

**2014 Advanced Significant Changes
Florida Building Code – Fifth Edition**



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By

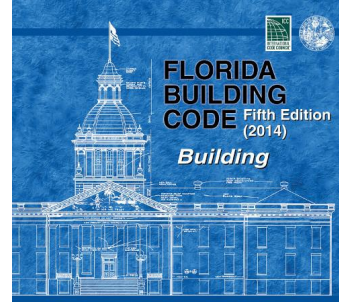
BCIC, LLC

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2014 Advanced Significant Changes

Florida Building Code – Fifth Edition

This is a Florida Advanced Building Code Course (1 hour) meeting the requirements of the Florida Department of Business and Professional Regulation (DBPR) for Advanced Florida Building Code Module. This course was developed by BCIC LLC (Building Codes in Construction).



This course presents the significant code changes from the 2010 Florida Building Code to the 2014 Florida Building Code – Fifth Edition. The course highlights the differences and includes base code changes in the 2012 International Building Code and the Florida specific changes. The course includes topics such as occupancy classification, special occupancies, incidental uses, fire resistant construction and fire protection, means of egress, and roofing. The Florida Building Code can be viewed at www.floridabuilding.org.

Learning Objectives

At the end of this course, you will have an understanding of the changes between the 2007 and 2014 Florida Building Code including but not limited to the requirements for occupancy classification, special occupancies, fire protection, means of egress and roofing.

2014 Florida Building Code Fifth Edition



The Florida Building Commission has adopted the 2012 International Codes as the base code for the 2014 Florida Building Codes. The 2012 International Codes are modified by the Commission to incorporate amendments that have been made to strengthen the Florida Building Codes as well

as Declaratory statements and Legislative mandates. Many Florida amendments contained previous Florida Building Code editions were removed because they were either out-dated or were cover by the base code. The following course represents the most significant code changes from the Florida Building Code-Building 2010 (with accumulated supplements) to the Florida Building Code-Building 2014 that could be presented in a 1 hour course. Some of these changes occurred in the 2012 International Building Codes (base code).

Significant Changes to Chapter 1 Administration

Section 102.4 Referenced Codes and Standards

This change in the base code clarifies the scope of standards referenced in the code. When there is a conflict between a referenced standard and the code, the code applies. Another similar provision was added to clarify the scope of other codes and standards referenced in code. When there are provisions on the same subject matter in the code, referenced code or referenced standard, the code applies.

Excerpt from the FBC

102.4.1 Conflicts. Where differences conflicts occur between provisions of this code and referenced codes and standards, the provisions of this code shall apply.

102.4.2 Provisions in referenced codes and standards. Where the extent of the reference to a referenced code or standard includes subject matter that is within the scope of this code or the Florida Codes listed in Section 101.4, the provisions of this code or the Florida Codes listed in Section 101.4, as applicable, shall take precedence over the provisions in the referenced code or standard.

Significant Changes to Chapter 2 Definitions

The definitions located in the individual chapters of the 2010 Florida Building Code were moved back to Chapter 2. Words indicated in the text of the code in *italics* are defined in Chapter 2

Significant Changes to Chapter 3 Use and Occupancy Classification

Section 303.1.3 Assembly Group A



Assembly spaces in Group E are no longer classified as Group A

Excerpt from the FBC

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

Section 303.3 Assembly Group A

A-2 occupancy was expanded to include Casinos and cafeterias and similar dining facilities (including associated commercial kitchens with restaurants.

Excerpt from the FBC

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



Section 308.3 Institutional Group I

New definition provided in Chapter 2 that is used in Section 308.3.

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 include occupants who evacuate at a slower rate and/or who have mental and psychiatric complications.

Revised section by removing “providing personal care” and adding “receive custodial care”. Section provides clarity to classifying facilities as Group I-1 that provide custodial care



Excerpt from the FBC

308.3 Institutional Group I-1. This occupancy shall include buildings, structures or portions thereof for more than 16 persons 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 care facilities
Social rehabilitation facilities*



Section 308.3.1 added requirements for a fire sprinkler system for 5 or fewer persons classified as Group R-3



*Excerpt from the FBC
308.3.1 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 Florida Building Code, Residential provided an automatic sprinkler system is installed in accordance with Section 903.3.1.3 or with Section P2904 of the Florida Building Code, Residential.*

Section 308.4 Institutional Group 2

The terms: surgical, psychiatric, nursing or custodial were removed. This classification applies to medical care on a 24 hour basis for more than 5 persons. Foster care facilities were added and childcare facilities were removed.

*Excerpt from the FBC
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*



Section 308.4.1 Institutional Group 2

Section added to classify this use for five or fewer persons as Group R-3 and requires a fire sprinkler system

Excerpt from the FBC

- 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 Florida Building Code Residential provided an automatic sprinkler system is installed in accordance with Section 903.3.1.3 or with Section P2904 of the Florida Building Code, Residential.

