Florida Building Code

8th Edition (2023)

Significant Changes - Building and Residential

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Director, Building Section

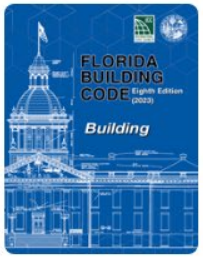
Effective Date: December 31st., 2023

Department of Regulatory and Economic Resources
Construction, Permitting and Building Code Division

MIAMI-DADE COUNTY

Florida Building Code 2023

8TH EDITION – BUILDING & RESIDENTIAL



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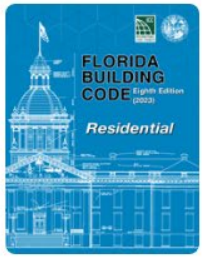

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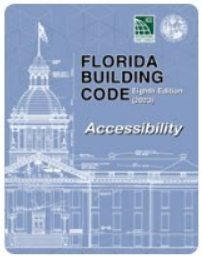

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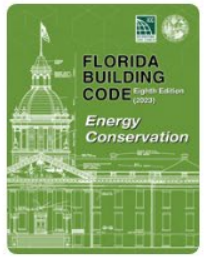

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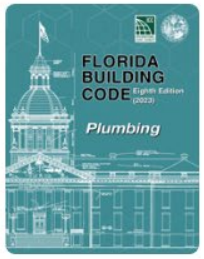

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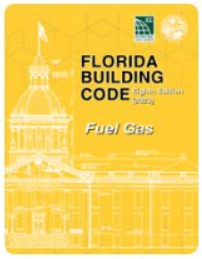

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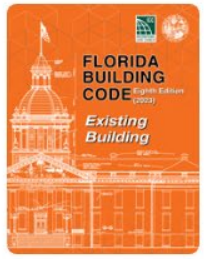

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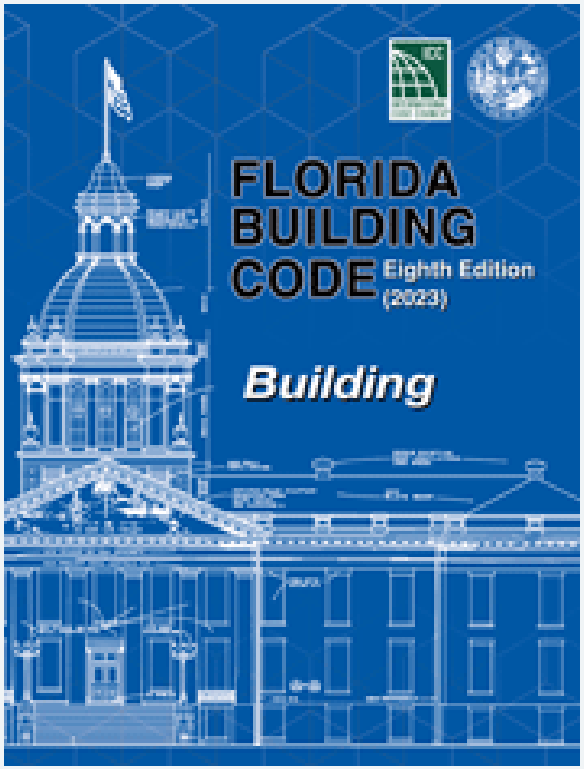
MIAMI-DADE COUNTY

FBC 2023
Building



MIAMI-DADE COUNTY

FBC 2023 Chapter 1 Scope and Administration
105.3.1.3 Reviewing application for building permit.

New section

1.When reviewing an application for a building permit, a local government may not request additional information from the applicant more than three times, unless the applicant waives such limitation in writing.

2.If a local government requests additional information from an applicant and the applicant submits the requested additional information to the local government within 30 days after receiving the request, the local government must, within 15 days after receiving such information:
a. Determine if the application is properly completed;
b. Approve the application;
c. Approve the application with conditions;
d. Deny the application; or
e. Advise the applicant of information, if any, that is needed to deem the application properly completed or to determine the sufficiency of the application.

3.If a local government makes a second request for additional information from the applicant and the applicant submits the requested additional information to the local government within 30 days after receiving the request, the local government must, within 10 days after receiving such information:
a. Determine if the application is properly completed;
b. Approve the application;
c. Approve the application with conditions;
d Deny the application; or
e. Advise the applicant of information, if any, that is needed to deem the application properly completed or to determine the sufficiency of the application.

MIAMI-DADE COUNTY

FBC 2023 Chapter 1 Scope and Administration
105.3.1.3 Reviewing application for building permit.

New section (cont.)

4. Before a third request for additional information may be made, the applicant must be offered an opportunity to meet with the local government to attempt to resolve outstanding issues. If a local government makes a third request for additional information from the applicant and the applicant submits the requested additional information to the local government within 30 days after receiving the request, the local government must, within 10 days after receiving such information unless the applicant waived the local government's limitation in writing, determine that the application is complete and:
a. Approve the application;
b. Approve the application with conditions; or
c. Deny the application.

5.If the applicant believes the request for additional information is not authorized by ordinance, rule, statute, or other legal authority, the local government, at the applicant's request, must process the application and either approve the application, approve the application with conditions, or deny the application.

THIS IS CONSISTENT WITH THE LANGUAGE SET FORTH IN THE 2023 FLORIDA STATUTES SECTION 553.792 & House Bill HB 765

MIAMI-DADE COUNTY

FBC 2023 Chapter 1 Scope and Administration
Section 105.3.8

New section

A local government may not require a contract between a builder and an owner for the issuance of a building permit or as a requirement for the submission of a building permit application.

FBC 2023 Chapter 1 Scope and Administration

110.9 Mandatory structural inspections for condominium and cooperative buildings New section (cont.)

Champlain Towers South, 12-story condominium, Town of Surfside, FL
June 24, 2021

MIAMI-DADE COUNTY

FBC 2023 Chapter 1 Scope and Administration

110.9 Mandatory structural inspections for condominium and cooperative buildings

New section

110.9.1General.
The Legislature finds that maintaining the structural integrity of a building throughout its service life is of paramount importance in order to ensure that buildings are structurally sound so as to not pose a threat to the public health, safety, or welfare. As such, the Legislature finds that the imposition of a statewide structural inspection program for aging condominium and cooperative buildings in this state is necessary to ensure that such buildings are safe for continued use.

110.9.2
As used in this section, the terms:

(a)“Milestone inspection” means a structural inspection of a building, including an inspection of load-bearing walls and the primary structural members and primary structural systems as those terms are defined in s. 627.706, Florida Statutes, by a licensed architect or engineer authorized to practice in this state for the purposes of attesting to the life safety and adequacy of the structural components of the building and, to the extent reasonably possible, determining the general structural condition of the building as it affects the safety of such building, including a determination of any necessary maintenance, repair, or replacement of any structural component of the building. The purpose of such inspection is not to determine if the condition of an existing building is in compliance with the Florida Building Code or the fire safety code.

(b)“Substantial structural deterioration” means substantial structural distress that negatively affects a building’s general structural condition and integrity. The term does not include surface imperfections such as cracks, distortion, sagging, deflections, misalignment, signs of leakage, or peeling of finishes unless the licensed engineer or architect performing the phase one or phase two inspection determines that such surface imperfections are a sign of substantial structural deterioration.

MIAMI-DADE COUNTY

FBC 2023 Chapter 1 Scope and Administration
110.9 Mandatory structural inspections for condominium and cooperative buildings
New section (cont.)

110.9.3
A condominium association under Chapter 718, Florida Statutes, and a cooperative association under Chapter 719, Florida Statutes, must have a milestone inspection performed for each building that is three stories or more in height by December 31 of the year in which the building reaches 30 years of age, based on the date the certificate of occupancy for the building was issued, and every 10 years thereafter. If the building is located within 3 miles of a coastline as defined in s. 376.031, Florida Statutes, the condominium association or cooperative association must have a milestone inspection performed by December 31 of the year in which the building reaches 25 years of age, based on the date the certificate of occupancy for the building was issued, and every 10 years thereafter. The condominium association or cooperative association must arrange for the milestone inspection to be performed and is responsible for ensuring compliance with the requirements of this section. The condominium association or cooperative association is responsible for all costs associated with the inspection. This subsection does not apply to a single- family, two-family, or three-family dwelling with three or fewer habitable stories above ground.

110.9.4
If a milestone inspection is required under this section and the building's certificate of occupancy was issued on or before July 1, 1992, the building's initial milestone inspection must be performed before December 31, 2024. If the date of issuance for the certificate of occupancy is not available, the date of issuance of the building's certificate of occupancy shall be the date of occupancy evidenced in any record of the local building official.

110.9.5
Upon determining that a building must have a milestone inspection, the local enforcement agency must provide written notice of such required inspection to the condominium association or cooperative association by certified mail, return receipt requested.

MIAMI-DADE COUNTY

FBC 2023 Chapter 1 Scope and Administration
110.9 Mandatory structural inspections for condominium and cooperative buildings
New section (cont.)

110.9.6
Within 180 days after receiving the written notice under Section 110.9.5, the condominium association or cooperative association must complete phase one of the milestone inspection. For purposes of this section, completion of phase one of the milestone inspection means the licensed engineer or architect who performed the phase one inspection submitted the inspection report by e-mail, United States Postal Service, or commercial delivery service to the local enforcement agency.

110.9.7
A milestone inspection consists of two phases:

110.9.7.1
For phase one of the milestone inspection, a licensed architect or engineer authorized to practice in this state shall perform a visual examination of habitable and nonhabitable areas of a building, including the major structural components of a building, and provide a qualitative assessment of the structural conditions of the building. If the architect or engineer finds no signs of substantial structural deterioration to any building components under visual examination, phase two of the inspection, as provided in Section 110.9.7.2, is not required. An architect or engineer who completes a phase one milestone inspection shall prepare and submit an inspection report pursuant to Section 110.9.8.

110.9.7.2
A phase two of the milestone inspection must be performed if any substantial structural deterioration is identified during phase one. A phase two inspection may involve destructive or nondestructive testing at the inspector's direction. The inspection may be as extensive or as limited as necessary to fully assess areas of structural distress in order to confirm that the building is structurally sound and safe for its intended use and to recommend a program for fully assessing and repairing distressed and damaged portions of the building. When determining testing locations, the inspector must give preference to locations that are the least disruptive and most easily repairable while still being representative of the structure. An inspector who completes a phase two milestone inspection shall prepare and submit an inspection report pursuant to Section 110.9.8.

MIAMI-DADE COUNTY

FBC 2023 Chapter 1 Scope and Administration
110.9 Mandatory structural inspections for condominium and cooperative buildings
New section (cont.)

110.9.8
Upon completion of a phase one or phase two milestone inspection, the architect or engineer who performed the inspection must submit a sealed copy of the inspection report with a separate summary of, at minimum, the material findings and recommendations in the inspection report to the condominium association or cooperative association, and to the building official of the local government which has jurisdiction. The inspection report must, at a minimum, meet all of the following criteria:

(a)Bear the seal and signature, or the electronic signature, of the licensed engineer or architect who performed the inspection.
(b)Indicate the manner and type of inspection forming the basis for the inspection report.
(c)Identify any substantial structural deterioration, within a reasonable professional probability based on the scope of the inspection, describe the extent of such deterioration, and identify any recommended repairs for such deterioration.
(d)State whether unsafe or dangerous conditions, as those terms are defined in the Florida Building Code, were observed.
(e)Recommend any remedial or preventive repair for any items that are damaged but are not substantial structural deterioration.
(f)Identify and describe any items requiring further inspection.

110.9.9
The association must distribute a copy of the inspector-prepared summary of the inspection report to each condominium unit owner or cooperative unit owner, regardless of the findings or recommendations in the report, by United States mail or personal delivery and by electronic transmission to unit owners who previously consented to received notice by electronic transmission; must post a copy of the inspector-prepared summary in a conspicuous place on the condominium or cooperative property; and must publish the full report and inspector-prepared summary on the association’s website, if the association is required to have a website.

MIAMI-DADE COUNTY

FBC 2023 Chapter 1 Scope and Administration

110.9 Mandatory structural inspections for condominium and cooperative buildings New section (cont.)

110.9.10
A local enforcement agency may prescribe timelines and penalties with respect to compliance with this section.

110.9.11
A board of county commissioners may adopt an ordinance requiring that a condominium or cooperative association schedule or commence repairs for substantial structural deterioration within a specified timeframe after the local enforcement agency receives a phase two inspection report; however, such repairs must be commenced within 365 days after receiving such report. If an association fails to submit proof to the local enforcement agency that repairs have been scheduled or have commenced for substantial structural deterioration identified in a phase two inspection report within the required timeframe, the local enforcement agency must review and determine if the building is unsafe for human occupancy.

MIAMI-DADE COUNTY

FBC 2023 Chapter 2 Definitions

Note: 50+ revisions to existing definitions and new definitions
Significant to the BLDG Plans Review Trade as follows below:

ACCESSORY STRUCTURE. A structure that is accessory to and incidental to that of a building or dwelling(s) and that is located on the same lot.

ATRIUM. ~~An opening connecting two or more stories other than enclosed stairways, elevators, hoistways, escalators, plumbing, electrical, air-conditioning or other equipment, which is closed at the top and not defined as a mall. Stories, as used in this definition, do not include balconies within assembly groups or mezzanines that comply with Section 505.~~
A vertical space that is closed at the top connecting two or more stories in Group I-2 and I-3 Occupancies or three stories in all other occupancies.

AUTOMATIC FLUSH BOLT. Door-locking hardware, installed on the inactive leaf of a pair of doors, which has a bolt that is extended automatically into the door frame or floor when the active leaf is closed after the inactive leaf, and which holds the inactive leaf in a closed position. When the active leaf is opened, the automatic flush bolt retracts the bolt or rod allowing the inactive leaf to be opened (see CONSTANT LATCHING BOLT, DEAD BOLT, MANUAL BOLT).

MIAMI-DADE COUNTY

FBC 2023 Chapter 2 Definitions
(cont.)

CHANGE OF OCCUPANCY

~~A change in the use of a building or a portion of a building which results in one of the following:~~

~~1. A change of occupancy classification.~~

~~2. A change from one group to another group within an occupancy classification.~~

~~3. Any change in use within a group for which there is a change in the application of the requirements of this code.~~

Either of the following shall be considered as a change of occupancy where this code requires a greater degree of safety, accessibility, structural strength, fire protection, means of egress, ventilation or sanitation than is existing in the current building or structure:

1.Any change in the occupancy classification of a building or structure.

2.Any change in the purpose of, or a change in the level of activity within, a building or structure.

MIAMI-DADE COUNTY

FBC 2023 Chapter 2 Definitions
(cont.)

DANGEROUS
Any building, structure or portion thereof that meets any of the conditions described below shall be deemed dangerous:
1. The building or structure has collapsed, has partially collapsed, has moved off its foundation or lacks the necessary support of the ground.
2. There exists a significant risk of collapse, detachment or dislodgment of any portion, member, appurtenance or ornamentation of the building or structure under ~~service loads~~ permanent, routine, or frequent loads; under actual loads already in effect; or under wind, rain, flood, or other environmental loads when such loads are imminent.

