases.** **7.3.1.3.1** The occupant load in any building or portion thereof shall be permitted to be increased from the occupant load established for the given use in accordance with 7.3.1.2 where all other requirements of this	NA

2012 IBC	Explanation	2012 NFPA 101	Recommendations
		Code are also met, based on such increased occupant load.	
1021.3 Exit configuration. *Exits*, or *exit access stairways* or *ramps* providing access to *exits* at other stories, shall be arranged in accordance with the provisions of Sections 1015.2 through 1015.2.2. *Exits* shall be continuous from the point of entry into the *exit* to the *exit discharge*. **1021.3.1 Access to exits at adjacent levels.** Access to *exits* at other levels shall be by *stairways* or *ramps*. Where access to *exits* occurs from adjacent building levels, the horizontal and vertical *exit access* travel distance to the closest *exit* shall not exceed that specified in Section 1016.1. Access to *exits* at other levels shall be from an adjacent story. **Exception:** Landing platforms or roof areas for *helistops* that are less than 60 feet (18 288 mm) long, or less than 2,000 square feet (186 m2) in area, shall be permitted to access the second *exit* by a fire escape, *alternating tread device* or ladder leading to the story or level below. **1021.4 Vehicular ramps.** Vehicular ramps shall not be considered as an *exit access ramp* unless pedestrian facilities are provided.	Added, a section to coordinate with the open exit access stairway provisions in Section 1009.3 and the exit access travel provisions in Section 1016.1.	**7.5.1.1** Exits shall be located, and exit access shall be arranged, so that exits are readily accessible at all times. **7.5.1.1.1*** Where exits are not immediately accessible from an open floor area, continuous passageways, aisles, or corridors leading directly to every exit shall be maintained and shall be arranged to provide access for each occupant to not less than two exits by separate ways of travel, unless otherwise provided in 7.5.1.1.3 and 7.5.1.1.4. **7.5.1.1.2** Exit access corridors shall provide access to not less than two approved exits, unless otherwise provided in 7.5.1.1.3 and 7.5.1.1.4. **7.5.1.1.3** The requirements of 7.5.1.1.1 and 7.5.1.1.2 shall not apply where a single exit is permitted in Chapters 11 through 43 **7.5.1.1.4** Where common paths of travel are permitted for an occupancy in Chapters 11 through 43, such common paths of travel shall be permitted but shall not exceed the limit specified. **7.5.1.2** Corridors shall provide exit access without passing through any intervening rooms other than corridors, lobbies, and other spaces permitted to be open to the corridor, unless otherwise provided in	**NA**

2012 IBC	Explanation	2012 NFPA 101	Recommendations
		7.5.1.2.1 and 7.5.1.2.2. **7.5.1.3.2*** Where two exits, exit accesses, or exit discharges are required, they shall be located at a distance from one another not less than one-half the length of the maximum overall diagonal dimension of the building or area to be served, measured in a straight line between the nearest edge of the exits, exit accesses, or exit discharges, unless otherwise provided in 7.5.1.3.3 through 7.5.1.3.5. **7.5.1.3.3** In buildings protected throughout by an approved, supervised automatic sprinkler system in accordance with Section 9.7, the minimum separation distance between two exits, exit accesses, or exit discharges, measured in accordance with 7.5.1.3.2, shall be not less than one-third the length of the maximum overall diagonal dimension of the building or area to be served. **7.5.1.3.4*** In other than high-rise buildings, where exit enclosures are provided as the required exits specified in 7.5.1.3.2 or 7.5.1.3.3 and are interconnected by not less than a 1-hour fire resistance–rated corridor, exit separation shall be measured along the shortest line of travel within the corridor.	
1021.2.2 Basements. A basement provided with one *exit* shall not be located more than one story below	Added section that allows for individual dwelling units to have a single exit out of the unit. This could	Basements single exit is NA. **28.2.4.1** Means of egress shall comply with all of the following,	**NA**