Section 308.6 Institutional Group 4

This section in the base code replaced Group D (FL Specific amendment) in 2010 FBC. Group D was deleted. The revised section adds and clarifies adult day care and child day care.

Excerpt from the FBC

308.6 Institutional Group I-4, day care facilities. This group shall include buildings and structures occupied by more than five persons of any age who receive custodial care for fewer than 24 hours per day by persons other than parents or guardians, relatives by blood, marriage or adoption, and in a place other than the home of the person cared for. This group shall include, but not be limited to, the following:

Adult day care

Child day care

Institutional Group 4

Section 308.6.1 Day care facilities

This section allows a child care facility to be classified as Group E occupancy



Excerpt from FBC

308.6.1 Classification as Group E. A child day care facility that provides care for more than five but no more than 100 children 2 ½ years or less of age, where the rooms in which the children are cared for are located on a level of exit discharge serving such rooms and each of these child care rooms has an exit door directly to the exterior, shall be classified as Group E.

Institutional Group 4

Section 308.6.2 Day care facilities

This revised section clarifies that spaces in religious worship occupancy are classified as part of the main occupancy.

Excerpt from the FBC

308.6.2 Within a place of religious worship. Rooms and spaces within places of religious worship providing such care during religious functions shall be classified as part of the primary occupancy.

Institutional Group 4

Section 308.6.3 Day care facilities

This section clarifies that spaces with five or fewer persons receiving CUSTODIAL CARE occupancy are classified as part of the main occupancy.

Excerpt from the FBC

308.6.3 Five or fewer persons receiving care. A facility having five or fewer persons receiving custodial care shall be classified as part of the primary occupancy.

Institutional Group 4

Section 308.6.4 Day care facilities

This revised section clarifies that spaces with five or fewer persons receiving CUSTODIAL CARE in a dwelling unit are classified as Group R-3 or they have to comply with the residential code.

Excerpt from the FBC

308.6.4 Five or fewer persons receiving care in a dwelling unit. A facility such as the above within a dwelling unit and having five or fewer persons receiving custodial care shall be classified as a Group R-3 occupancy or shall comply with the Florida Residential Code.

Section 310.5 Residential Group 3

Boarding houses (nontransient) with 16 or fewer occupants and boarding houses (transient) with 10 or fewer occupants have been added to the Group R-3 classification. Congregate living facilities classified as Group R-3 has been clarified.

Excerpt from the FBC

310.5 Residential Group R-3. Residential occupancies where the occupants are primarily permanent in nature and not classified as Group R-1, R-2, R-4 or I, including:

Buildings that do not contain more than two dwelling units

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

Residential Group 3

Section 310.5.1

Adult and child care facilities have been combined. This section was revised to clarify that care facilities that can comply with the Florida Building Code, Residential are limited to 5 or fewer individuals receiving care.

Excerpt from the FBC

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 Florida Building Code, Residential provided an automatic sprinkler system is installed in accordance with Section 903.3.1.3 or with Section P2904 of the Florida Building Code Residential.

Significant Changes to Chapter 4 Special Detailed Requirements Based on Use and Occupancy

Section 401.2 Additional Design Criteria



Chapter 4 contains additional design criteria for special

occupancies. The Florida amendments in this chapter are mostly derived from Agency rules that affect construction of these special occupancies. This chapter reorganized the special occupancies to conform with base code and moved the Florida Specific sections to the end of the chapter. Sections 425 through 448 are “Reserved sections”.

There were many changes made to these Florida specific special occupancies.

Excerpt from the FBC

- 401.2 Additional design criteria.
401.2.1 Scope. In addition to the provisions of this chapter, the following special occupancies, standards, requirements and codes shall conform to the following sections:

The following chart is a comparison of where the sections are located in the 2010 Florida Building Code and the 2014 Florida Building Code - Fifth edition.

Comparison of Location of Special Occupancies from FBC 2010 to FBC 2014		
TITLE OF SECTION	FBC 2010	FBC 2014
Live Work Units	438	419
Groups I-1- R-1/R-3	439	420
Hydrogen Cut-Off	440	421
Ambulatory Health Care	441	422
Storm Shelter	442	423
Children's Play Structures		424 (New)
Reserved sections		425-448
Hospitals	419	449
Nursing Homes	420	450
Ambulatory Surgical Centers	423	451
Birthing Centers	422	452
Educational Facilities	423	453
Swimming Pools	424	454
Public Lodging	425	455
Public Food Service Establishments	426	456
Mental Health Programs	427	457
Manufactured Buildings	428	458
Boot Camps for Children	429	459
Mausoleums/Columbarium's	430	460
Transient Public Lodging	431	461
Asbestos in New Buildings-Prohibited	432	462
Adult Day Care	433	463
Assisted Living	434	464
Control of Radiation	435	465
Day Care Occupancies	436	466
Hospice/Inpatient/Hospice	437	467
Schools/Colleges/Universities	438	468
Office Surgery Suite		469 (New)

Section 469.1 Office Surgery Suite

This new Section in the code was added to reflect requirements for a new “care” section related to Office Surgery for Florida. This is a Florida specific requirement and the requirements were derived from Agency Rule and incorporated into the Florida Building Code. This is an extensive section with many requirements.