DECORATIVE CEMENTITIOUS FINISH
A skim coat, as defined in ASTM C926, of Portland cement-based plaster applied to concrete or masonry surfaces intended for cosmetic purposes.

DWELLING UNIT, EFFICIENCY.
A dwelling unit where all permanent provisions for living, sleeping, eating and cooking are contained in a single room.

MIAMI-DADE COUNTY

FBC 2023 Chapter 2 Definitions
(cont.)

EMERGENCY ESCAPE AND RESCUE OPENING
An **operable** exterior window, door or other similar device that provides for a means of escape and access for rescue in the event of an emergency.

MECHANICAL-ACCESS ENCLOSED PARKING GARAGE
An enclosed parking garage that employs parking machines, lifts, elevators or other mechanical devices for vehicle moving from and to street level and in which public occupancy in the garage is prohibited in all areas except the vehicle access bay.
*(Note: code already provided definition for Mechanical-access **open** parking garages)*

~~**CHILDREN'S**~~ **PLAY STRUCTURE**
A structure composed of one or more components, where the user enters a play environment.

POSITIVE ROOF DRAINAGE
The drainage condition in which consideration has been made for all loading deflections of the roof deck, and ~~additional~~ sufficient slope has been provided to ensure drainage of the roof within 48 hours of precipitation.

MIAMI-DADE COUNTY

FBC 2023 Chapter 2 Definitions
(cont.)

ROOF ASSEMBLY ~~(For application to Chapter 15 only).~~
A system designed to provide weather protection and resistance to design loads. The system consists of a roof covering and roof deck or a single component serving as both the roof covering and the roof deck. A roof assembly includes the roof covering, roof deck and may include a vapor retarder, thermal barrier, insulation or similar substrate.

ROOF SECTION
A separation or division of a roof area by existing joints, parapet walls, flashing (excluding valleys), difference of elevation (excluding hips and ridges), roof type or legal description; not including the roof area required for a proper tie-off with an existing system.

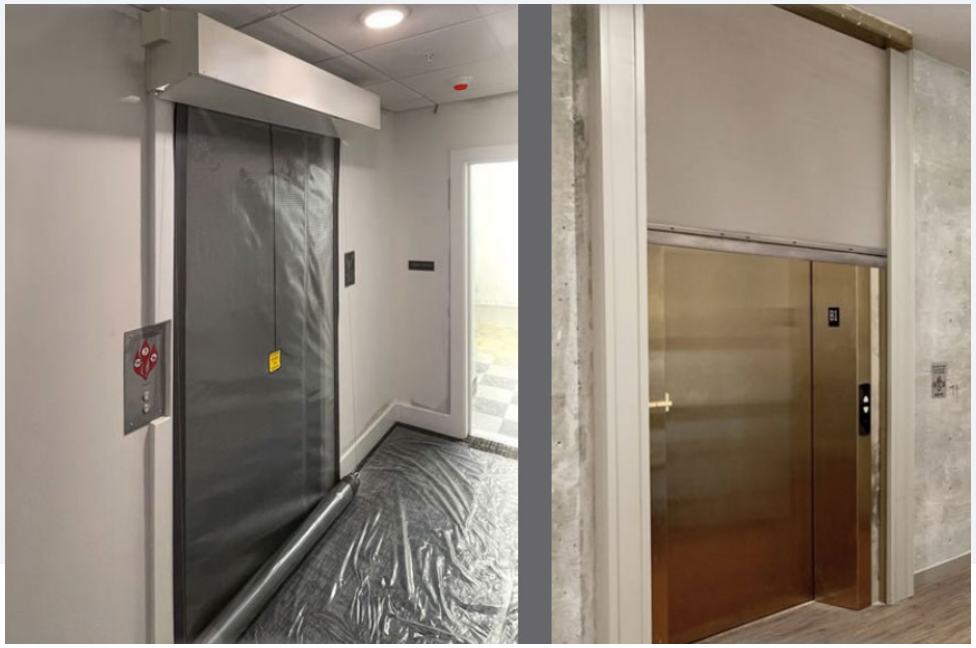
ROOF SYSTEM
A roof system consists of a roof covering and other interacting roofing components and may include vapor retarder, thermal barrier, insulation or other similar substrate. The system does not include the roof deck unless it is part of a single component serving as the roof covering and the roof deck.

MIAMI-DADE COUNTY

FBC 2023 Chapter 2 Definitions
(cont.)

SMOKE COMPARTMENT
A space within a building ~~enclosed~~ separated from other interior areas of the building by smoke barriers, including ~~the top and bottom~~ interior walls and horizontal assemblies.

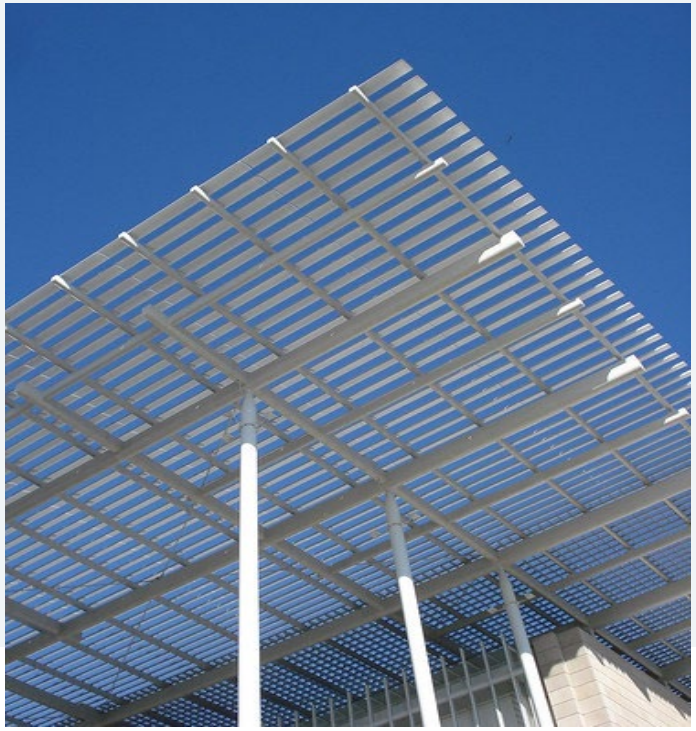
SMOKE-PROTECTIVE CURTAIN ASSEMBLY FOR HOISTWAY
An automatic-closing smoke and draft control curtain assembly.



FBC 2023 Chapter 2 Definitions
(cont.)

SPECIAL EVENT STRUCTURE
Any ground-supported structure, platform, stage, stage scaffolding or rigging, canopy, tower or similar structure supporting entertainment related equipment or signage.

SUN CONTROL STRUCTURE
An accessory structure consisting of columns or posts supporting an open roof of girders, beams or cross rafters with or without fixed or operational louvers serving to direct sunlight.



FBC 2023 Chapter 3
Use and Occupancy Classification
Section 306

306.2 Moderate-hazard factory industrial, Group F-1
Section has incorporated in its list the following:

Energy storage systems (ESS) in dedicated use buildings
Water/sewer treatment facilities

MIAMI-DADE COUNTY

FBC 2023 Chapter 3
Use and Occupancy Classification
Section 306

Types of energy storage systems include:

1. Thermal energy storage, which uses heat or cold to store energy
2. Mechanical energy storage, which uses physical forces such as springs, compressed air, flywheels, or gravity to store energy
3. Chemical energy storage, which uses chemical reactions to store energy
4. Electrochemical energy storage, which uses batteries or fuel cells to store energy
5. Solar energy storage, which uses solar panels or other devices to store energy from the sun
6. Pumped hydro storage, which uses water and elevation to store energy

MIAMI-DADE COUNTY

FBC 2023 Chapter 3
Use and Occupancy Classification
Section 306

New section under Group F-1:

306.2.1 Aircraft manufacturing facilities.

Aircraft manufacturing facilities shall comply with Section 412.7

(note: Aircraft manufacturing facilities are already part of the listing, this section is specific to referencing their requirements in chapter 4).

FBC 2023 Chapter 3
Use and Occupancy Classification
Section 310 Residential Group R

310.5.2 Lodging houses

Owner-occupied lodging houses with five or fewer guest rooms and 10 or fewer occupants shall be permitted to be constructed in accordance with the Florida Building Code, Residential, provided that an automatic sprinkler system is installed in accordance with Section 903.3.1.3 or Section P2904 of the Florida Building Code, Residential.

MIAMI-DADE COUNTY

FBC 2023 Chapter 4

SPECIAL DETAILED REQUIREMENTS BASED ON OCCUPANCY AND USE

Section 404 Atriums

404.5 Smoke Control

A smoke control system shall be installed in accordance with Section 909.

~~Exception: In other than Group I-2, and Group I-1, Condition 2, smoke control is not required for atriums that connect only two stories.~~

Exceptions:

1.In other than Group I-2, and Group I-1, Condition 2, smoke control is not required for atriums that connect only two stories.

2. A smoke control system is not required for atriums connecting more than two stories when all of the following are met:

2.1.Only the two lowest stories shall be permitted to be open to the atrium.

2.2. All stories above the lowest two stories shall be separated from the atrium in accordance with the provision for a shaft in Section 713.4.

MIAMI-DADE COUNTY

FBC 2023 Chapter 4
SPECIAL DETAILED REQUIREMENTS BASED ON OCCUPANCY AND USE
Section 404 Atriums

404.6 Enclosure of atriums
Atrium spaces shall be separated from adjacent spaces by a 1-hour fire barrier constructed in accordance with Section 707 or a horizontal assembly constructed in accordance with Section 711, or both.
Two additional exceptions have been incorporated:
4. A horizontal assembly is not required between the atrium and openings for escalators complying with Section 712.1.3.
5. A horizontal assembly is not required between the atrium and openings for exit access stairways and ramps complying with Item 4 of Section 1019.3.

404.10 Exit stairways in an atrium.
Where an atrium contains an interior exit stairway all the following shall be met:
1. The entry to the exit stairway is the edge of the closest riser of the exit stairway.
2. The entry of the exit stairway shall have access from a minimum of two directions.
3. The distance between the entry to an exit stairway in an atrium and the entrance to a minimum of one exit stairway enclosed in accordance with Section 1023.2 shall comply with the separation required by Section 1007.1.1.
4. Exit access travel distance shall be measured to the closest riser of the exit stairway.
5. Not more than 50 percent of the exit stairways shall be located in the same atrium.

MIAMI-DADE COUNTY

FBC 2023 Chapter 4

SPECIAL DETAILED REQUIREMENTS BASED ON OCCUPANCY AND USE

Section 406.6 Enclosed Parking Garages

New section

406.6.4 Mechanical-access enclosed parking garages.
Mechanical-access enclosed parking garages shall be in accordance with Sections 406.6.4.1 through 406.6.4.4.

406.6.4.1 Separation.
Mechanical-access enclosed parking garages shall be separated from other occupancies and accessory uses by not less than 2-hour fire barriers constructed in accordance with Section 707 or by not less than 2-hour horizontal assemblies constructed in accordance with Section 711, or both.

406.6.4.2 Smoke removal.
A mechanical smoke removal system, installed in accordance with Section 910.4, shall be provided for all areas containing a mechanical-access enclosed parking garage.

406.6.4.3 Fire control equipment room.
Fire control equipment, consisting of the fire alarm control unit, mechanical ventilation controls and an emergency shutdown switch, shall be provided in a room located where the equipment is able to be accessed by the fire service from a secured exterior door of the building. The room shall be not less than 50 square feet (4.65 m2) in area and shall be in a location that is approved by the fire code official.

406.6.4.3.1 Emergency shutdown switch.
The mechanical parking system shall be provided with a manually activated emergency shutdown switch for use by emergency personnel. The switch shall be clearly identified and shall be in a location approved by the fire code official.

406.6.4.4 Fire department access doors.
Access doors shall be provided in accordance with the Florida Fire Prevention Code.

MIAMI-DADE COUNTY

FBC 2023 Chapter 4

SPECIAL DETAILED REQUIREMENTS BASED ON OCCUPANCY AND USE

Section 407 Group I-2

(Foster care & detoxification facilities, Hospitals, Nursing Homes, Psychiatric Hospitals, etc.)

407.4.4.3 Access to corridor.

~~Movement from habitable rooms shall not require passage through more than three doors and 100 feet (30 480 mm) distance of travel within the suite.~~

~~**Exception:** The distance of travel shall be permitted to be increased to 125 feet (38 100 mm) where an automatic smoke detection system is provided throughout the *care suite* and installed in accordance with NFPA 72.~~

Every care suite shall have a door leading directly to an exit access corridor or horizontal exit. Movement from habitable rooms within the care suite shall not require more than 100 feet (30 480 mm) of travel within the care suite to a door leading to the exit access corridor or horizontal exit. Where a care suite is required to have more than one exit access door by Section 407.4.4.5.2 or 407.4.4.6.2, the additional door shall lead directly to an exit access corridor, exit or an adjacent suite.

MIAMI-DADE COUNTY

FBC 2023 Chapter 4

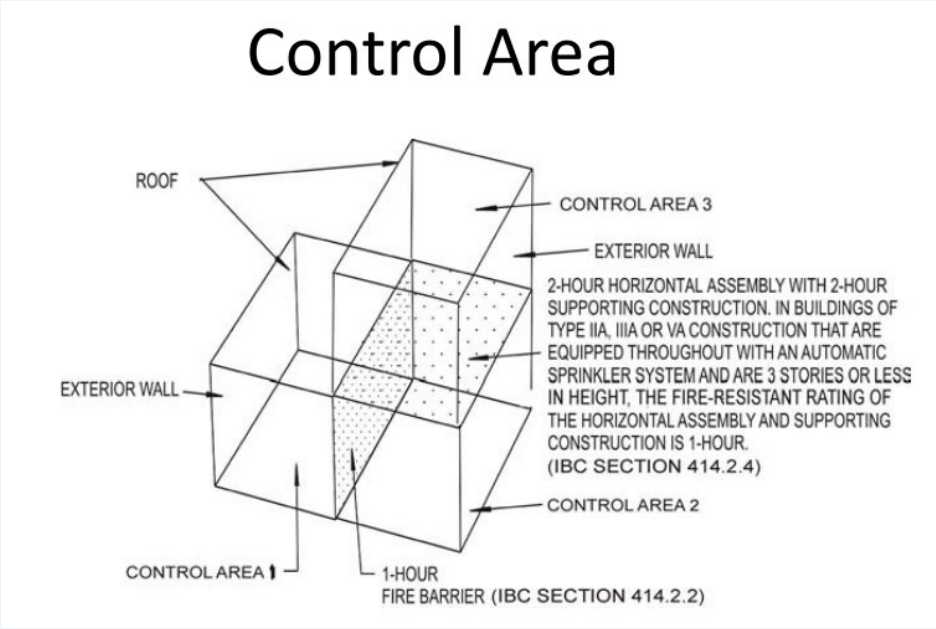
SPECIAL DETAILED REQUIREMENTS BASED ON OCCUPANCY AND USE

Section 414

Hazardous Materials

414.2.3 Number

The maximum number of control areas within a building shall be in accordance with Table 414.2.2. For the purposes of determining the number of control areas within a building, each portion of a building separated by one or more fire walls complying with Section 706 shall be considered a separate building.