2012 IBC	Explanation	2012 NFPA 101	Recommendations
grade plane. **1021.2.3 Single-story or multiple-story dwelling units.** Individual single-story or multiple-story *dwelling units* shall be permitted to have a single *exit* within and from the *dwelling unit* provided that all of the following criteria are met: 1. The *dwelling unit* complies with Section 1015.1 as a space with one *means of egress* and 2. Either the *exit* from the *dwelling unit* discharges directly to the exterior at the *level of exit discharge*, or the *exit access* outside the dwelling unit's entrance door provides access to not less than two *approved* independent *exits*.	be used for Group R-2 or R-3 dwelling units, such as apartments within apartment buildings, apartments within mixed use buildings, or townhouses-type unit.	except as otherwise permitted by 28.2.4.2 and **28.2.4.3:** (1) The number of means of egress shall be in accordance with Section 7.4. (2) Not less than two separate exits shall be provided on every story. (3) Not less than two separate exits shall be accessible from every part of every story. 28.2.4.3 A single exit shall be permitted in buildings where the total number of stories does not exceed four, provided that all of the following conditions are met: (1) There are four or fewer guest rooms or guest suites per story. (2) The building is protected throughout by an approved, supervised automatic sprinkler system in accordance with 28.3.5. (3) The exit stairway does not serve more than one-half of a story below the level of exit discharge. (4) The travel distance from the entrance door of any guest room or guest suite to an exit does not exceed 35 ft (10.7 m). (5) The exit stairway is completely enclosed or separated from the rest of the building by barriers having a minimum 1-hour fire resistance rating.	

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		(6) All openings between the exit stairway enclosure and the building are protected with self-closing door assemblies having a minimum 1-hour fire protection rating. (7) All corridors serving as access to exits have a minimum 1-hour fire resistance rating. (8) Horizontal and vertical separation having a minimum 1⁄2-hour fire resistance rating is provided between guest rooms or guest suites.	
1022.2 Construction. Enclosures for *interior exit stairways* and ramps shall be constructed as *fire barriers* in accordance with Section 707 or *horizontal assemblies* constructed in accordance with Section 711, or both. *Interior exit stairway* and *ramp* enclosures shall have a *fire-resistance rating* of not less than 2 hours where connecting four stories or more and not less than 1 hour where connecting less than four stories. The number of stories connected by the *interior exit stairways* or *ramps* shall include any basements, but not any *mezzanines*. *Interior exit stairways* and *ramps* shall have a *fire resistance rating* not less than the floor assembly penetrated, but need not exceed 2 hours. **Exception:** *Interior exit stairways* and *ramps* in Group I-3 occupancies in accordance with the provisions of Section	Moved open stairway exceptions that had previously been located under this section to Section 1009.3. Exit stairways and ramps are required to be enclosed with fire barriers.	**7.2.2.5.1 Enclosures.** **7.2.2.5.1.1** All inside stairs serving as an exit or exit component shall be enclosed in accordance with 7.1.3.2. **7.2.2.5.1.2** Inside stairs, other than those serving as an exit or exit component, shall be protected in accordance with Section 8.6. **7.1.3.2.1** Where this *Code* requires an exit to be separated from other parts of the building, the separating construction shall meet the requirements of Section 8.2 and the following: (1)*The separation shall have a minimum 1-hour fire resistance rating where the exit connects three or fewer stories. (2) The separation specified in 7.1.3.2.1(1), other than an existing separation, shall be supported by construction having not less than a 1-hour fire resistance rating. (3)*The separation shall have a	**NA**