Excerpt from the FBC

- 469.1 Scope. An office surgery suite is that portion of a physician’s office where surgery is performed according to 64B-8-9009 Standard of Care for Office Surgery. These minimum standards of design and construction apply to a physician’s office required to register under 64B8-9009.(1)(a).

Significant Changes to Chapter 5 General Building Heights and Areas

Section 505.2.2 Mezzanine Means of Egress



Specific egress requirements for mezzanines were removed and referred to the applicable provisions of Chapter 10 for egress/exiting.

Excerpt from the FBC

505.2.2 Means of egress. The means of egress for mezzanines shall comply with the applicable provisions of Chapter 10.

Section 509.1 Incidental Uses

Provisions for incidental uses have been clarified by relocating the criteria from the mixed-occupancy provisions to a new stand-alone section specific to incidental uses. The section clarifies when incidental uses need to be separated from other areas per table 509.

Excerpt from the FBC

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.

Exception: Incidental uses within and serving a dwelling unit are not required to comply with this section.

Section 509.2 Incidental Uses

This section clarifies that incidental uses are not required to be classified as a separate occupancy. Incidental uses are not distinct occupancies but are support spaces for the primary occupancy.

Excerpt from the FBC

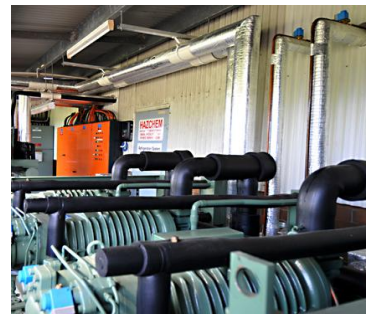
- 509.2 Occupancy classification. Incidental uses shall not be individually classified in accordance with Section 302.1. Incidental uses shall be included in the building occupancies within which they are located.

Section 509.3 Incidental Uses

Incidental uses cannot exceed 10 percent of the building area of a story.

Excerpt from the FBC

- 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.



Section 509.4.2 Incidental Uses



Incidental Uses requires an automatic fire sprinkler system in lieu of an automatic fire extinguishing system in the 2010 FBC

Excerpt from the FBC

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..

Significant Changes to Chapter 6 Types of Construction

Tables 601 and 602

The Florida-specific amendments to Table 601 and Table 602 have been deleted and the fire resistance rating requirements are now consistent with the base code.

Significant Changes to Chapter 7 Fire and Smoke Protection Features

Section 705.2 Projections

The method to determine the allowable projections and distance was revised with a simple table. The combustible projection limitations have been revised to include projections with greater fire separation distances.

FIRE SEPARATION DISTANCE (FSD)	MINIMUM DISTANCE FROM LINE USED TO DETERMINE FSD
0 feet to less than 2 feet	Projections not permitted
2 feet to less than 5 feet	24 inches
5 feet or greater	40 inches

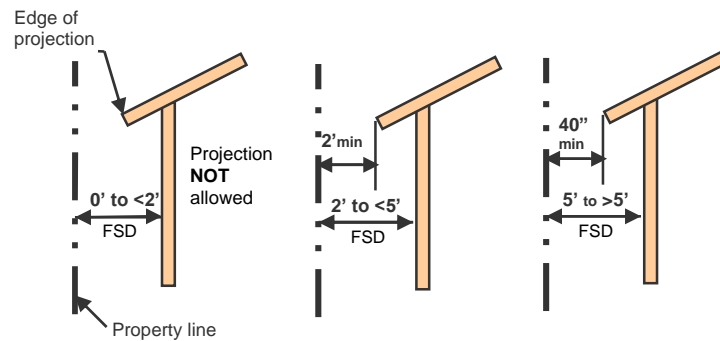


Excerpt from the FBC

705.2 Projections. Cornices, eave overhangs, exterior balconies and similar projections extending beyond the exterior wall shall conform to the requirements of this section and Section 1406. Exterior egress balconies and exterior exit stairways and ramps shall also comply with Sections 1019 and 1026, respectively.

Projections shall not extend any closer to the line used to determine the fire separation distance than shown in Table 705.2.

Example of allowed projections



Section 706.2 Fire Walls

This revised section permits fire walls to be constructed as double fire walls in accordance with NFPA 221 in lieu of the structural ability to allow collapse of construction on either side of the wall.

Excerpt from the FBC

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.