***CONTROL AREA**. Spaces within a building where quantities of hazardous materials not exceeding the maximum allowable quantities per control area are stored, dispensed, used or handled.*

MIAMI-DADE COUNTY

FBC 2023 Chapter 4

SPECIAL DETAILED REQUIREMENTS BASED ON OCCUPANCY AND USE

Section 451 Ambulatory Surgical Centers

New section

451.3.4.7

Where a fully sprinklered ambulatory surgical center is located in a single-story unsprinklered building, a fire barrier designed and constructed in accordance with Section 707, Fire Barriers, and Section 707.3.10, Fire Areas, of this code, may be used to separate the sprinklered ambulatory surgical center fire area from the fire area of the remainder of the unsprinklered single-story building only when all exits from the ambulatory surgical center lead directly to the exterior of the building or to an exit passageway designed and constructed in accordance with Section 1024, Exit Passageways, of this code.

MIAMI-DADE COUNTY

FBC 2023 Chapter 4

SPECIAL DETAILED REQUIREMENTS BASED ON OCCUPANCY AND USE

Section 469

Office Surgery Suite

469.4.3.2

The size of the operating room(s) shall be as follows:

469.4.3.2.1

An operating room shall have a minimum clear floor area of 255 square feet (23.69 m2).

469.4.3.2.2

An operating room where anesthetics will be administered using an anesthesia machine and supply cart shall have a minimum clear floor area of 270 square feet (25.08 m2).

469.4.3.2.3

An operating room where surgery that may require additional staff and equipment will be performed shall have a minimum clear floor area of 400 square feet (37.16 m2).

469.4.3.3

See The Guidelines, Chapter 2.1, Common Elements of Outpatient Facilities, for design details regarding clearances and space requirements for operating rooms.

MIAMI-DADE COUNTY

FBC 2023 Chapter 5
General Building Heights & Areas
Table 504.4
Number of Stories

OCCUPANCY CLASSIFICATION	TYPE OF CONSTRUCTION									
	SEE FOOTNOTES	TYPE I		TYPE II		TYPE III		TYPE IV	TYPE V	
		A	B	A	B	A	B	HT	A	B
R-1	NS[d, h]	UL	11	4	4	4	4	4	3	2
	S13R	4	4						4	3
	S	UL	12	5	5	5	5	5	4	3
R-2	NS[d, h]	UL	11	4	4	4	4	4	3	2
	S13R	4	4	4					4	3
	S	UL	12	5	5	5	5	5	4	3
R-3	NS[d, h]	UL	11	4	4	4	4	4	3	3
	S13R	4	4						4	4
	S	UL	12	5	5	5	5	5	4	4
R-4	NS[d, h]	UL	11	4	4	4	4	4	3	2
	S13R	4	4						4	3
	S	UL	12	5	5	5	5	5	4	3
S-1	NS	UL	11	4	2	3	2	~~4~~ 5	3	1
	S	UL	12	5	3	4	3	~~5~~ 6	4	2
S-2	NS	UL	11	5	3	4	3	~~4~~ 5	4	2
	S	UL	12	6	4	5	4	~~5~~ 6	5	3
U	NS	UL	5	4	2	3	2	4	2	1
	S	UL	6	5	3	4	3	5	3	2

MIAMI-DADE COUNTY

FBC 2023 Chapter 5
General Building Heights & Areas
Sections 506
Building Area

Table 506.2:
Allowable area factor in of I-3 occupancies of construction type IIA has been increased from 45,000 sq. ft. to 60,000 sq. ft. for buildings of maximum of one story above grade plane equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1.

Section 506.3.2 Minimum frontage distance
Additional language:
The frontage increase shall be based on the smallest public way or open space that is 20 feet (6096 mm) or greater, and the percentage of building perimeter having a minimum 20 feet (6096 mm) public way or open space.
Note: Calculations associated with determining this increase have been eliminated from here. Calculations have been replaced and simplified by the introduction of a new Table 506.3.3

Section 506.3.3 Amount of Increase
Calculations have been removed and a new Table 506.3.3 Frontage Increase Factor has been introduced.

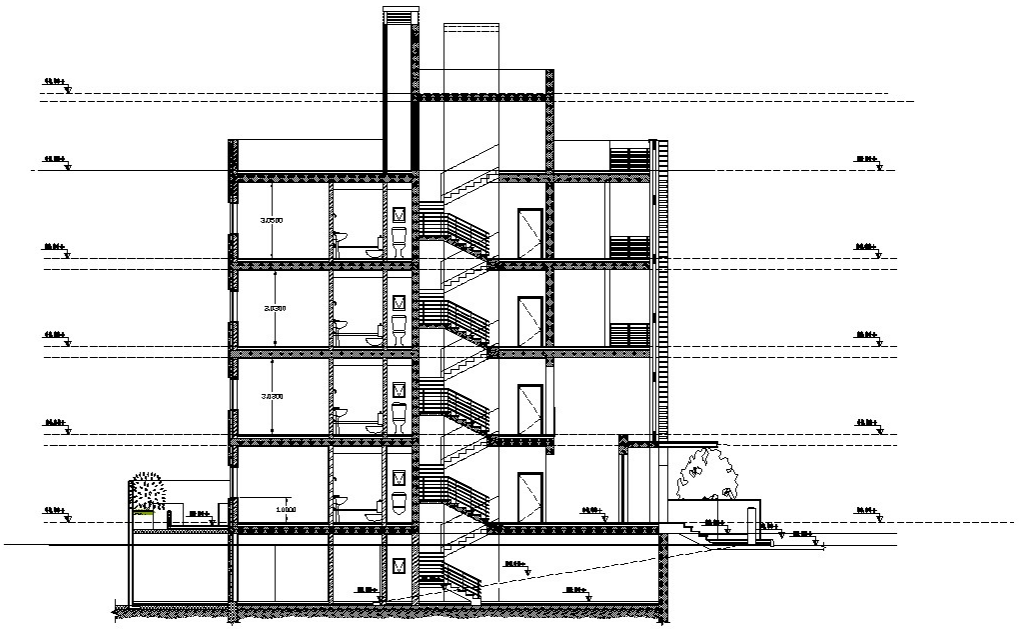
Section 506.3.3.1 Section 507 Buildings
New section and Table providing requirements for area factor increases in Unlimited Area Buildings.

MIAMI-DADE COUNTY

FBC 2023 Chapter 5
General Building Heights & Areas
Section 510
Special Provisions

Section 510.5 Group R-1 and R-2 buildings of Type IIIA construction

~~The height limitation for buildings of Type IIIA construction in Groups R-1 and R-2 shall be increased to six stories and 75 feet (22 860 mm).~~ For buildings of Type IIIA construction in Groups R-1 and R-2, the maximum allowable height in Table 504.3 shall be increased by 10 feet and the maximum allowable number of stories in Table 504.4 shall be increased by one where the first floor assembly above the basement has a fire-resistance rating of not less than 3 hours and the floor area is subdivided by 2-hour fire-resistance-rated fire walls into areas of not more than 3,000 square feet (279 m2).



FBC 2023 Chapter 6
Types of Construction
Table 601
Fire-resistance rating requirements for bldg. elements (hours)

TABLE 601 FIRE-RESISTANCE RATING REQUIREMENTS FOR BUILDING ELEMENTS (HOURS)

BUILDING ELEMENT	TYPE I		TYPE II		TYPE III		TYPE IV	TYPE V	
	A	B	A	B	A	B	HT	A	B
Primary structural frame[f] (see Section 202)	3[a, b]	2[a, b, c]	1[b, c]	0[c]	1[b, c]	0	HT	1	0
Bearing walls									
Exterior[e, f]	3	2	1	0	2	2	2	1	0
Interior	3[a]	2[a]	1	0	1	0	1/HT	1	0
Nonbearing walls and partitions Exterior	See Table 705.5								
Nonbearing walls and partitions Interior[d]	0	0	0	0	0	0	See Section 2304.11.2	0	0
Floor construction and associated secondary members (see Section 202)	2	2	1	0	1	0	HT	1	0
Roof construction and associated secondary members (see Section 202)	$1\frac{1}{2}$[b]	1[b,c]	1[b,c]	0[c]	1[b,c]	0	HT	1[b,c]	0

For SI: 1 foot = 304.8 mm.

a. Roof supports: Fire-resistance ratings of primary structural frame and bearing walls are permitted to be reduced by 1 hour where supporting a roof only.

b. Where every part of the roof construction is 20 feet or more above the floor or mezzanine immediately below, fire protection of structural members in roof construction shall not be required, including protection of primary structural frame members, roof framing and decking, except where any of the following conditions apply.

1. In Group F-1, H, M and S-1 occupancies.
2. Where the roof is an occupiable space.

Fire-retardant-treated wood members shall be allowed to be used for such unprotected members.

c. In all occupancies, heavy timber complying with Section 2304.11 shall be allowed for roof construction, including primary structural frame members, where a 1-hour or less fire-resistance rating is required.

d. Not less than the fire-resistance rating required by other sections of this code.

e. Not less than the fire-resistance rating based on fire separation distance (see Table 705.5).

f. Not less than the fire-resistance rating as referenced in Section 704.10.

Table 601 has been slightly modified; primary structural frame for all except Type IIIB, Type IV & Type V construction has been made subject to footnotes “b” & “c” (which have been expanded to include occupiable roofs. Sections “e” & “f” have been updated to new references.

MIAMI-DADE COUNTY

FBC 2023 Chapter 6
Construction Classification

Section 602.1 General
Buildings and structures erected or to be erected, altered or extended in height or area shall be classified in one of the five construction types defined in Sections 602.2 through 602.5. The building elements shall have a fire-resistance rating not less than that specified in Table 601 and exterior walls shall have a fire-resistance rating not less than that specified in Table **705.5**. Where required to have a fire-resistance rating by Table 601, building elements shall comply with the applicable provisions of Section 703.2. The protection of openings, ducts and air transfer openings in building elements shall not be required unless required by other provisions of this code.
*Note: Table 602 Fire-resistant rating requirements for exterior walls based on fire separation distance has been removed from this chapter; this is now **Table 705.5**.*

Section 602.4.1 Fire-retardant-treated wood in exterior walls
Fire-retardant-treated wood framing and sheathing complying with Section 2303.2 shall be permitted within exterior wall assemblies ~~not less than 6 inches (152 mm) in thickness~~ with a 2-hour rating or less.

Section 602.4.2 Cross-laminated timber in exterior walls
Section has been clarified, references updated, minimum thickness of 6" deleted.

MIAMI-DADE COUNTY

FBC 2023 Chapter 7
Fire and Smoke Protection Features

Section 704.6.1 Secondary attachments to structural members (new section)

Where primary and secondary structural steel members require fire protection, any additional structural steel members having direct connection to the primary structural frame or secondary structural members shall be protected with the same fire-resistive material and thickness as required for the structural member. The protection shall extend away from the structural member a distance of not less than 12 inches (305 mm) or shall be applied to the entire length where the attachment is less than 12 inches (305 mm) long. Where an attachment is hollow and the ends are open, the fire-resistive material and thickness shall be applied to both exterior and interior of the hollow steel attachment.

Table 705.2 Minimum Distance of Projection ***(change in language @ 3 ft. to less than 5 ft.)***

TABLE 705.2 MINIMUM DISTANCE OF PROJECTION

FIRE SEPARATION DISTANCE (FSD) (feet)	MINIMUM DISTANCE FROM LINE USED TO DETERMINE FSD
0 to less than 2	Projections not permitted
2 to less than 3	24 inches
3 to less than 5	Two-thirds the FSD *
5 or greater	40 inches

* ~~24" plus 8" for every foot of FSD beyond 3 ft. or fraction thereof~~

MIAMI-DADE COUNTY

FBC 2023 Chapter 7
Fire and Smoke Protection Features
Fire Barriers

Section 707.4 Exterior Walls

Where exterior walls serve as a part of a required fire-resistance-rated shaft or separation or enclosure for a stairway, ~~or~~ ramp ~~enclosure~~, ~~or separation,~~ or exit passageway, such walls shall comply with the requirements of Section 705 for exterior walls and the fire-resistance-rated enclosure or separation requirements shall not apply.

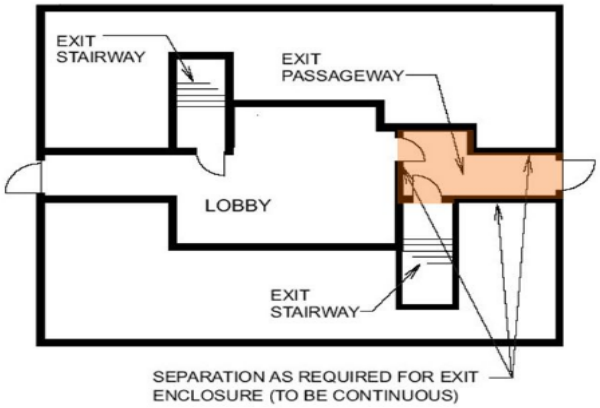
Exceptions:

1. Exterior walls required to be fire-resistance rated in accordance with Section 1021 for exterior egress balconies, Section 1023.7 for interior exit stairways and ramps, Section 1024.9 for exit passageways and Section 1027.6 for exterior exit stairways and ramp.
2. Exterior walls required to be fire-resistance rated in accordance with the Florida Fire Prevention Code for enclosure of energy storage systems.

MIAMI-DADE COUNTY

FBC 2023 Chapter 7
Fire and Smoke Protection Features
Fire Barriers

707.5 Continuity.
Fire barriers shall extend from the top of the foundation or floor/ceiling assembly below to the underside of the floor or roof sheathing, slab or deck above and shall be securely attached thereto. Such fire barriers shall be continuous through concealed space, such as the space above a suspended ceiling. Joints and voids at intersections shall comply with Sections 707.8 and 707.9.
Exceptions:
1.Shaft enclosures shall be permitted to terminate at a top enclosure complying with Section 713.12.
2.Interior exit stairway and ramp enclosures required by Section 1023 and exit access stairway and ramp enclosures required by Section 1019 shall be permitted to terminate at a top enclosure complying with Section 713.12.
3.An exit passageway enclosure required by Section 1024.3 that does not extend to the underside of the roof sheathing, slab or deck above shall be enclosed at the top with construction of the same fire-resistance rating as required for the exit passageway.



FBC 2023 Chapter 7
Fire and Smoke Protection Features
Fire Partitions

708.1 General.

The following wall assemblies shall comply with this section.

1. Separation walls as required by Section 420.2 for Groups I-1, R-1, R-2 and R-3.
2. Walls separating tenant spaces in covered and open mall buildings as required by Section 402.4.2.1.
3. Corridor walls as required by Section ~~1020.1~~ 1020.2.
4. Elevator lobby separation as required by Section 3006.2.
5. Egress balconies as required by Section 1019.2
6. Walls separating ambulatory care facilities from adjacent spaces, corridors or tenants as required by Section 422.2.
7. Walls separating dwelling and sleeping units in Groups R-1 and R-2 in accordance with Sections 907.2.8.1 and 907.2.9.1.
8. Vestibules in accordance with Section 1028.2.