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408.3.8.		minimum 2-hour fire resistance rating where the exit connects four or more stories, unless one of the following conditions exists: (a) In existing non-high-rise buildings, existing exit stair enclosures shall have a minimum 1-hour fire resistance rating. (b) In existing buildings protected throughout by an approved, supervised automatic sprinkler system in accordance with Section 9.7, existing exit stair enclosures shall have a minimum 1-hour fire resistance rating. (c) The minimum 1-hour enclosures in accordance with 28.2.2.1.2, 29.2.2.1.2, 30.2.2.1.2, and 31.2.2.1.2 shall be permitted as an alternative to the requirement of 7.1.3.2.1(3).	
1022.5 Penetrations. Penetrations into and openings through *interior exit stairways* and *ramps* are prohibited except for required *exit* doors, equipment and ductwork necessary for independent ventilation or pressurization, sprinkler piping, standpipes, electrical raceway for fire department communication systems and electrical raceway serving the *interior exit stairway* and *ramp* and terminating at a steel box not exceeding 16 square inches (0.010 m2). Such penetrations shall be protected in accordance with Section 714. There shall be no penetrations or	Clarified that penetrations of the outside membrane of a fire barrier utilized to enclose an interior exit stair or ramp are now permitted, provided the penetration is properly protected.	**7.1.3.2.1** (10) Penetrations into, and openings through, an exit enclosure assembly shall be limited to the following: (a) Door assemblies permitted by 7.1.3.2.1(9) (b)*Electrical conduit serving the exit enclosure (c) Required exit door openings (d) Ductwork and equipment necessary for independent stair pressurization (e) Water or steam piping necessary for the heating or cooling of the exit enclosure (f) Sprinkler piping (g) Standpipes	**NA**

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communicating openings, whether protected or not, between adjacent *interior exit stairways* and *ramps*. **Exception:** Membrane penetrations shall be permitted on the outside of the *interior exit stairway* and *ramp*. Such penetrations shall be protected in accordance with Section 714.3.2.		(h) Existing penetrations protected in accordance with 8.3.5 (i) Penetrations for fire alarm circuits, where the circuits are installed in metal conduit and the penetrations are protected in accordance with 8.3.5 (11) Penetrations or communicating openings shall be prohibited between adjacent exit enclosures. (12) Membrane penetrations shall be permitted on the exit access side of the exit enclosure and shall be protected in accordance with 8.3.5.6.	
1026.5 Location. *Exterior exit stairways* and *ramps* shall have a minimum fire separation distance of 10 feet (3048 mm) measured from the exterior edge of the *stairway* or *ramp*, including landings, to adjacent lot lines and from other buildings on the same lot unless the adjacent building *exterior walls* and openings are protected in accordance with Section 705 based on *fire separation distance*.	Clarified that exterior ramps and stairways, as an open exit element, must be separated from the lot lines by a minimum distance of 10 feet (3048 mm). This is consistent with what was previously indicated in Section 1027.3.	Not a subject in NFPA 101	**NA**
1028.1 General. A room or space used for assembly purposes which contains seats, tables, displays, equipment or other material shall comply with this section.	Revised this section, as well as other references to this section throughout this code, to refer to spaces used for assembly purposes rather than Group A. This clarifies that the aisle and aisle accessway provisions are applicable to all assembly spaces, regardless of the use of the building.	**3.3.188.2* *Assembly Occupancy.*** An occupancy (1) used for a gathering of 50 or more persons for deliberation, worship, entertainment, eating, drinking, amusement, awaiting transportation, or similar uses; or (2) used as a special amusement building, regardless of occupant load.	**NA**