Section 708.1 Fire Partitions

The Florida specific requirement for the construction of fire partitions separating individual tenant spaces in 2010 FBC has been deleted. Associated exceptions have also been deleted.

FBC 2010 Language that was removed from code:

~~*6. Walls separating individual tenant spaces.*~~

Section 712 Vertical Openings

This new section contains requirements previously applicable to shaft enclosures. The previous exceptions to shaft enclosures have been rewritten to become available options for dealing with various vertical openings encountered within a building.

Section 713 Shaft Enclosures

Shaft enclosures are now covered in Section 713. The provisions for shaft enclosures have been reorganized for clarity and to remove conflicts resulting in inconsistent interpretations.

Section 714.4.1.2 Penetrations

New exception #6 was added exempting membrane penetrations from complying with Section 714.4.1.1.1 or 714.4.1.1.2 (protection of penetrations) by noncombustible items in concrete floors.

Excerpt from the FBC

713.4.1.2 714.4.1.2 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 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.

Section 714.4.1.2 Penetrations

New exception #7 added that allows the ceiling membrane of a 1- or 2-hour fire rated floor/ceiling or roof/ceiling assembly to be interrupted by a double wood top plate of a fire rated wall.

Excerpt from the FBC

713.4.1.2 714.4.1.2 Membrane penetrations.

Exceptions

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 714.4.1.1.1 or 714.4.1.1.2. The fire-resistance rating of the wall shall not be less than the rating of the horizontal assembly.

Section 714.5 Penetrations in Smoke Barriers

An “L” rating identifying the air leakage rating newly defined in Chapter 2—is now mandated for penetration firestop systems and fire-resistant joint systems that are utilized in smoke barrier construction

Excerpts from the FBC

- *202 Definitions.*

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.

714.5 Penetrations in Smoke Barriers. Penetrations in smoke barriers shall be protected by approved through-penetration firestop systems installed and tested in accordance with the requirements of UL 1479 for air leakage. The air leakage rate L rating of the penetration assemblies system measured at 0.30 inch (7.47 Pa) of water in both the ambient temperature and elevated temperature tests, shall not exceed:

- 1. 5.0 cfm per square foot of penetration opening for each through-penetration firestop system; or*
- 2. A total cumulative leakage of 50 cfm for any 100 square feet of wall area, or floor area*

Wired Glass

Provisions for using wired glass in 715.5.4 of the 2010 FBC without compliance with the applicable test standards have been deleted.

Section 716.3 Marking fire-rated glazing assemblies 202 Definitions

A definition of “fire-rated glazing” has been added to Chapter 2. Table 716.3 was added to define and relate the various test standards for fire-rated glazing to the designations used to mark such glazing. Fire-resistance-rated glazing is tested in accordance with ASTM E 119 or UL 263 as a wall assembly. Fire-protection-rated glazing, is tested in accordance with NFPA 257 or UL 9 as an opening protective.

Excerpt from the FBC

Definitions 202

Fire rated glazing: Glazing with either a fire protection rating or a fire resistance rating.

Table 716.3 Marking Fire-Rated Glazing Assemblies		
FIRE TEST STANDARD	MARKING	DEFINITION OF MARKING
ASTM E119 or UL 263	W	Meets wall assemble criteria
NFPA 257 or UL 9	OH	Meets fire window assemble criteria including the hose stream test
NFPA 252 or UL 10B or UL10C	D H T	Meets fire door assembly Meets fire door assembly "Hose Stream" test Meets 450° F temp rise criteria for 30 minutes
	XXX	The time in minutes of the fire resistance rating of the glazing assembly

Significant Changes to Chapter 9 Fire Protection Systems

Section 907.2.9.3 Group R-2 College and University Buildings

This new section requires a smoke detection system tied into the occupant notification system in the public and common spaces of R-2 college and university buildings. The required smoke alarms within individual dwelling and sleeping units are required to be interconnected with the building's fire alarm and detection system.

Excerpt from FBC

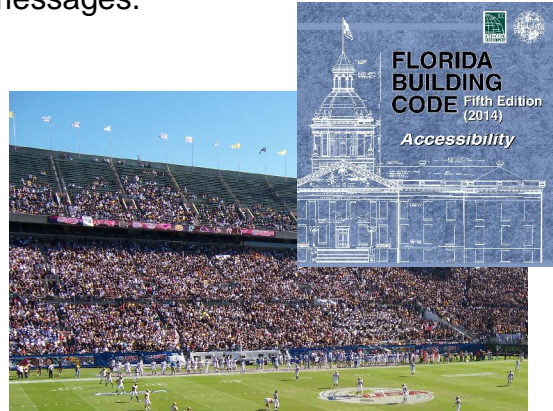
Group R-2 College and university buildings. An automatic smoke detection system that activates the occupant notification system in accordance with Section 907.5 shall be installed in Group R-2 college and university buildings in the following locations:

- 1. Common spaces outside of dwelling units and sleeping rooms*
- 2. Laundry rooms, mechanical rooms, and storage rooms.*
- 3. All interior corridors serving sleeping units or dwelling units.*

Section 907.5.2.2.4 Emergency voice/alarm communication captions

This new section requires mass notification fire alarm signals in large stadiums, arenas, and grandstands to have captioned messages.