MIAMI-DADE COUNTY

FBC 2023 Chapter 7
Fire and Smoke Protection Features
Section 712
Vertical Openings

712 Vertical Openings

712.1.7 Atriums.

~~In other than Group H occupancies, atriums complying with Section 404 shall be permitted.~~

Atriums complying with Section 404 that connect two or more stories in Group I-2 or I-3 Occupancies or three or more stories in other occupancies shall be permitted.

Exceptions:

1.Atriums shall not be permitted within Group H Occupancies.

2.Balconies or stories within Groups A-1, A-4 and A-5 and mezzanines that comply with Section 505 shall not be considered a story as it applies to this section.

MIAMI-DADE COUNTY

FBC 2023 Chapter 7
Fire and Smoke Protection Features
Section 713
Shaft Enclosures

713 Shaft Enclosures

713.12 Enclosure at top.

~~A shaft enclosure that does not extend to the underside of the roof sheathing, deck or slab of the building shall be enclosed at the top with construction of the same fire-resistance rating as the topmost floor penetrated by the shaft, but not less than the fire-resistance rating required for the shaft enclosure.~~

The top of shaft enclosures shall comply with one of the following:

1. Extend to the underside of the roof sheathing, deck or slab and the roof assembly shall comply with the requirements for the type of construction as specified in Table 601.
2. Terminate below the roof assembly and be enclosed at the top with construction of the same fire-resistance rating as the topmost floor penetrated by the shaft, but not less than the fire-resistance rating required for the shaft enclosure.
3. Extend past the roof assembly and comply with the requirements of Section 1510.

713.12.1 Penthouse mechanical rooms.

A fire/smoke damper shall not be required at the penetration of the roof-top structure where shaft enclosures extend up through the roof assembly into a rooftop structure conforming to Section 1510. All ductwork in the shaft shall be connected directly to HVAC equipment.

MIAMI-DADE COUNTY

FBC 2023 Chapter 7
Fire and Smoke Protection Features
Section 716
Opening Protectives

Table 716.5 Opening Fire Protection Assemblies, Ratings and Markings
Table has been modified and expanded to incorporate requirements for double fire walls constructed in accordance with NFPA 221.
Other references to footnotes have been reorganized and expanded as well .

716.5.3.1 Smoke and draft control.
Fire door assemblies shall meet the requirements for a smoke and draft control door assembly tested in accordance with UL 1784. The air leakage rate of the door assembly shall not exceed 3.0 cubic feet per minute per square foot (0.01524 m3/s ● m2) of door opening at 0.10 inch (24.9 Pa) of water for both the ambient temperature and elevated temperature tests. Louvers shall be prohibited. Installation of smoke doors shall be in accordance with NFPA 105. Terminated stops shall be prohibited on doors required by Section 405.4.3 to comply with Section 716.5.3 and prohibited on doors required by Sections 3006.3 Item 3, 3007.6.3, or 3008.6.3 to comply with Section 716.5.3.1.
Exception: Elevator hoistway door openings protected in accordance with Section 3006.3

716.5.6.1 Energy storage system separation.
Fire-protection-rated glazing shall not be permitted in fire door frames with transom lights and sidelights in fire barriers required by the Florida Fire Prevention Code to enclose energy storage systems.

MIAMI-DADE COUNTY

FBC 2023 Chapter 8
Interior Finishes and Decorative Materials
New Section 809

Artificial Decorative Vegetation on Buildings and Outdoor Occupancies.

809.1 General.
Fixed artificial decorative vegetation placed in outdoor occupancies or on an occupied roof of a building shall comply with this section.

809.2 Testing.
Artificial decorative vegetation shall meet the flame propagation performance criteria of the Test Method 1 or Test Method 2, as appropriate, of NFPA 701. Meeting such criteria shall be documented and certified by the manufacturer in an approved manner. Alternatively, the artificial decorative vegetation shall be tested in accordance with NFPA 289, using the 20 kW ignition source, and shall have a maximum heat release rate of 100 kW.

809.3 Electrical fixtures and wiring.
The use of unlisted electrical wiring and lighting on artificial decorative vegetation shall be prohibited. The use of electrical wiring and lighting on artificial trees constructed entirely of metal shall be prohibited.

809.4 Ignition sources and maintenance.
Ignition sources and maintenance of outdoor artificial vegetation shall be in accordance with the Florida Fire Prevention Code.

MIAMI-DADE COUNTY

FBC 2023 Chapter 10
Means of Egress
Section 1006
Number of Exits & Exit Access Doorways

1006.2.1 Egress based on occupant load and common path of egress travel distance.
Two exits or exit access doorways from any space shall be provided where the design occupant load or the common path of egress travel distance exceeds the values listed in Table 1006.2.1. The cumulative occupant load from adjacent rooms, areas or spaces shall be determined in accordance with Section 1004.2.
Exceptions:
1. The number of exits from foyers, lobbies, vestibules or similar spaces need not be based on cumulative occupant loads for areas discharging through such spaces, but the capacity of the exits from such spaces shall be based on applicable cumulative occupant loads.
2. Care suites in Group I-2 occupancies complying with Section 407.4.
3. Unoccupied mechanical rooms and penthouses are not required to comply with the common path of egress travel distance measurement.

MIAMI-DADE COUNTY

FBC 2023 Chapter 10
Means of Egress
Section 1010
Doors, Gates and Turnstiles

1010.1.1 Size of doors.
The required capacity of each door opening shall be sufficient for the occupant load thereof and shall provide a minimum clear opening width of 32 inches (813 mm). The clear opening width of doorways with swinging doors shall be measured between the face of the door and the **frame** stop, with the door open 90 degrees (1.57 rad). Where this section requires a minimum clear opening width of 32 inches (813 mm) and a door opening includes two door leaves without a mullion, one leaf shall provide a minimum clear opening width of 32 inches (813 mm). In Group I-2, doors serving as means of egress doors where used for the movement of beds shall provide a minimum clear opening width of 41-1/2 inches (1054 mm). ~~The maximum width of a swinging door leaf shall be 48 inches (1219 mm) nominal.~~ The minimum clear height of door openings shall be not less than 80 inches (2032 mm).

1010.1.3 Forces to unlatch and open doors.
The forces to unlatch doors shall comply with the following:
1. Where door hardware operates by push or pull, the operational force to unlatch the door shall not exceed 15 pounds (66.7N).
2. Where door hardware operates by rotation, the operational force to unlatch the door shall not exceed 28 inch-pounds (315 N-cm).
The forces to open doors shall comply with the following:
1. For interior swinging egress doors that are manually operated, other than doors required to be fire rated, the force for pushing or pulling open the door shall not exceed 5 pounds (22 N).
2. For other swinging doors, sliding doors or folding doors, and doors required to be fire rated, the door shall require not more than a 30-pound (133 N) force to be set in motion and shall move to a full open position when subjected to not more than a 15- pound (67 N) force.

MIAMI-DADE COUNTY

FBC 2023 Chapter 10
Means of Egress
Section 1010
Doors, Gates and Turnstiles

1010.1.~~7~~6 Thresholds.
Thresholds at doorways shall not exceed 3/4 inch (19.1 mm) in height above the finished floor or landing for sliding doors serving dwelling units or 1/2 inch (12.7 mm) above the finished floor or landing for other doors. Raised thresholds and floor level changes greater than 1/4 inch (6.4 mm) at doorways shall be beveled with a slope not greater than one unit vertical in two units horizontal (50-percent slope).

Exceptions:
1. In occupancy Group R-2 or R-3, threshold heights for sliding and side-hinged exterior doors shall be permitted to be up to 7-3/4 inches (197 mm) in height if all of the following apply:
1.1. The door is not part of the required means of egress.
1.2. The door is not part of an accessible route as required by Chapter 11.
2. For exterior doors serving dwelling units, or sleeping units, thresholds at doorways shall ~~not exceed the height required to pass the water resistance test of AAMA/WDMA/CSA 101/I.S.2/A440, or TAS 202 for high-velocity hurricane zones, or the maximum allowable height difference between interior floor levels. Exterior floor level shall comply with Table 1010.1.7.~~ be allowed at a height necessary to comply with the water resistance requirements of Section 1709.5.

Note: ***Table 1010.1.7 Exterior Floor Level Difference****—table has been eliminated.*

MIAMI-DADE COUNTY

FBC 2023 Chapter 10
Means of Egress
Section 1010
Doors, Gates and Turnstiles

~~1010.1.9.4~~ **1010.2.4 Locks and latches**

Locks and latches shall be permitted to prevent operation of doors where any of the following exist:

8. Other than egress courts, where occupants must egress from an exterior space through the building for means of egress, exit access doors shall be permitted to be equipped with an approved locking device where installed and operated in accordance with all of the following:
8.1. The maximum occupant load shall be posted where required by Section 1004.9. Such signage shall be permanently affixed inside the building and shall be posted in a conspicuous space near all the exit access doorways.
8.2. A weatherproof telephone or two-way communication system installed in accordance with Section 1009 shall be located adjacent to not less than one required exit access door on the exterior side.
8.3. The egress door locking device is readily distinguishable as locked and shall be a key-operated locking device.
8.4. A clear window or glazed door opening, not less than 5 square feet (0.46 m2) in area, shall be provided at each exit access door to determine if there are occupants using the outdoor area.
8.5. A readily visible, durable sign shall be posted on the interior side on or adjacent to each locked required exit access door serving the exterior area stating, “THIS DOOR TO REMAIN UNLOCKED WHEN THE OUTDOOR AREA IS OCCUPIED.” The letters on the sign shall be not less than 1 inch (25.4 mm) high on a contrasting background.
8.6. The occupant load of the occupied exterior area shall not exceed 300 occupants in accordance with Section 1004.
9. Locking devices are permitted on doors to balconies, decks or other exterior spaces serving individual dwelling or sleeping units.
10. Locking devices are permitted on doors to balconies, decks or other exterior spaces of 250 square feet (23.23 m2) or less serving a private office space.

MIAMI-DADE COUNTY

FBC 2023 Chapter 10
Means of Egress
Section 1010
Doors, Gates and Turnstiles

~~1010.1.10~~ **1010.2.9 Panic and fire exit hardware.**

1010.2.9.1 Refrigeration machinery room.
Refrigeration machinery rooms larger than 1,000 square feet (93 m2) shall have not less than two exit or exit access doorways that swing in the direction of egress travel and shall be equipped with panic hardware or fire exit hardware.

~~Electrical rooms with equipment rated 1,200 amperes or more and over 6 feet (1829 mm) wide, and that contain overcurrent devices, switching devices or control devices with exit or exit access doors, shall be equipped with panic hardware or fire exit hardware. The doors shall swing in the direction of egress travel.~~

1010.2.9.2 Rooms with electrical equipment.
Exit or exit access doors serving transformer vaults, rooms designated for batteries or energy storage systems, or modular data centers shall be equipped with panic hardware or exit hardware. Rooms containing electrical equipment rated 800 amperes or more and that contain overcurrent devices, switching devices or control devices and where the exit or exit access door is less than 25 feet (7620 mm) from the equipment working space as required by NFPA 70, such doors shall not be provided with a latch or lock other than panic hardware or exit hardware. The doors shall swing in the direction of egress travel.

MIAMI-DADE COUNTY

FBC 2023 Chapter 10
Means of Egress
Section 1010
Doors, Gates and Turnstiles

~~1010.1.9.8~~ **1010.2.13 Delayed egress.**
Delayed egress locking systems shall be permitted to be installed on doors serving Group B, F, I, M, R, S and U occupancies in buildings that are equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or an approved automatic smoke or heat detection system installed in accordance with Section 907.
Exceptions:
1. Delayed egress locking systems shall be permitted to be installed on doors serving Group E occupancies that have an occupant load of 10 or fewer and that are in buildings that are equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or an approved automatic smoke or heat detection system installed in accordance with Section 907.
2. In courtrooms in Group A-3 and B occupancies, delayed egress locking systems shall be permitted to be installed on exit or exit access doors, other than the main exit or exit access door, that serve a courtroom in buildings that are equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1.

~~1010.1.9.8.1~~ **1010.2.13.1 Delayed egress locking system.**
Requirement 5 limits the egress path from any point to not pass through more than one delayed egress locking system. Exception 1 allows maximum of two for Group I-2 and I-3 under certain conditions.
Exception 1 additions Group I-1 Condition 2 to this list
Exception 2 allows a maximum of two for Group I-1 and I-4 under certain conditions. ***Exception now specifies "Group I-1 Condition 1."***

MIAMI-DADE COUNTY

FBC 2023 Chapter 10
Means of Egress
Section 1010
Doors, Gates and Turnstiles

1010.2.16 Elevator lobby exit access doors.
In other than high-rise buildings and Group I-3, R-3 and R-4 occupancies, electrically locked exit access doors providing egress from elevator lobbies shall be permitted where all the following conditions are met:
1. For all occupants of the floor, the path of exit access travel to not less than two exits is not required to pass through the elevator lobby.
2. The building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1, and a fire alarm system in accordance with Section 907. Elevator lobbies shall be provided with an automatic smoke detection system in accordance with Section 907.
3. Activation of the building fire alarm system by other than a manual fire alarm box shall automatically unlock the electric locks providing exit access from the elevator lobbies, and the electric locks shall remain unlocked until the system is reset.
4. The electric locks shall unlock on loss of power to the electric lock or electrical locking system.
5. The electric locks shall have the capability of being unlocked by a switch located at the fire command center, security station, or other approved location.
6. A two-way communication system complying with Chapter 7 of the Florida Building Code, Accessibility shall be located in the elevator lobby adjacent to the electrically locked exit access door and connected to an approved constantly attended station. This constantly attended station shall have the capability of unlocking the electric locks of the elevator lobby exit access doors.
7. Emergency lighting shall be provided in the elevator lobby on both sides of the electrically locked door.
8. The door locking system units shall be listed in accordance with UL 294.

MIAMI-DADE COUNTY

FBC 2023 Chapter 10
Means of Egress
Section 1011
Stairways

1011.11 Handrails.

Flights of stairways shall have handrails on each side and shall comply with Section 1014. Where glass is used to provide the handrail, the handrail shall comply with Section 2407.

Exceptions:

1. Flights of stairways within dwelling units and flights of spiral stairways are permitted to have a handrail on one side only.
2. Decks, patios and walkways that have a single change in elevation where the landing depth on each side of the change of elevation is greater than what is required for a landing do not require handrails.
3. In Group R-3 occupancies, a change in elevation consisting of a single riser at an entrance or egress door does not require handrails.
4. Changes in room elevations of three or fewer risers within dwelling units and sleeping units in Group R-2 and R-3 do not require handrails.
5. Where a platform lift is in a stationary position and the floor of the platform lift serves as the upper landing of a stairway, handrails shall not be required on the stairway, provided that all of the following criteria are met:
   5.1. The stairway contains no more than two risers.
   5.2. A handhold, positioned horizontally or vertically, is located on one side of the stairway adjacent to the top landing.
   5.3. The handhold is located not less than 34 inches (864 mm) and not more than 42 inches (1066 mm) above the bottom landing of the stairway.
   5.4. The handhold gripping surface complies with Section 1014.3 and is not less than 4.5 inches (144 mm) in length.