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1028.1.1 Bleachers. *Bleachers*, *grandstands* and *folding and telescopic seating*, that are not building elements, shall comply with ICC 300. **1028.1.1.1 Spaces under grandstands and bleachers.** When spaces under *grandstands* or *bleachers* are used for purposes other than ticket booths less than 100 square feet (9.29 m2) and toilet rooms, such spaces shall be separated by *fire barriers* complying with Section 707 and *horizontal assemblies* complying with Section 711 with not less than 1-hour fire-resistance-rated construction.	Added requirements for spaces beneath grandstands and bleachers are to be adequately separated to protect the assembly seating area from any potential hazards.	**12.4.8.1** General. Grandstands shall comply with the provisions of this chapter as modified by 12.4.8. **12.4.8.5 Spaces Underneath Grandstands**. Spaces underneath a grandstand shall be kept free of flammable or combustible materials, unless protected by an approved, supervised automatic sprinkler system in accordance with Section 9.7 or unless otherwise permitted by one of the following: (1) This requirement shall not apply to accessory uses of 300 ft2 (28 m2) or less, such as ticket booths, toilet facilities, or concession booths, where constructed of noncombustible or fire-resistive construction in otherwise nonsprinklered facilities. (2) This requirement shall not apply to rooms that are enclosed in not less than 1-hour fire checkresistance–rated construction and are less than 1000 ft2 (93 m2) in otherwise nonsprinklered facilities.	**NA**
1028.10 Aisle accessways. *Aisle accessways* for seating at tables shall comply with Section 1028.10.1. *Aisle accessways* for seating in rows shall comply with Section 1028.10.2. **1028.10.1.1 Aisle accessway width for seating at tables.** *Aisle accessways* serving arrangements of seating at tables or counters	Relocated, from Section 1017.4, the provisions for aisle accessways between tables. Now all aisle and aisle accessway provisions for assembly spaces are in Section 1028.	**12.2.5.7* Aisle Accessways Serving Seating at Tables.** **12.2.5.7.1** The required clear width of an aisle accessway shall be not less than 12 in. (305 mm) where measured in accordance with 12.2.5.7.3 and shall be increased as a function of length in accordance with 12.2.5.7.4, unless otherwise permitted by 12.2.5.7.2. **12.2.5.7.2*** If used by not more than	**NA**

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shall have sufficient clear width to conform to the capacity requirements of Section 1005.1 but shall not have less than a minimum of 12 inches (305 mm) of width plus 1/2 inch (12.7 mm) of width for each additional 1 foot (305 mm), or fraction thereof, beyond 12 feet (3658 mm) of *aisle accessway* length measured from the center of the seat farthest from an *aisle*. ***1028.10.2 Clear width of aisle accessways serving seating in rows.*** *Where seating rows have 14 or fewer seats, the minimum clear aisle accessway width shall not be less than 12 inches (305 mm) measured as the clear horizontal distance from the back of the row ahead and the nearest projection of the row behind. Where chairs have automatic or self-rising seats, the measurement shall be made with seats in the raised position. Where any chair in the row does not have an automatic or self-rising seat, the measurements shall be made with the seat in the down position.* *For seats with folding tablet arms, row spacing shall be determined with the tablet arm in the used position.* ***Exception:*** *For seats with folding tablet arms, row spacing is permitted to be determined with the tablet arm in the stored position where the tablet arm when raised manually to vertical position in one motion automatically returns to the*		four persons, no minimum clear width shall be required for the portion of an aisle accessway having a length not exceeding 6 ft (1830 mm) and located farthest from an aisle. **12.2.5.7.3*** Where nonfixed seating is located between a table and an aisle accessway or aisle, the measurement of required clear width of the aisle accessway or aisle shall be made to a line 19 in. (485 mm), measured perpendicularly to the edge of the table, away from the edge of said table. **12.2.5.7.4*** The minimum required clear width of an aisle accessway, measured in accordance with 12.2.5.4.8 and 12.2.5.7.3, shall be increased beyond the 12 in. (305 mm) requirement of 12.2.5.7.1 by 1⁄2 in. (13 mm) for each additional 12 in. (305 mm) or fraction thereof beyond 12 ft (3660 mm) of aisle accessway length, where measured from the center of the seat farthest from an aisle. **12.2.5.7.5** The path of travel along the aisle accessway shall not exceed 36 ft (11 m) from any seat to the closest aisle or egress doorway. **12.2.5.5*** Aisle Accessways Serving Seating Not at Tables. 12.2.5.5.1* The required clear width of aisle accessways between rows of seating shall be determined as	