*Excerpt from FBC
907.5.2.2.4 Emergency voice/alarm communication captions. Where stadiums, arenas and grandstands are required to caption audible public announcements in accordance with the Florida Building Code, Accessibility, the emergency/voice alarm communication system shall also be captioned.*



Section 907.2.11 Single and Multiple Station smoke alarms

This section adds Group I-1 occupancy to require interconnection of smoke alarms. The use of listed wireless smoke alarms are now permitted to substitute for wired interconnection of the smoke alarms.

*Excerpt from the FBC
907.2.11.3 Interconnection. Where more than one smoke alarm is required to be installed within an individual dwelling unit or sleeping unit in Group R-1, R-2, R-3 or R-4 R or I-1 occupancies, the smoke alarms shall be interconnected in such a manner that the activation of one alarm will activate all of the alarms in the individual unit. Physical interconnection of smoke alarms shall not be required where listed wireless alarms are installed and all alarms sound upon activation of one alarm. The alarm shall be clearly audible in all bedrooms over background noise levels with all intervening doors closed.*

Section 908.7 Carbon Monoxide Protection

Carbon Monoxide protection was relocated from section 916 to section 908.7.

Section 909.21 Elevator Hoistway Pressurization

The elevator hoistway pressurization alternate was relocated from section 708.14 to 909.21.

Significant Changes to Chapter 10 Means of Egress

Section 1005.3.1 Means of Egress Sizing

A new exception added for stairways for all groups other than Group H and I-2 permits the use of a stairway means of egress capacity factor of 0.2 in buildings with a sprinkler system and an emergency voice/alarm communication system.

Excerpt from the FBC

1005.3.1 Stairways. The capacity, in inches, 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 inches (7.62 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, 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 inches (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.

Section 1009 Stairways

Revisions within this code section are based on the following concepts:

- All stairs within a building are elements of the means of egress system and must comply with Chapter 10.
- Unenclosed stairways are not considered an exit.
- All exit stairways, to qualify as exits, must be enclosed with a fire-resistance-rated enclosure consisting of exit stair shafts and passageways based on the previous exit enclosure provisions.
- All stairways that are permitted to be open, or are not required stairways for egress purposes, are exit access stairways.
- Exit access stairways must be enclosed with fire-resistance-rated enclosures based on shaft provisions or may be open in accordance with exceptions based on the previous code exceptions.

- Exit access travel distance is measured from an entrance to an exit.
- Exit access travel distance includes the travel distance on an exit access stairway.
- Entrances to exits on each story are not mandatory and access to exits on other stories is permissible within certain limitations.

Section 1009.3 Exit Access Stairways

The changes in this section are a clarification of existing requirements. Changes to interior stairways and ramps will provide for consistent application of the code requirements. Design professionals and construction professionals should review and become aware of these changes. The changes address the entire egress system and how unenclosed stairs affect exits versus exit access, travel distance measurements, contribution to the minimum number of required exits, etc.

Section 1011.2 Floor Level Exit Signs

Floor-level exit signs must also be provided in the means of egress serving the guest rooms in Group R-1 occupancies.

Excerpt from the FBC

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 guest rooms 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.

Section 1012.3.1 Handrail Graspability

A minimum cross-section dimension of 1 inch has been established for the graspability of noncircular Type I handrails.



Excerpt from the FBC

1012.3.1 Type I. Handrails with a circular cross section shall have an outside diameter of at least 1 1/4 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 6 1/4 inches (160 mm) with a maximum cross-sectional dimension of 2 1/4 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).

Section 1013.1-1013.8 Guards

The guard requirements for operable windows having a sill height more than 72 inches above the finished grade have been relocated from Chapter 14 (1405.13.2) to the general guard provisions of Chapter 10. The minimum window sill height at which a guard is not required has been increased from 24 inches to 36 inches. Openings below a 36" window sill height shall not allow the passage of a 4" diameter sphere.

Excerpt from the FBC

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 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.

Section 1013.3 Window Opening Devices

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.

Excerpt from the FBC

1013.3. Required guards shall not be less than 42 inches (1067 mm) high, measured vertically as follows:

1. From the adjacent walking surfaces; or
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 in height measured vertically above the adjacent walking surfaces or adjacent fixed seating.

Section 1013.8.1 Window Opening Devices

New section on window opening control devices that these devices to comply with ASTM F 2090 Specification for Window Fall Prevention Devices with Emergency Escape (Egress) Release Mechanisms.