MIAMI-DADE COUNTY

FBC 2023 Chapter 10
Means of Egress
Sections 1016 & 1017
Exit Access & Exit Access Travel Distance

1016.2 Egress through intervening spaces.
Egress through intervening spaces shall comply with this section.

1.Exit access through an enclosed elevator lobby is permitted. Where access to two or more exits or exit access doorways is required in Section 1006.2.1, access to not less than one of the required exits shall be provided without travel through the enclosed elevator lobbies required by Section 3006, not to apply if the lobby is only provided to meet the requirements of Section 3007.6, Exception 1. Where the path of exit access travel passes through an enclosed elevator lobby, the level of protection required for the enclosed elevator lobby is not required to be extended to the exit unless direct access to an exit is required by other sections of this code.

3.An exit access shall not pass through a room that can be locked to prevent egress.

Exception: An electrically locked exit access door providing egress from an elevator lobby shall be permitted in accordance with Section 1010.2.16.

MIAMI-DADE COUNTY

FBC 2023 Chapter 10
Means of Egress
Section 1017
Exit Access Travel Distance

Table 1017.2 Exit Access Travel Distance

TABLE 1017.2 EXIT ACCESS TRAVEL DISTANCE[a]

OCCUPANCY	WITHOUT SPRINKLER SYSTEM (feet)	WITH SPRINKLER SYSTEM (feet)
A, E, F-1, M, R, S-1	200	250[b]
I-1	Not Permitted	250[b]
B	200	300[c]
F-2, S-2, U	300	400[c]
H-1	Not Permitted	75[d]
H-2	Not Permitted	100[d]
H-3	Not Permitted	150[d]
H-4	Not Permitted	175[d]
H-5	Not Permitted[e]	200[c]
I-2, I-3, I-4	Not Permitted	200[c]

Occupancy **S-1**: Exit access travel distance with sprinkler system has been reduced from 400 ft. to 250 ft.

MIAMI-DADE COUNTY

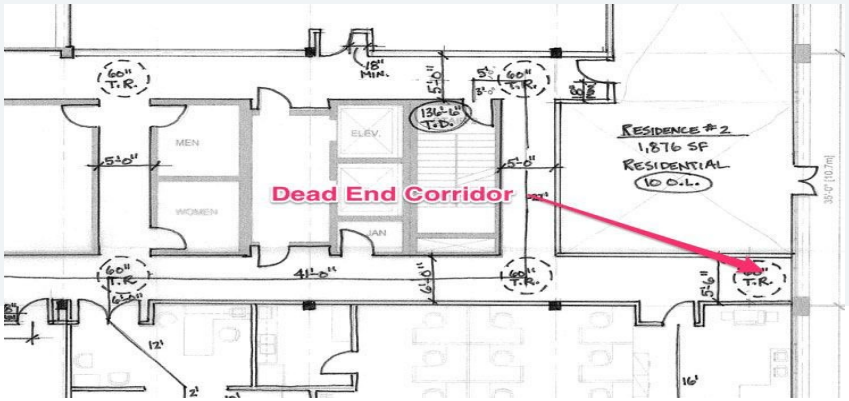
FBC 2023 Chapter 10
Means of Egress
Section 1020
Corridors

~~1020.4~~ **1020.5 Dead ends.**

Where more than one exit or exit access doorway is required, the exit access shall be arranged such that there are no dead ends in corridors more than 20 feet (6096 mm) in length.

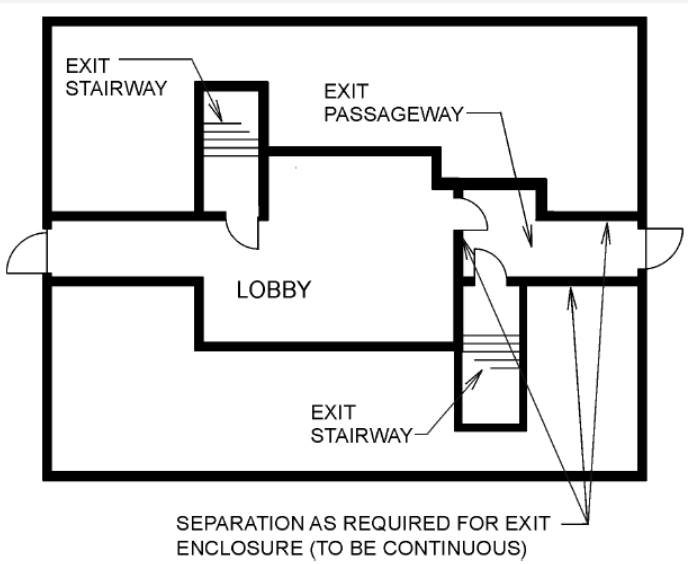
Exceptions:

1. In occupancies in Group I-3 of Condition 2, 3 or 4, the dead end in a corridor shall not exceed 50 feet (15 240 mm).
2. In occupancies in Groups B, E, F, I-1, M, R-1, R-2, S and U, where the building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1, the length of the dead-end corridors shall not exceed 50 feet (15 240 mm).
3. A dead-end corridor shall not be limited in length where the length of the dead-end corridor is less than 2.5 times the least width of the dead-end corridor.
4. In Group I-2, Condition 2 occupancies, the length of dead end corridors that do not serve patient rooms or patient treatment spaces shall not exceed 30 feet (9144 mm).



FBC 2023 Chapter 10
Means of Egress
Section 1024
Exit Passageways

1024.9 Exit passageway exterior walls.
Exterior walls of the exit passageway shall comply with Section 705. Where nonrated walls or unprotected openings enclose the exterior of the exit passageway and the walls or openings are exposed by other parts of the building at an angle of less than 180 degrees (3.14 rad), the building exterior walls within 10 feet (3048 mm) horizontally of a nonrated wall or unprotected opening shall have a fire-resistance rating of not less than 1 hour. Openings within such exterior walls shall be protected by opening protectives having a fire protection rating of not less than 3/4 hour. This construction shall extend vertically from the ground to a point 10 feet (3048 mm) above the floor of the exit passageway, or to the roof line, whichever is lower.



FBC 2023 Chapter 10
Means of Egress
Section 1029
Assembly

1029.6.3 Open-air assembly seating

New Section

1029.6.3.1 Automatic sprinklers.

Enclosed areas with walls and ceilings in buildings or structures containing open-air assembly seating shall be protected with an approved automatic sprinkler system in accordance with Section 903.3.1.1.

Exceptions:

1. The floor area used for contests, performances or entertainment, provided that the roof construction is more than 50 feet (15 240 mm) above the floor level and the use is restricted to low fire hazard uses.
2. Press boxes and storage facilities less than 1,000 square feet (93 m2) in area.
3. Open-air assembly seating facilities where seating and the means of egress in the seating area are essentially open to the outside.

MIAMI-DADE COUNTY

FBC 2023 Chapter 10
Means of Egress
Section 1029
Assembly

1029.16 Handrails.
Ramped aisles having a slope exceeding one unit vertical in 15 units horizontal (6.7-percent slope) and stepped aisles shall be provided with handrails in compliance with Section 1014 located either at one or both sides of the aisle or within the aisle width. Where the stepped aisles have seating on one side and the aisle width is 74 inches (1880 mm) or greater, two handrails are required. Where two handrails are required, one of the handrails shall be within 30 inches (762 mm) horizontally of side of the tiered floor adjacent to the stepped the aisle.

1029.16.1 Discontinuous mid-aisle handrails.
Where there is seating on both sides of the aisle, the mid-aisle handrails shall be discontinuous ~~with gaps or breaks at intervals not exceeding five rows to facilitate access to seating and to permit crossing from one side of the aisle to the other.~~ Where a stepped aisle is required to have two handrails, the mid-aisle handrails shall be discontinuous. The gaps or breaks at intervals shall not exceed five rows to facilitate access to seating and to permit crossing from one side of the aisle to the other. These gaps or breaks shall have a clear width of not less than 22 inches (559 mm) and not greater than 36 inches (914 mm), measured horizontally, and the mid-aisle handrail shall have rounded terminations or bends.

MIAMI-DADE COUNTY

FBC 2023 Chapter 10
Means of Egress
Section 1031
Egress Courts

1031.1 General.
Egress courts serving as an exit discharge component in the means of egress system shall comply with the requirements in this section.

1031.2 Width or capacity.
The required capacity of egress courts shall be determined as specified in Section 1005.1, but the minimum width shall be not less than 44 inches (1118 mm), except as specified herein. Egress courts serving Group R-3 and U occupancies shall be not less than 36 inches (914 mm) in width. The required capacity and width of egress courts shall be unobstructed to a height of 7 feet (2134 mm). The width of the egress court shall not be less than the required capacity.
Exception: Encroachments complying with Section 1005.7.

1031.3 Construction and openings.
Where an egress court serving a building or portion thereof is less than 10 feet (3048 mm) in width, the egress court walls shall have not less than 1-hour fire-resistance-rated construction for a distance of 10 feet (3048 mm) above the floor of the egress court. Openings within such walls shall be protected by opening protectives having a fire protection rating of not less than 3/4 hour.
Exceptions:
1. Egress courts serving an occupant load of less than 10.
2. Egress courts serving Group R-3

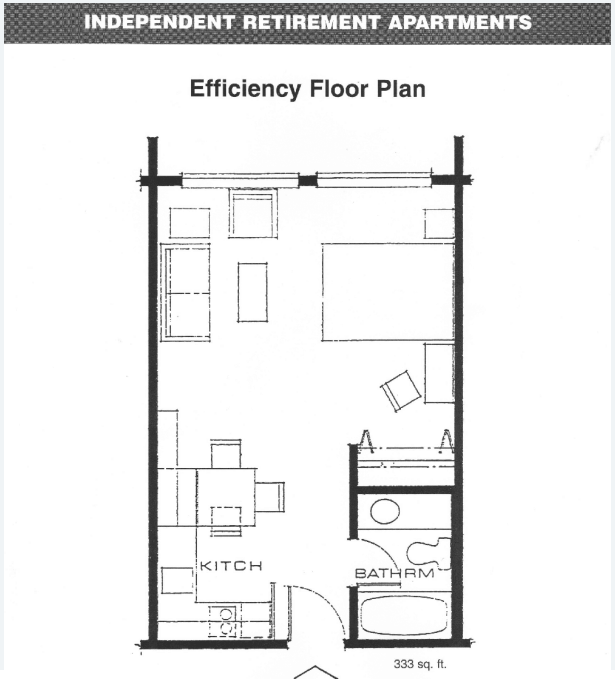
MIAMI-DADE COUNTY

FBC 2023 Chapter 12
Interior Environment

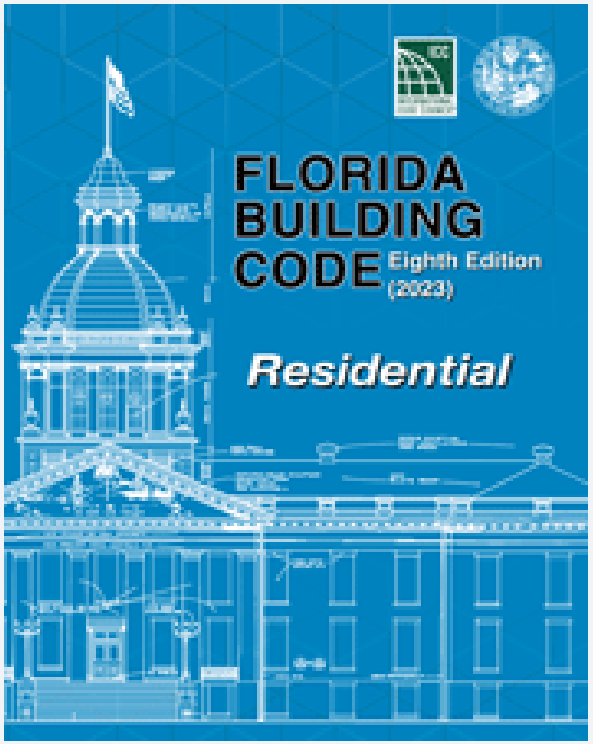
Interior Space Dimensions

1208.4 Efficiency dwelling units.

An efficiency living unit shall conform to the requirements of the code except as modified herein:
1. The unit shall have a living room of not less than ~~220~~ **190** square feet (~~20.4 m2~~ **17.7 m2**) of floor area. ~~An additional 100 square feet (9.3 m2) of floor area shall be provided for each occupant of such unit in excess of two.~~



FBC 2023
Residential



MIAMI-DADE COUNTY

FBC 2023 Residential
Chapter 3
Building Planning
R 303 Light, Ventilation and Heating

R303.1 Habitable rooms.
Habitable rooms shall have an aggregate glazing area of not less than 8 percent of the floor area of such rooms. Natural ventilation shall be through windows, skylights, doors, louvers or other approved openings to the outdoor air. Such openings shall be provided with ready access or shall otherwise be readily controllable by the building occupants. The openable area to the outdoors shall be not less than 4 percent of the floor area being ventilated.
Exceptions:
1. For habitable rooms other than kitchens, the glazed areas need not be openable where the opening is not required by Section R310 and a whole-house mechanical ventilation system or a mechanical ventilation system ~~that is~~ capable of producing 0.35 air changes per hour in the habitable rooms is installed in accordance with Section M1507.
2. For kitchens, the glazed areas need not be openable where the opening is not required by Section R310 and a local exhaust system is installed in accordance with Section M1507.
3. The glazed areas need not be installed in rooms where Exception 1 is satisfied and artificial light is provided that is capable of producing an average illumination of 6 footcandles (65 lux) over the area of the room at a height of 30 inches (762 mm) above the floor level.
4. Use of sunroom and patio covers, as defined in Section R202, shall be permitted for natural ventilation if in excess of 40 percent of the exterior sunroom walls are open, or are enclosed only by insect screening.

MIAMI-DADE COUNTY

FBC 2023 Residential
Chapter 3
Building Planning
R310 Ceiling Height

R305.1 Minimum height.
Habitable space, hallways and portions of basements containing these spaces shall have a ceiling height of not less than 7 feet (2134 mm). Bathrooms, toilet rooms and laundry rooms shall have a ceiling height of not less than 6 feet 8 inches (2032 mm).