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stored position by force of gravity.		follows: (1) Horizontal measurements shall be made, between vertical planes, from the back of one seat to the front of the most forward projection of the seat immediately behind it. (2) Where the entire row consists of automatic- or self-rising seats that comply with ASTM F 851, Standard Test Method for Self-Rising Seat Mechanisms, the measurement shall be permitted to be made with the seats in the up position. 12.2.5.5.2 The aisle accessway between rows of seating shall have a clear width of not less than 12 in. (305 mm), and this minimum shall be increased as a function of row length in accordance with 12.2.5.5.4 and 12.2.5.5.5. 12.2.5.5.3 If used by not more than four persons, no minimum clear width shall be required for the portion of an aisle accessway having a length not exceeding 6 ft (1830 mm), measured from the center of the seat farthest from the aisle. 12.2.5.5.4* Rows of seating served by aisles or doorways at both ends shall not exceed 100 seats per row. 12.2.5.5.4.1 The 12 in. (305 mm) minimum clear width of aisle accessway specified in 12.2.5.5.2 shall be increased by 0.3 in. (7.6 mm) for every seat over a total of 14 but shall not be required to exceed 22 in. (560 mm). 12.2.5.5.4.2 The requirement of 12.2.5.5.4.1 shall not apply to	

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		smoke-protected assembly seating as permitted by 12.4.2.7. 12.2.5.5.5 Rows of seating served by an aisle or doorway at one end only shall have a path of travel not exceeding 30 ft (9.1 m) in length from any seat to an aisle. 12.2.5.5.5.1 The 12 in. (305 mm) minimum clear width of aisle accessway specified in 12.2.5.5.2 shall be increased by 0.6 in. (15 mm) for every seat over a total of seven. 12.2.5.5.5.2 The requirements of 12.2.5.5.5 and 12.2.5.5.5.1 shall not apply to smoke-protected assembly seating as permitted by 12.4.2.8 and 12.4.2.9. 12.2.5.5.6 Rows of seating using tablet-arm chairs shall be permitted only if the clear width of aisle accessways complies with the requirements of 12.2.5.5 when measured under one of the following conditions: (1) The clear width is measured with the tablet arm in the usable position. (2) The clear width is measured with the tablet arm in the stored position where the tablet arm automatically returns to the stored position when raised manually to a vertical position in one motion and falls to the stored position by force of gravity. 12.2.5.5.7 The depth of seat boards shall be not less than 9 in. (230 mm) where the same level is not used for both seat	

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		boards and footboards. 12.2.5.5.8 Footboards, independent of seats, shall be provided so that there is no horizontal opening that allows the passage of a 1⁄2 in. (13 mm) diameter sphere.	
1029.1 General. In addition to the *means of egress* required by this chapter, provisions shall be made for *emergency escape and rescue openings* in Group R-2 occupancies in accordance with Tables 1021.2(1) and 1021.2(2) and Group R-3 occupancies. Basements and sleeping rooms below the fourth story above *grade plane* shall have at least one exterior *emergency escape and rescue opening* in accordance with this section.	Added requirements for Revised scope for emergency escape and rescue openings to coordinate with Group R-2 in the tables for single exit floors and Group R-3.	**26.2.1.2 Secondary Means of Escape.** In addition to the primary route, each sleeping room and living area shall have a second means of escape in accordance with 24.2.2, unless the sleeping room or living area has a door leading directly outside the building with access to the finished ground level or to a stairway that meets the requirements for exterior stairs in 26.2.1.1.2. **28.2.1.2** Means of escape within the guest room or guest suite shall comply with the provisions of Section 24.2 for one- and two-family dwellings. **24.2.2.1.1** In dwellings or dwelling units of two rooms or more, every sleeping room and every living area shall have not less than one primary means of escape and one secondary means of escape. **30.2.1.2** Means of escape within the dwelling unit shall comply with the provisions of Section 24.2 for one- and two-family dwellings.	**NA**