Excerpt from the FBC

1013.8.1 Window Opening Control Devices. Window opening control devices shall comply with ASTM F 2090. The window 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.

Section 1021.2 Exits from Two Stories

New exception allows exits to be arranged where they serve a portion of a story instead of requiring that all of the required exits from the story be accessible to all of the occupants. Allows unenclosed interior stairways and ramps to be used as part of the means of egress.

Excerpt from the FBC

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:

(Items 1–3 not shown)

Exceptions:

(Exceptions 1 through 6 not shown)

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
load of that portion of the story, but not less than two exits.

Significant Code Changes to Chapter 14 Exterior Walls

Section 1403.5 Vertical and lateral Flame Propagation

A flame-spread test of the wall assembly is now required where combustible water-resistive barriers are used in the exterior walls of Type I, II, III, and IV buildings that are greater than 40 feet in height. This requirement is applicable to types of construction that allow either no or limited combustibles in the exterior walls. Newer construction practices, such as the addition of combustible water-resistant barriers, can result in significant amounts of combustible materials being installed within the exterior walls.

Excerpt from the FBC

1403.5 Vertical and Lateral Flame Propagation.

Exterior walls on buildings of Type I, II, III, or IV construction that are greater than 40 feet (12 192 mm) in height above grade plane and contain a combustible water-resistive barrier shall be tested in accordance with and comply with the acceptance criteria of NFPA 285.

Significant Code Changes to Chapter 15 Roof Assemblies

Section 1507.2.8 Underlayment application

Underlayment requirements have been significantly revised. For roof slopes of 2:12 to less than 4:12, a two layer system is required. For roof slopes of 4:12 and greater, a single layer is permitted but underlayment is required to be ASTM D 226 Type II, ASTM D 4869 Type IV, or ASTM D 6757 (all are equivalent to a 30 lb. underlayment). Required fastening of underlayment to roof has been significantly enhanced. Self-adhered underlayment complying with ASTM D 1970 is also permitted.

Excerpt from the FBC

1507.2.8 Underlayment application.

Underlayment shall be installed using one of the following methods:

1. For roof slopes from two units vertical in 12 units horizontal (17-percent slope), and less than four units vertical in 12 units horizontal (33-percent slope). Underlayment shall comply with ASTM D 226, Type I or Type II or ASTM D 4869, Type II or Type IV or ASTM D 6757 and shall be two layers applied in the following manner. Apply a 19-inch (483 mm) strip of underlayment felt parallel to and starting at the eaves, fastened sufficiently to hold in place. Starting at the eave, apply 36-inch-wide (914 mm) sheets of underlayment, overlapping successive sheets 19 inches (483 mm), and fastened with 1-inch (25 mm) round plastic cap, metal cap nails or nails and tin-tabs attached to a nailable deck with one row in the field of the sheet with a maximum fastener spacing of 12 inches on center (305 mm), and one row at the overlaps fastened 6 inches (152 mm) on center. Synthetic underlayment shall be fastened in accordance with this section and the manufacturer's recommendations.

2. For roof slopes of four units vertical in 12 units horizontal (33-percent slope) or greater. Underlayment shall comply with ASTM D 226, Type II or ASTM D 4869, Type IV or ASTM D 6757 and shall be one layer applied in the following manner. Underlayment shall be applied shingle fashion, parallel to and starting from the eave and lapped 2 inches (51 mm), fastened with 1-inch (25 mm) round plastic cap, metal cap nails or nails and tin-tabs attached to a nailable deck with two staggered rows in the field of the sheet with a maximum fastener spacing of 12 inches (305 mm) on center, and one row at the overlaps fastened 6 inches (152 mm) on center. Synthetic underlayment shall be fastened in accordance with this section and the manufacturer's recommendations. End laps shall be offset by 6 feet (1829 mm).

3. As an alternative, the entire roof deck shall be covered with an approved self-adhering polymer modified bitumen sheet meeting ASTM D 1970 or an approved self-adhering synthetic underlayment installed in accordance with the manufacturer's installation instructions.

Significant Changes to Chapter 16 Structural Design

There are few changes to Chapter 16. Most of the changes that were made to the 2012 IBC were incorporated in the last edition 2010 FBC. These changes were made to be consistent with ASCE 7-10



There has been some controversy and confusion regarding the new requirements contained in the 2014 FBC for snow (Section 1608) and earthquake (Section 1613) design. Previous editions of the FBC have not contained these requirements so why are these requirements here in the 2014 FBC? Does Florida now have snow and earthquake provisions that must be included in the structural design?

The answer is “No.” Nothing has changed in Florida regarding snow and earthquake design, there is no threat of snow or earthquakes. Historically, these sections have been removed from the FBC; however in this edition of the 2014 FBC, they were left in the base code (2012 IBC). The Scoping section in the Preface of the FBC clarifies this issue.