New exception #4

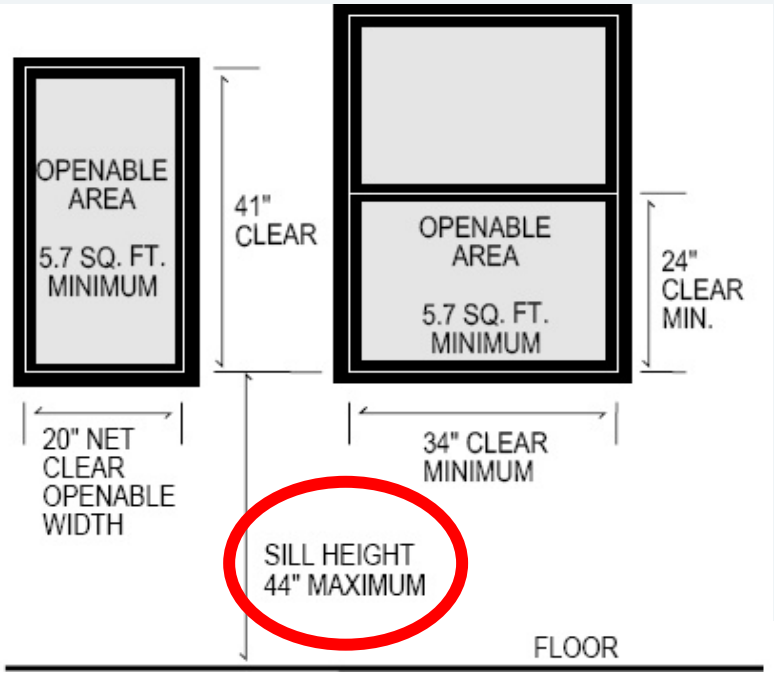
4. Beams and girders spaced apart not less than 36 inches (914 mm) in clear finished width shall project not more than 78 inches (1981 mm) from the finished floor.

FBC 2023 Residential
Chapter 3
Building Planning
R310 Emergency Escape & Rescue Openings

Section R310 reorganized; reference to sill has been removed (aligns with language and intent of FBC section 1030). In addition, reference to sill has also been removed in the R312 Section that identifies guards/window fall protection.

R310.2.3 Maximum height from floor.

Emergency escape and rescue openings shall have the bottom of the clear opening not greater than 44 inches (1118 mm) above the floo



FBC 2023 Residential
Chapter 3
Building Planning
R311 Means of Egress

R311.7 Stairways.

Where required by this code or provided, stairways shall comply with this section.

Exceptions:

1. Stairways not within or serving a building, porch or deck.
2. Stairways leading to nonhabitable attics.
3. Stairways leading to crawl spaces.

MIAMI-DADE COUNTY

Florida Building Code

Flood Regulations

Unincorporated Miami Dade County

2023

Jose Tormes CFM

Flood

- Residential
  - Minimum required Finish Floor Elevation for a residential structure (single family residence, duplex, triplex and town home no higher than three stories and with individual means of egress, as defined by the Florida Building Code) is at or above the Base Flood Elevation plus one (1) foot (BFE + 1') as shown on the FEMA Flood Maps (FIRM) as codified in the Florida Building Code (FBC Residential R322.2.1)

  - Miami Dade County requires the finish floor of said structures to be at a minimum 8" (0.67') above the elevation established by the County Flood Criteria Map, or highest Back of Sidewalk elevation fronting the property, if there is no sidewalk, said floor must be 8" (0.67') above the Highest Crown of the Road fronting the property as codified in Chapter 11C-3(k) of the Miami Dade County Code of Ordinance

Flood

- Residential FBC 322.2.2:
  - Enclosed areas below the Design Flood Elevation (DFE) shall only be used for parking of vehicles (most common are the attached garages), building access or storage, all materials used below the DFE shall be Flood Resistant materials (R322.1.8) and they must be provided with flood openings in accordance with section R322.2.2.1
  - Miami Dade County requires the finish floor of said areas to be at a minimum 4” (0.34’) above the elevation established by the County Flood Criteria Map, or highest Back of Sidewalk elevation fronting the property, if there is no sidewalk, said floor must be 4” (0.34’) above the Highest Crown of the Road fronting the property as codified in Chapter 11C-3(m) of the Miami Dade County Code of Ordinance. And said areas can not be partitioned nor air conditioned if they are below the DFE (Chapter 11C-5(6)

Flood

- Commercial
  - Minimum required Finish floor elevation as regulated by the Florida Building Code (FBC Building 16-12.4 (which requires compliance with ASCE 24-14)) states that the minimum elevation is for Category I (agricultural structures , minor storage facilities and certain temporary facilities) must be at or above the Base Flood Elevation (BFE), category II and III structures (commercial, multi units structures, schools) must be at a minimum 1 ft. above the BFE and Category IV structures (emergency facilities such as hospitals, police, fire, power generating, public utilities and any other type of facility required in case of emergencies) must be at a minimum 2 ft. above the BFE.

  - Chapter 11C-3(k) of the County Code, minimum required is 4" (0.34') above the elevation established by the County Flood Criteria Map, or the highest Back of Sidewalk elevation fronting the property, if there is no sidewalk, said floor must be 4" (0.34') above the Highest Crown of the Road fronting the property.

Flood

- Residential:
  - R322.1.6: Electrical equipment and components; HVAC, plumbing appliances and fixtures, duct systems and other service equipment shall be at or above elevations in section R322.2 or R322.3 (Coastal A and Coastal High Hazard or V zones).

Flood

- The Flood Design Class of Buildings can be found on ASCE Publication 24-14 Table 1-1.
- Minimum elevation of the top of the Lowest Floor for structures on Special Flood Hazard areas other than Coastal A zone and Coastal High Hazard can be found on ASCE Publication 24-14 table 2-1.
- Coastal High Hazard and Coastal A Zone can be found on ASCE Publication 24-14 table 4-2

Flood

Existing Building (FBC 2023):

- Additions (FBC 1401.3.3): In flood hazard areas, buildings that are evaluated in accordance with this section, shall comply with Section 1612.3 of the FBC Building or Section R322 of the FBC Residential as applicable, if the work covered by this section constitutes substantial improvements.(FBC Existing Building 1401.3.3). If not Substantial, the FFE shall match existing (FBC 1401.3.3.2).

- Substantial Alterations (Improvements): In flood hazard areas, repairs that constitutes substantial improvement shall require that the building comply with Section 1612. of the FBC Building or Section R322 of the FBC Residential (FBC Existing Building 401.5).

- Substantial Damages: In flood hazard areas, buildings that have sustained substantial damage shall be brought into compliance with Section 1612 of the FBC Building or R322 of the FBC Residential as applicable (FBC Existing Building 406.2.4).

Flood

Type of Structure	FBC	Chapter 11c	Chapter 11c	Chapter 11c	ERP
Residential	BFE + 1’	COR + 8”	BOS + 8”	CFC + 8”	ERP min elevation
Category I	BFE	COR + 4”	BOS + 4”	CFC + 4”	ERP min elevation
Category II	BFE + 1’	COR + 4”	BOS + 4”	CFC + 4”	ERP min elevation
Category III	BFE + 1’	COR + 4”	BOS + 4”	CFC + 4”	ERP min elevation
Category IV	BFE + 2’	COR + 4”	BOS + 4”	CFC + 4”	ERP min elevation

- ✓ If ERP is required, the FFE must also be 1 ft. (2 ft. if Category IV structure) above the calculated 100 Year One Day Peak Storm
- ✓ The most stringent Finished Floor Elevation applies
- ✓ Chapter 11C requires +8” for residential condos and apartment buildings
- ✓ More stringent standards apply to VE and Coastal A zones
- ✓ Applicable to unincorporated Miami-Dade County only. All municipalities have their own flood regulations and DERM does not regulate flood requirements for municipalities.

County Flood Criteria

It is worth noting that the County Flood Criteria (CFC) maps have been revised and they have been converted to datum NAVD 1988 in anticipation of the new FEMA Flood maps (FIRM"s) which will be in datum NAVD 1988.

The conversion factor is NAVD 1988 plus (+) 1.52' = NGVD 1929

The shapefile format can be found at https://gis-mdc.opendata.arcgis.com/datasets/500625d5715f4279895b85ef570f7de2/explore

For more information on the maps, you can contact Marcia Steelman (marcia.steelman@miamidade.gov).

New Requirements related to Lot Grading

Note that to verify the lot grading as related to residential infill lots as well as residential pools, starting with the new year all proposed residential infill development and residential pools that require a grading plan to prevent stormwater runoff from impacting neighboring sites, will be required to submit an As-Built elevation survey before final Building inspection, in order to verify that the stormwater runoff prevention methods in place are as approved and acceptable.

Flood

Helpful web resources:

FBC:

https://floridabuilding.org/bc/bc_default.aspx

FEMA:

https://www.dnr.state.mn.us/waters/watermgmt_section/floodplain/nfip-technical-bulletins.html

Chapter 11C (Municode):

https://library.municode.com/search?stateId=9&clientId=11719&searchText=chapter%2011c&contentTypeId=CODES

FBC 2023. 8th Edition. Significant Changes.

DISCIPLINE: STRUCTURE.

Dec. 01, 2023

MIAMI-DADE COUNTY

Miami-Dade County

PERMITTING AND INSPECTION CENTER

Presenter:

Fredy Tain, P.E. Structure and Airport Division Director.

Building Official & Assistant Director:

Mr. Edward A. Rojas.

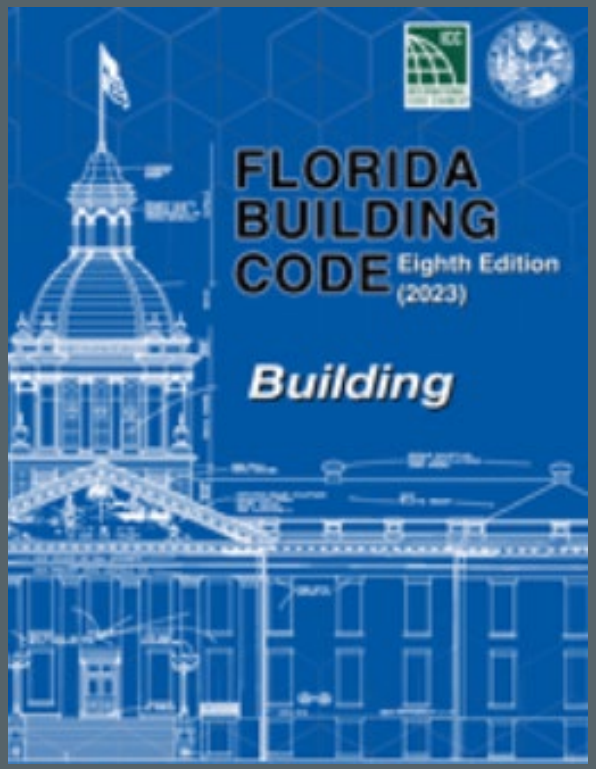
Division Chief III / Deputy Building Official

Mr. Sergio Ascunce

Notes:

No CE credit is granted, this is a Miami-Dade County courtesy Presentation.

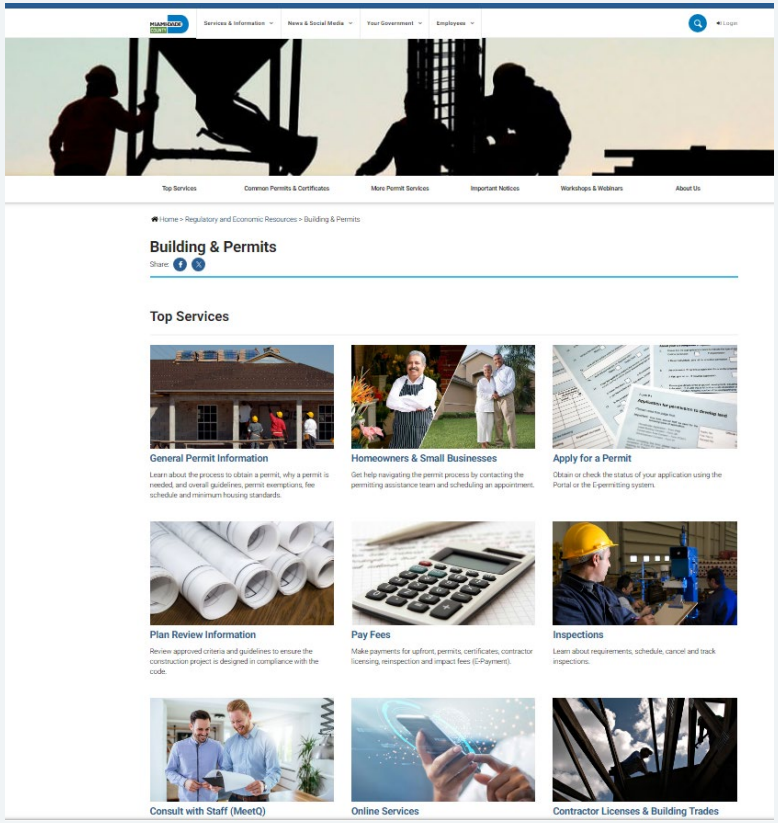
Not all changes to the code are listed in this presentation.



MIAMI-DADE COUNTY

Resources:

https://www.miamidade.gov/global/economy/building/home.page



HISTORY OF THE CODE

Code	Edition	Date in effect	Base Code	Loads Code
SFBC	First	10/29/1957		
SFBC	Revised edition to 1972			
SFBC	1974, 1976, 1979, 1984, 1988			
SFBC	1994 (19th)	3/3/1994		ASCE7-88
FBC 2001	1st	3/1/2002	SBC 1997 + SFBC1994	ASCE7-98
FBC 2004	2nd	10/1/2005	IBC 2003	ASCE7-02
FBC 2007	3rd	3/1/2009	IBC 2006	ASCE7-05
FBC 2010	4th	3/15/2012	IBC 2009	ASCE7-10
FBC 2014	5th	06/31/2015	IBC 2012	ASCE7-10
FBC 2017	6th	01/01/2017	IBC 2015	ASCE7-10
FBC 2020	7th	12/31/2020	IBC 2018	ASCE7-16
FBC 2023	8th	12/31/2023	IBC 2021	ASCE7-22

FBC 2023. Most used Code Standards.

STANDARDS	
Concrete Code	ACI318-19
Masonry Code	TMS402-2016, TMS-602-2016
Loads Code	ASCE7-22
Flood Code	ASCE24-14
Wood Codes	ANSI/AWC NDS-2018, ANSI/AWC SDPWS-2021
Aluminum code	ADM1-2020
Steel Code	AISC360-16
Communication Towers	TIA222-H-2017
See chapter 35 for complete list of Standards	

Chapter 1. Scope and Administration.

Inspections.

Section 110.8.1: **Threshold Buildings.**

No change in FBC 2023

Analysis:

This section was revised in FBC 2017 to clarify that the threshold building inspections applies not only to new constructions but also to repair and restoration projects in which the structural system or loading of the building is being modified. It is still valid in FBC 2023.

Chapter 1. Milestone Inspection

Sect 10.9: Mandatory structural inspections for condominium and cooperative buildings.
110.9.2. “Milestone inspection” Definition: A Structural Inspection of the Building…
110.9.3. Milestone inspection shall be performed for each building that is three stories or more in height by December 31 of the year in which the building reaches 30 years of age based on the date the certificate of occupancy for the building was issued, and every 10 years thereafter. If the building is located within 3 miles of a coastline …the fist milestone inspection shall be performed by December 31 of the year in which the building reaches 25 years of age.

For buildings with certificate of occupancy issued on or before July 1, 1992, the initial milestone inspection must be performed before December 31, 2024.

Chapter 1. Milestone Inspection

1109.9.5. Local Enforcement Agency are responsible to implement these Milestone inspections.

110.9.7. A milestone inspection consists of two phases:
1- Visual inspection by an Architect or Engineer.
2- When any substantial structural deterioration is identified during phase one, phase two of the milestone inspection must be performed, it may involve destructive or nondestructive testing at the inspector's direction.

110.9.8. …the architect or engineer must submit a sealed inspection report of, at minimum, the material findings and recommendations in the inspection report to the condominium association or cooperative association, and to the building official of the local government which has jurisdiction.

Chapter 1. Milestone Inspection

110.9.11. A board of county commissioners may adopt an ordinance requiring that a condominium or cooperative association schedule or commence repairs for substantial structural deterioration within a specified timeframe after the local enforcement agency receives a phase two inspection report; however, such repairs must be commenced within 365 days after receiving such report. If an association fails to submit proof to the local enforcement agency that repairs have been scheduled or have commenced for substantial structural deterioration identified in a phase two inspection report within the required timeframe, the local enforcement agency must review and determine if the building is unsafe for human occupancy.

Building Recertification vs Milestone Inspection

Miami-Dade County has in place since 1975 the **Building Recertification Program** (former 40-year inspection) which has been modified to comply with the requirements of the Milestone Inspection.

The Building Recertification Program covers all building except the followings:

- Single family residences and duplexes; or
- Agricultural exempt buildings; or
- Minor buildings 2,000 square feet or less and having an occupancy load of 10 or less based on the building code classification

Conclusion:
Compliance with the Building Recertification Inspection Program guarantees compliance with Milestone Inspection requirements.

Building Recertification

Who can perform the Inspections in Threshold Buildings?

As per Miami-Dade County Chapter 8 Section 8-11(E)(ii):

(ii)If the building or structure is a Threshold Building, as defined above, then (a) the structural portion of such report must be prepared by a Professional Engineer registered in the State of Florida ***specializing in structural design****.*

- Qualifications of the structural engineer:
  - Self-Qualification Letter: Resume of equal experience
  - -- One of the following documents from DBPR (Print out from website):
    - Engineer who's passed Structural I Exam (8hrs) *OR*
    - Engineers who's passed Civil Exam plus Structural II (8hrs) *OR*
    - Engineers who's passed the 16hrs Structural Test *OR*
    - Engineer who's obtained such license by examination under the civil discipline prior to March 1, 1993
    - Structural Recognition Program from the Engineering Board

Chapter 2. Definitions.

DANGEROUS. Any building, structure or portion thereof that meets any of the conditions described below shall be deemed dangerous:

1. The building or structure has collapsed, has partially collapsed, has moved off its foundation or lacks the necessary support of the ground.
2. There exists a significant risk of collapse, detachment or dislodgment of any portion, member, appurtenance or ornamentation of the building or structure under permanent, routine, or frequent loads; under actual loads already in effect; or under wind, rain, flood, or other environmental loads when such loads are imminent.

Chapter 2. Definitions.

ESSENTIAL FACILITIES. Buildings and other structures that are intended to remain operational in the event of extreme environmental loading from flood, wind or tornado.

FBC 2020:

…environmental loading from flood, wind, ~~snow or earthquakes~~.

Chapter 2. Definitions.

SUN CONTROL STRUCTURE.
An accessory structure consisting of columns or posts supporting an open roof of girders, beams or cross rafters with or without fixed or operational louvers serving to direct sunlight.

Chapter 2. Definitions.

New definitions related with trusses:

INDIVIDUAL TRUSS MEMBER:

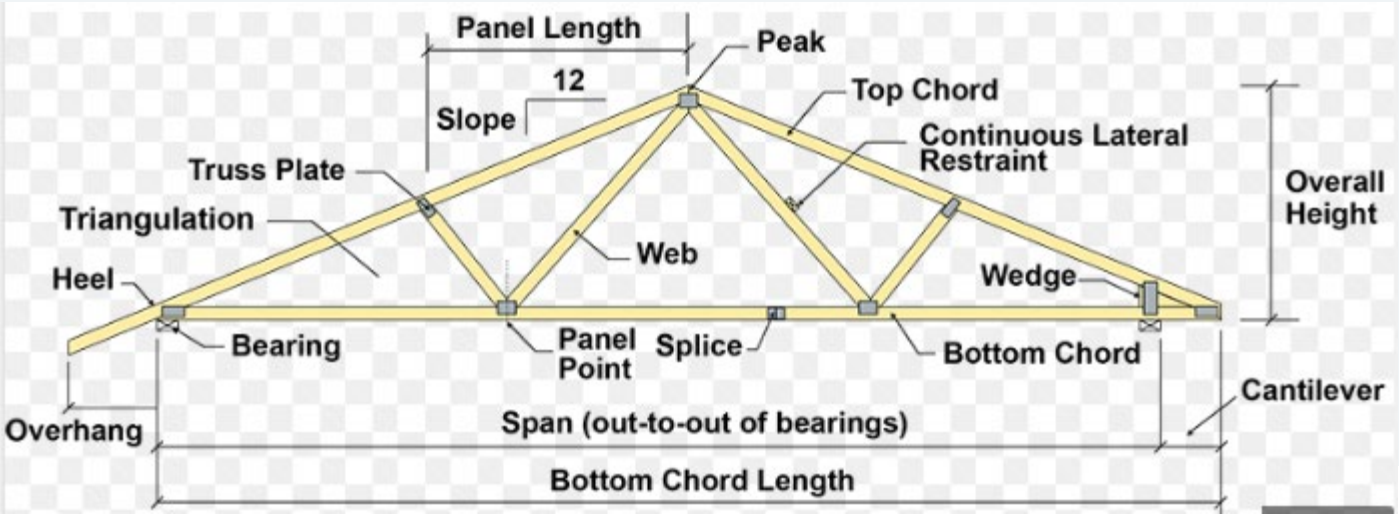
A truss chord or truss web.

PERMANENT INDIVIDUAL TRUSS MEMBER DIAGONAL BRACING (*PITMDB*):

Structural member or assembly intended to permanently stabilize the *PITMR*.

PERMANENT INDIVIDUAL TRUSS MEMBER RESTRAINT (*PITMR*):

Restraint that is used to prevent local buckling of an individual truss chord or web member because of the axial forces in the individual truss member.



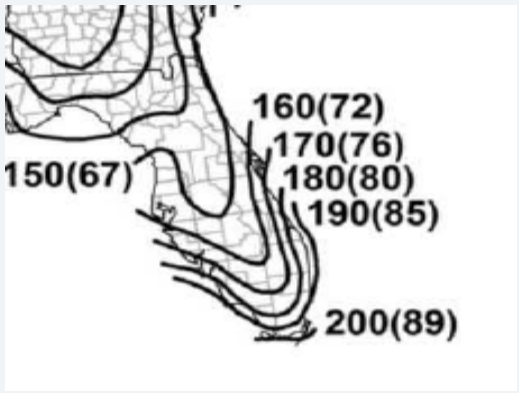
Chapter 2. Definitions.

UNDERPINNING.
The alteration of an existing foundation to transfer loads to a lower elevation using new piers, piles or other permanent structural support elements installed below the existing foundation.

Chapter 2. Definitions.

Wind-borne Debris Region: Areas within hurricane-prone regions located:

1. Within 1 mile (1.61 km) of the mean high-water line where an Exposure D condition exists upwind at the waterline and the ultimate design wind speed, Vult, is 130 mph (58 m/s) or greater; or,
2. In areas where the ultimate design wind speed, Vult, is 140 mph (63.6 m/s) or greater.



Chapter 4. Special detailed requirements based on occupancy and use.

Hospitals

449.4.2.5.4 Systems and utilities identified in Section 449.4.2 shall be protected from debris impact by an equipment housing or a screening enclosure complying with the impact protection standards in accordance with Section 1626 when located at or below 30 feet above the finished grade of the building. Where screening enclosures are used, the height of the enclosure shall be not less than the height of the protected equipment and shall provide clearances required for the maintenance and continuous operation of the equipment. Where the housing and louvers are designed to provide the required equipment protection, sufficient standoff shall be provided to prevent damage to internal components from deflection of the cladding as a result of impact. Roof mounted equipment shall have fastening systems designed to meet the wind load requirements of the Florida Building Code, Building.

Chapter 6. Types of Constructions.

Sect. 602.4.2. Cross-laminated timber in exterior walls.

FBC 2020: ~~Minimum thickness 6 inches~~ for cross - laminated timber (CLT) exterior walls.

FBC 2023: Cross-laminated timber not less than 4 inches in thickness complying with Section 2303.1.4 shall be permitted within exterior wall assemblies…

Cross-laminated timber *(**CLT**) is a proprietary engineered wood product that is prefabricated using several layers of kiln-dried **lumber**, laid flat-wise, and glued together on their wide faces in alternative directions. Panels typically consist of three, five, seven or nine alternating layers of dimension **lumber**.*
This product requires NOA or Florida approval.

Chapter 14. Exterior Walls.

1403.3 Wind resistance.

Exterior walls, exterior wall coverings, exterior soffits and fascia's, components and claddings and the associated openings, shall be designed and constructed to resist safely the superimposed loads required by Chapter 16.

1405.2 Weather protection.

Exterior walls shall provide weather protection for the building. The materials of the minimum nominal thickness specified in Table 1405.2 shall be acceptable as approved weather coverings. Where the ultimate design wind speed, Vult, is greater than 115 mph, claddings listed in Table 1405.2 must be of adequate strength to resist the wind loads for cladding specified in Chapter 16.

Chapter 15. Roof Assemblies and Roof top Structures.

Introduced in FBC 2020 remains effective in FBC 2023:

1510.7. Photovoltaic systems

Sect. 1510.7.1. Wind resistance**.** Rooftop-mounted *photovoltaic* systems shall be designed for wind loads in accordance with ASCE 7.

Analysis:

Roof mounted PV system shall be designed using ASCE7-22

Chapter 15. Roof Assemblies and Roof Top Structures.

FBC 2023 (Building), sect. 1514.4.2 Overflow drains and scuppers. …overflow scuppers sized in accordance with *Florida Building Code, Plumbing* and ASCE 7, Chapter 8 with commentary shall be installed …not less than 2 inches or more than 4 inches above the low point of the finished roofing surface... Overflow scuppers shall be a minimum of 4 inches in any dimension ... Overflow scuppers shall also comply with the *Florida Building Code, Plumbing*, and Section **1611** of this code.

Analysis:
This section requires overflow drains and scuppers be sized in accordance with ASCE 7, Chapter 8 with commentary (Rain Loads) in addition to the Florida Building Code, Plumbing.

Scuppers. FBC 2023 (Plumbing)

FBC 2023 (Plumbing), sect. 1106.5 Parapet wall scuppers.

Where scuppers are used for primary roof drainage or for secondary (emergency overflow) roof drainage or both, the quantity, size, location and inlet elevation of the scuppers shall be chosen to prevent the depth of ponding water on the roof from exceeding the maximum water depth that the roof was designed for as determined by Section 1611.1 of the Florida Building Code, Building. Scupper openings shall be not less than 4 inches (102 mm) in height and have a width that is equal to or greater than the circumference of a roof drain sized for the same roof area. The flow through the primary system shall not be considered when locating and sizing secondary scuppers.

Chapter 16. Structural Design

Rain Load.

FBC (building) sect. 1611.1 Design rain loads.

Each portion of a roof shall be designed to sustain the load of rainwater as per the requirements of Chapter 8 of ASCE 7. Rain loads shall be based on the summation of the static head, ds, hydraulic head, dh, and ponding head, dp using Equation 16-19. The hydraulic head shall be based on hydraulic test data or hydraulic calculations assuming a flow rate corresponding to a rainfall intensity equal to or greater than the 15-minute duration storm with return period given in Table 1611.1. The ponding head shall be based on structural analysis as the depth of water due to deflections of the roof subjected to unfactored rain load and unfactored dead load.

FBC 2020 :~~The design rainfall shall be based on the 100-year hourly rainfall rate indicated in Figure 1611.1 Figures 1611.1 indicating 100-year, 1-hour rainfall values were eliminated in FBC 2023~~

Chapter 16. Structural Design

Rain Load.

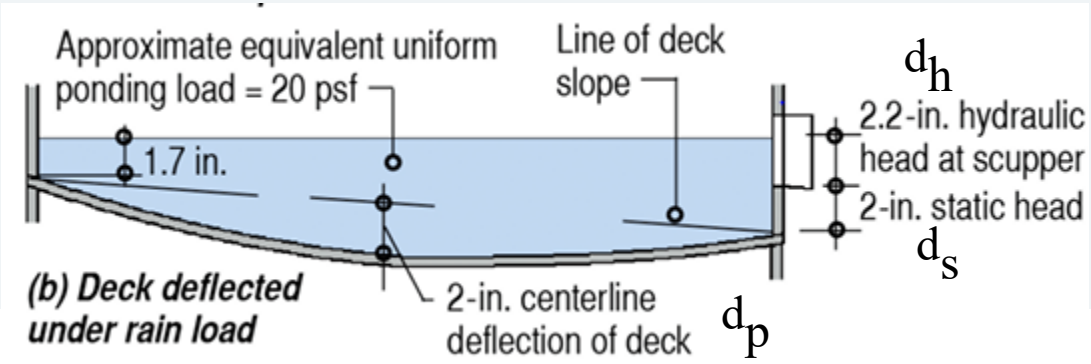
R: Rain Load

$R=5.2(d_s + d_h + d_p)$ Eq. 16-19

d_s = Static head equal to the depth of water on the undeflected roof up to the of the secondary drainage system for structural loading (SDSL) in inches.

d_h = Hydraulic head equal to the depth of water on the undeflected roof above the inlet of the secondary drainage system for structural loading (SDSL) required to achieve the design flow in inches.

d_p = Ponding head equal to the depth of water due to deflections of the roof to unfactored rain load and unfactored dead load in inches.



Chapter 16. Structural Design

Rain Load.

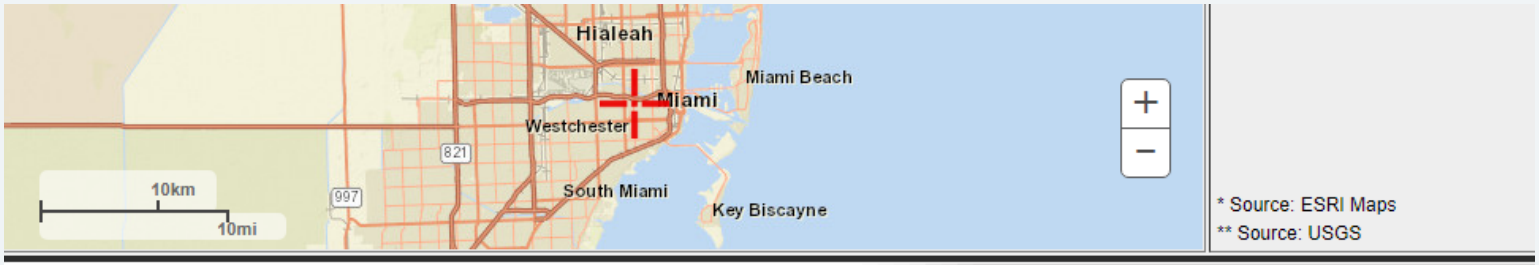
TABLE 1611.1 DESIGN STORM RETURN PERIOD BY RISK CATEGORY

RISK CATEGORY	DESIGN STORM RETURN PERIOD
I & II	100 years
III	200 years
IV	500 years

ASCE7-22, chapter 8 commentary indicates to find the rainfall intensity for the 15-minute duration storm at:
http://hdsc.nws.noaa.gov/hdsc/pfds/index.html
The Precipitation Frequency Data Server (PFDS)

Chapter 16. Structural Design

Rain Load.