*Excerpt from the FBC: Preface
Scope*

*The Florida Building Code is based on national model building codes and national consensus standards which are amended where necessary for Florida’s specific needs. **However, code requirements that address snow loads and earthquake protection are pervasive; they are left in place but should not be utilized or enforced because Florida has no snow load or earthquake threat.***

Significant Changes to the Florida Building Code, Residential

Section R301.2.1.1.3 Alternative design method for screen enclosures

This new section provides an alternative method for designing screen enclosures that relies on the screening material to be removed, retracted, opened, or cut to reduce the anticipated loads on the structure.



Excerpt from the FBC-R

R301.2.1.1.3 Alternative design method for screen enclosure.

(1) The purpose of this section is to provide an alternate method for designing aluminum screen enclosures as defined by the Florida Building Code, permitting the loads of the structural frame to be based on portions of the screen in the screen walls removed, retracted, moved to the open position, or cut.

Section R302.1 Exterior walls

This section was revised to specify exterior wall minimum fire-resistance ratings based on whether the building is fire sprinklered. A new table requires greater fire separation distances for the same fire resistance ratings in buildings not equipped with an automatic sprinkler system. The exception for buildings located on zero lot lines has been deleted.

Table R302.1(1) and R302.2(2)				
Exterior Wall Element		Minimum Fire-Resistance Rating	Dwellings W/O Sprinklers Minimum Fire Separation Distance	Dwellings with Sprinklers Minimum Fire Separation Distance
Walls	Fire Resistance Rated	1-hour with ASTM E119 with exposure on both sides	< 5 feet	0 feet
	Not fire resistance rated	0 hours	≥ 5 feet	3 feet
Projections	Fire Resistance Rated	1 hour on the underside	≥ 2 feet to < 5 feet	2 feet
	Not fire resistance rated	0 hours	≥ 5 feet	3 feet

Openings in walls	Not allowed	N/A	< 3 feet	< 3 feet
	25% maximum of wall area	0 hours	3 feet	N/A
	Unlimited	0 hours	5 feet	3 feet
Penetrations	All	Comply with Section R302.4	< 5 feet	< 3 feet
		None required	5 feet	3 feet

Section R302.5.1 Opening protection

Opening protection between the garage and the residence requires doors between the garage and residence to be equipped with self-closing devices.



Excerpt from the FBC-R

R302.5.1 Opening protection.

Openings from a private garage directly into a room used for sleeping purposes shall not be permitted. Other openings between the garage and residence shall be equipped with solid wood doors not less than 1 3/8 inches thick, or 20 minute fire-rated doors, equipped with a self-closing device.

Section R311.3 Floors and landings at exterior doors

The exception permitting the landing to be omitted for doors with a stairway of two or fewer risers on the exterior side of the door has been deleted. A new exception permits the landing to be less than 36 inches in the direction of travel for exterior balconies less than 60 square feet and only accessible from a door. The landing slope is now limited to 2 percent.

Excerpt from the FBC-R

R311.3 Floors and landings at exterior doors.

There shall be a landing or floor on each side of each exterior door. The width of each landing shall not be less than the door served. Every landing shall have a minimum dimension of 36 inches measured in the direction of travel. Exterior landings shall be permitted to have a slope not to exceed 2 percent.

Exception: Exterior balconies less than 60 sq.ft. and only accessible from a door are permitted to have a landing less than 36 inches in direction of travel.

Section R314.5 Interconnection

This section pertaining to interconnection of smoke alarms was relocated from Section R314.3 and R314.4. Exception has been revised to remove the physical interconnection requirement of all alarms where listed wireless alarms are installed and all alarms sound upon activation.



*Excerpt from the FBC-R
R314.5 Interconnection*

Where more than one smoke alarm is required to be installed within an individual dwelling unit in accordance with Section R314.3, the alarm devices shall be interconnected in such a manner that the actuation of one alarm will activate all of the alarms in the individual unit. Physical interconnection of smoke alarms shall not be required where listed wireless alarms are installed and all alarms sound upon activation of one alarm.

Section R501.3 Fire protection of floors



This is a new section requiring floors to be covered with a minimum ½ inch gypsum board or 5/8 inch wood structural panel on the underside. Exceptions are provided for fire sprinklers and certain crawl spaces.

*Excerpt from the FBC-R
R501.3 Fire Protection of floors*

Floor assemblies, not required elsewhere in this code to be fire-resistance rated, shall be provided with a ½ inch gypsum wallboard membrane, 5/8 inch wood structural panel membrane, or equivalent on the underside of the floor framing member.

Section R703.11.2.2 Design wind pressure rating

This section applies to vinyl siding installed over foam plastic sheathing. The section was reorganized for clarity. It was revised to lower the vinyl siding

pressure adjustment to 0.27 (with or without gypsum board on the inside) for ultimate wind speeds greater than 130 mph and less than 140 mph. Where ultimate wind speeds are equal to or greater than 140 mph, the foam sheathing has to be installed over a sheathing material designed and attached to separately resist 100% of the wind load.