POINT PRECIPITATION FREQUENCY (PF) ESTIMATES

WITH 90% CONFIDENCE INTERVALS AND SUPPLEMENTARY INFORMATION
NOAA Atlas 14, Volume 9, Version 2

PF tabular | PF graphical | Supplementary information | Print page

PDS-based precipitation frequency estimates with 90% confidence intervals (in inches)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	0.575 (0.476-0.698)	0.660 (0.545-0.801)	0.798 (0.657-0.972)	0.914 (0.748-1.12)	1.07 (0.847-1.36)	1.20 (0.922-1.54)	1.32 (0.981-1.75)	1.45 (1.03-1.98)	1.62 (1.10-2.28)	1.75 (1.16-2.51)
10-min	0.843 (0.697-1.02)	0.966 (0.798-1.17)	1.17 (0.962-1.42)	1.34 (1.10-1.64)	1.57 (1.24-1.99)	1.75 (1.35-2.26)	1.94 (1.44-2.56)	2.12 (1.50-2.90)	2.37 (1.61-3.34)	2.56 (1.69-3.67)
15-min	1.03 (0.850-1.25)	1.18 (0.973-1.43)	1.42 (1.17-1.74)	1.63 (1.34-2.00)	1.92 (1.51-2.43)	2.14 (1.65-2.75)	2.36 (1.75-3.13)	2.59 (1.84-3.53)	2.89 (1.96-4.07)	3.12 (2.06-4.48)
30-min	1.55 (1.28-1.88)	1.79 (1.48-2.17)	2.18 (1.80-2.66)	2.51 (2.05-3.07)	2.96 (2.33-3.75)	3.31 (2.54-4.26)	3.66 (2.71-4.84)	4.01 (2.84-5.47)	4.48 (3.04-6.30)	4.83 (3.19-6.93)

This values are inches of rainwater in 15 minutes

Overflow Scuppers.

The Facts:

- Roofs are typically designed for 30 psf or 20 psf of live load.
- The maximum depth of water allowed on the roof:

  5.7” for LL= 30 psf

  3.8” for LL= 20 psf.

- Overflow scuppers size, quantity and elevation shall be calculated with enough capacity not to exceed the maximum water depth shown above unless additional load is considered in the structural design.
- Remember that ponding effect is a variable to be considered in the design of the overflow scuppers.
  - **A note on the drawings indicating that the scuppers shall be installed between 2” and 4” is not correct, the actual height shall be stablished based on calculations.**

Chapter 16. Structural Design

Sect. 1603. Construction Documents.

1603.1.4 Wind design data.

The following information related to wind loads shall be shown, regardless of whether wind loads govern the design of the lateral force-resisting system of the structure:

1. Ultimate design wind speed, Vult, (3-second gust), miles per hour (km/hr), tornado speed, V_T (mph) and nominal design wind speed, Vasd, (mph) as determined in accordance with Section 1609.3.1.
2. Risk category.
3. Effective plan area, Ae, for tornado design in accordance with Chapter 32 of ASCE 7.
4. Wind exposure. Applicable wind direction if more than one wind exposure is utilized.
5. Applicable internal pressure coefficients and applicable tornado internal pressure coefficients.
6. Design wind pressures and their applicable zones with dimensions to be used for exterior component and cladding materials not specifically designed by the registered design professional responsible for the design of the structure, psf (kN/m2). Where design for tornado loads is required, the design pressures shown shall be the maximum of wind or tornado pressures.

Chapter 16. Structural Design

FBC 2020, Sect. 1603.1.9 Roof rain load data. ~~The following roof rain load parameters shall be shown regardless of whether the rain loads govern the design:~~
~~1. Rain load~~
~~2. Rain intensity, *i* (in./hr)~~

Replaced by:
FBC 2023, sect. 1603.1.9 Roof rain load data.

Design rainfall intensity, i (in./hr), shall be shown regardless of whether rain loads govern the design.

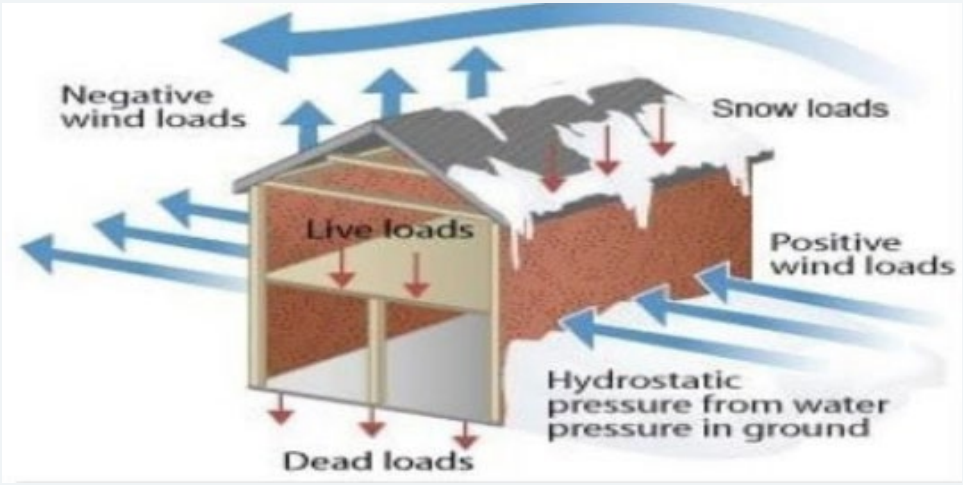
Analysis:
It is required to show Rain Intensity on the drawings as part of the design criteria, along with the other applicable loads.

Chapter 16. Structural Design

Section 1605. LOAD COMBINATIONS

1605.1 General.

Buildings and other structures and portions thereof shall be designed to resist the strength load combinations specified in ASCE 7, Section 2.3, the allowable stress design load combinations specified in ASCE 7, Section 2.4, or the alternative allowable stress design load combinations of Section 1605.2.



Chapter 16. Structural

Section 1606. DEAD LOADS

1606.3 Weight of fixed service equipment.
In determining dead loads for purposes of design, the weight of fixed service equipment, including the maximum weight of the contents of fixed service equipment, shall be included. The components of fixed service equipment that are variable, such as liquid contents and movable trays, shall not be used to counteract forces causing overturning, sliding, and uplift conditions in accordance with Section 1.3.6 of ASCE 7.

1606.4 Photovoltaic panel systems.
The weight of photovoltaic panel systems, their support system, and ballast shall be considered as dead load.

Note: Ballast systems for roof top equipment are not allowed in the HVHZ as per sect. 1522.2

Chapter 16. Structural Design

Section 1606. DEAD LOADS

Sect. 1606.5. Vegetative and landscaped Roof.
The weight of all landscaping and hardscaping materials for vegetative and landscaped roofs shall be considered as dead load. The weight shall be computed considering both fully saturated soil and drainage layer materials and fully dry soil and drainage layer materials to determine the most severe load effects on the structure

Chapter 16. Structural Design

Section 1607, LIVE LOADS

Table 1607.1 Minimum Live Load Table.

About 50% of this table is indicated as revised.
The foot notes that were “a thru o” were greatly simplified, there are only three notes now (a, b & c), all three indicating where the live load reduction is allowed.

100 PSF

Chapter 16. Structural Design

Section 1607, LIVE LOADS

Other changes in the Live Load section:

Sections with changes:

- 1607.8 Heavy vehicle loads
- 1607.8.2 Fire truck and emergency vehicles.
- 1607.8.3 Heavy vehicle garages
- 1607.8.4 Forklifts and movable equipment.
- 1607.9 Loads on handrails, guards, grab bars and seats.
- 1607.11 Reduction in uniform live loads.
- 1607.12 Distribution of floor loads.
- 1607.13.1 Distribution of roof loads.
- 1607.13.3 Awnings and canopies.
- 1607.21.1 Horizontal sway loads.

Chapter 16. Structural Design

Section 1607, LIVE LOADS

New sections:

1607.7 Passenger vehicle garages.
1607.16 Fixed ladders.
1607.17 Library stack rooms.
1607.18 Sidewalks, vehicular driveways, and yards subject to trucking.
1607.19 Stair treads.
1607.20 Residential attics.
1607.21 Seating for assembly uses.

Chapter 16. Structural Design

1607.13 Roof loads.

The structural supports of roofs and marquees shall be designed to resist wind and, where applicable, tornado loads, in addition to the dead load of construction and the appropriate live loads as prescribed in this section, or as set forth in Table 1607.1. The live loads acting on a sloping surface shall be assumed to act vertically on the horizontal projection of that surface.

Chapter 16. Structural Design

1620.7 Tornado Loads.

The design and construction of Risk Category III and IV buildings and other structures shall be in accordance with Chapter 32 of ASCE 7.

Risk Cat. III: Buildings and other structures, the failure of which could pose a substantial risk to human life…
Risk Cat. IV: Buildings and other structures designated as essential facilities

Chapter 16. Structural Design

No change to this section:

Sect. 1620.2 Wind velocity (3-second gust) used in structural calculations shall be as follows:

Miami-Dade County

Risk Category I Buildings and Structures: 165 mph
Risk Category II Buildings and Structures: 175 mph
Risk Category III Buildings and Structures: 186 mph
Risk Category IV Buildings and Structures: 195 mph

Chapter 18. Soils and Foundations

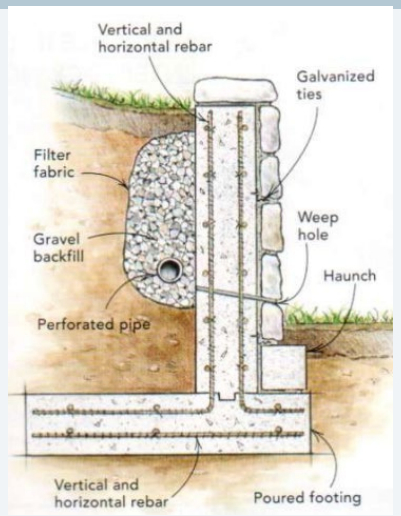
1803.5.7 Excavation near foundations.

Where excavation will reduce support from any foundation, a registered design professional shall prepare an assessment of the structure as determined from examination of the structure, available design documents, available sub-surfacing data, and, if necessary, excavation of test pits. The registered design professional shall determine the requirements for support and protection of any existing foundation and prepare site-specific plans, details and sequence of work for submission. Such support shall be provided by underpinning, bracing, excavation retention systems, or by other means acceptable to the building official.

Chapter 18. Soils and Foundations

1807.2 Retaining walls.

1807.2.3 Safety factor.
Retaining walls shall be designed to resist the lateral action of soil to produce sliding and overturning with a minimum safety factor of 1.5 in each case. The load combinations of Section 1605 shall not apply to this requirement. Instead, design shall be based on 1.0 times all applicable nominal loads, and investigation with one or more of the variable loads set to zero…



1807.2.4 Segmental retaining walls.
Dry-cast concrete units used in the construction of segmental retaining walls shall comply with ASTM C1372.

Chapter 20. Aluminum

2003.10 Sun control structure design.
A registered design professional shall design sun control structures.

2003.10.1Wind loads.
Basic wind speed in miles per hour (mph) shall be determined in accordance with Section 1620.2. Sun control structures, including exposed structures, components, and cladding, shall be designed to resist the wind loads as established in Section 1620.1.

2003.10.2
Operable louvers shall be repositioned and locked in the vertical open position when wind speeds are predicted to be 75 mph or greater. The contractor shall post a legible and readily visible permanent decal or sign stating words to the effect that the operable louvers are to be locked in the vertically open position when wind speeds are predicted to be 75 mph and during a hurricane warning or alert as designated by the National Weather Service…

FBC Existing Volume

Chapter 3

SECTION 303. ADDITIONS AND REPLACEMENTS OF EXTERIOR WALL COVERINGS AND EXTERIOR WALL ENVELOPES

303.1General.

The provisions of Section 303 apply to all alterations, repairs, additions, relocations of structures and changes of occupancy regardless of compliance method.

303.2 Additions and replacements.

Where an exterior wall covering or exterior wall envelope is added or replaced, the materials and methods used **shall comply with the requirements for new construction** in Chapter 14 and Chapter 26 **of the Florida Building Code, Building** and Chapter 7 of the Florida Building Code, Residential, as applicable, **if** the added or replaced exterior wall covering or exterior wall envelope **involves two or more contiguous stories and comprises more than 15 percent of the total wall area on any side of the building.**

FBC Existing Volume

Chapter 3

301.5 Relocated buildings.

Relocated buildings shall comply with the requirements of Chapter 13 of this code.

FBC Existing Volume

Chapter 4. Repairs

401.1 Scope.

Repairs, as defined in Chapter 2, include the patching or restoration or replacement of damaged materials, elements, equipment or fixtures for the purpose of maintaining such components in good or sound condition with respect to existing loads or performance requirements.

401.1.1 Bleachers, grandstands and folding and telescopic seating.

Repairs to existing bleachers, grandstands and folding and telescopic seating shall comply with ICC 300.

FBC Existing Volume

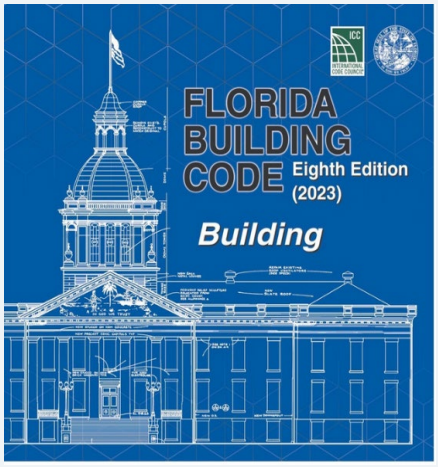
Chapter 4. Repairs

401.4 Related work.

Work on nondamaged components that is necessary for the required repair of damaged components shall be considered part of the repair and shall not be subject to the provisions of Chapter 7, 8, 9, 10 or 11.

Chapter 7: Alteration level 1.
Chapter 8: Alteration level 2.
Chapter 9: Alteration level 3.
Chapter 10: Change of occupancy.
Chapter 11: Additions

Questions?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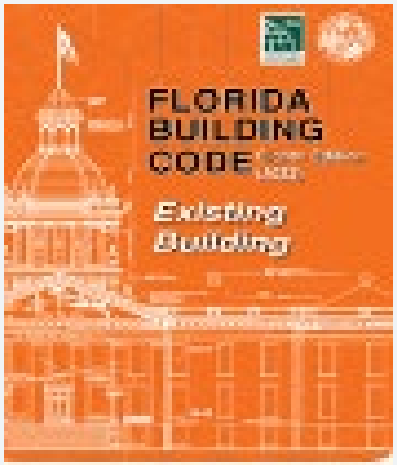
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