Section R806.1 Ventilation required

This section was revised to require ventilation openings to open directly to the outside air. The exception permitting unvented attics designed to eliminate the venting has been deleted. A new exception permits the omission of venting when determined not necessary by the code official due to atmospheric or climatic conditions.

Excerpt from the FBC-R

R806.1 Ventilation required

Enclosed attics and enclosed rafter spaces formed where ceilings are applied directly to the underside of roof rafters shall have cross ventilation for each separate space by ventilating openings protected against the entrance of rain or snow. Ventilations openings.... Required ventilation openings shall open directly to the outside air.

Exception: Attic ventilation shall not be required when determined not necessary by the code official due to atmospheric or climatic conditions.

Section R905.2.7 Underlayment application

Underlayment requirements have been significantly revised. For roof slopes of 2:12 to less than 4:12, a two layer system is required. Required fastening of underlayment to roof has been significantly enhanced. For roof slopes of 4:12 and greater, a single layer is permitted but underlayment is required to be equivalent to a 30 lb. underlayment. Self-adhered underlayment complying with ASTM D 1970 is also permitted.

Excerpt from the FBC-R

R905.2.7 Underlayment application.

Underlayment shall be installed using one of the following methods:

1. For roof slopes from two units vertical in 12 units horizontal and less than four units vertical in 12 units horizontal. Underlayment shall

comply with ASTM D226, Type I or Type II or ASTM D 4869, Type II or Type IV or ASTM D 6757 and shall be two layers applied in the following manner...

(2) For roof slopes of four units vertical in 12 units horizontal or greater. Underlayment shall comply with ASTM D226, Type II or ASTM D 4869, Type IV or ASTM D 6757 and shall be one layer applied in the following manner...

3. As an alternative, the entire roof deck shall be covered with an approved self-adhering polymer modified bitumen sheet meeting ASTM D 1970 or an approved self-adhering synthetic underlayment installed in accordance with the manufacturer's installation instructions.

Section R907 Reroofing

Reroofing requirements in previous versions of the codes were located in the Existing Building Code, are now also located in the Florida Building Code - Residential. Mitigation requirements applicable to site-built single family dwellings built prior to the Florida Building Codes are now also located in the Florida Building Code - Residential.

Conclusion

This concludes the course on the 2014 Florida Building Code Significant Code Changes. This course does not address every change in the 2014 Florida Building Code but only highlights some of the significant changes. The 2014 Florida Building Code is available for viewing online through the Building Code Information System at www.floridabuilding.org

QUIZ

2014 Advanced Significant Changes Florida Building Code – Fifth Edition

- 1) What is the base code for the 2014 5th edition Florida Building Code?
 - a. 2014 IBC
 - b. 2013 IBC
 - c. 2012 IBC
 - d. 2010 IBC

- 2) What makes up the 2014 5th edition Florida Building Code?
 - a. IBC
 - b. Amendments
 - c. Declaratory Statements
 - d. All of the above

- 3) If conflicts occur between the provisions of the code and referenced standards, which will apply?
 - a. the code provisions
 - b. the referenced standard
 - c. the design professional can choose the provision that applies
 - d. the building official shall determine the applicable provision

- 4) A room or space used for assembly purposes that is associated with a Group E occupancy is not considered a separate occupancy?
 - a. true
 - b. false

- 5) Incidental uses are
 - a. ancillary functions associated with a given occupancy
 - b. generally pose a greater level of risk to the occupancy
 - c. limited to those uses listed in Section 509
 - d. all of the above

6) Incidental uses shall not occupy more than 15% of the building area of the story in which they are located.

- a. True
- b. False

7) In Group R-1, R-2, R-3 R-4 or I-1, physical interconnection of smoke alarms shall not be required where listed wireless alarms are installed and all alarms sound upon activation of one alarm.

- a. True
- b. False

8) Floor level exit signs in R-1 are required in the means of egress serving

- a. meeting rooms
- b. guest rooms
- c. storage and mechanical rooms
- d. offices

9) In the Florida Building Code –Residential, openings between the garage and residence, other than sleeping rooms, shall be equipped with solid wood doors not less than 1 3/8 inches thick, or 20 minute fire-rated doors, equipped with a self-closing device.

- a. True
- b. False

10) In the Florida Building Code –Residential, floor assemblies, not required elsewhere in the code to be fire-resistance rated, shall be provided with a _____ on the underside of the floor framing member

- a. ½ inch gypsum wallboard membrane
- b. 5/8 inch wood structural panel membrane
- c. equivalent to ½ inch gypsum board or 5/8 inch wood structural panel
- d. any of the above