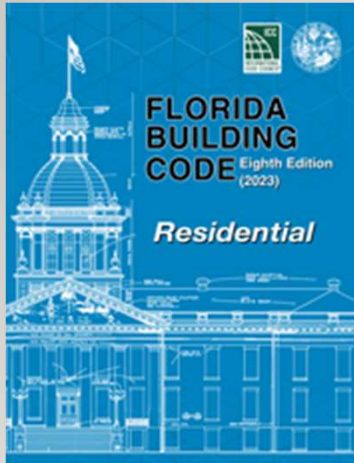


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2023 Advanced Florida Building Code Significant Changes, 8th Ed.

Course # 1284.0

with Kevin LaMalva, P.E., F.ASCE, F.SEI

2

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Empowering Spaces: Design for the Aging Population
IDCEC-approved course # Slide will be updated upon approval
2 HSW CEUs

5 BIOGRAPHY

- Registered Fire Protection Engineer (FL, MA, CA, CO, DC, GA, NJ, NY, NC, SC, TX, OR, WA)
- Registered Civil Engineer (MA)
- Over 16 years consulting experience
- ENR Newsmaker and SFPE D. Peter Lund Award recipient
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6 COURSE DESCRIPTION

This two (2) hour course covers and highlights some of the significant changes and updates in the 2023 8th Edition **Florida Building Code**, as well as those for the **Florida Residential Code** and **Florida Existing Building Code**. Participants will progress through key sections of these codes and be provided with exact code text along with explanatory commentary for practical context. Also, participants will be informed about the relationship of key code changes to other related code sections. Upon completion of this course, participants will understand the changes made to the 2023 8th Edition Florida Building Codes and how such changes affect the built environment as it pertains to public safety and welfare.

7 LEARNING OBJECTIVES

- Recognize the general composition of the Florida Building Codes and its application to community safety.
- Identify key changes from the 7th edition to the 8th edition of the Florida Building Codes.
- Interpret the relationship of the code changes to other sections of the Florida Building Codes.
- Understand how the code changes affect the built environment as it pertains to public safety and welfare.

8 COURSE OUTLINE

- **Florida Building Code**
 - Chapter 4: Special Detailed Requirements Based on Occupancy and Use (10 minutes)
 - Chapter 5: General Building Heights and Areas (5 minutes)
 - Chapter 7: Fire and Smoke Protection Features (15 minutes)
 - Chapter 8: Interior Finishes and Decorative Materials (5 minutes)
 - Chapter 9: Fire Protection Systems (10 minutes)
 - Chapter 10: Means of Egress [General] (15 minutes)
 - Chapter 10: Means of Egress [Doors] (15 minutes)

9 COURSE OUTLINE (CONTINUED)

- **Florida Residential Code**
 - Fire/Life Safety Provisions (10 minutes)
 - Other Provisions (15 minutes)
- **Florida Existing Building Code**
 - General (15 minutes)

10

FLORIDA BUILDING CODE

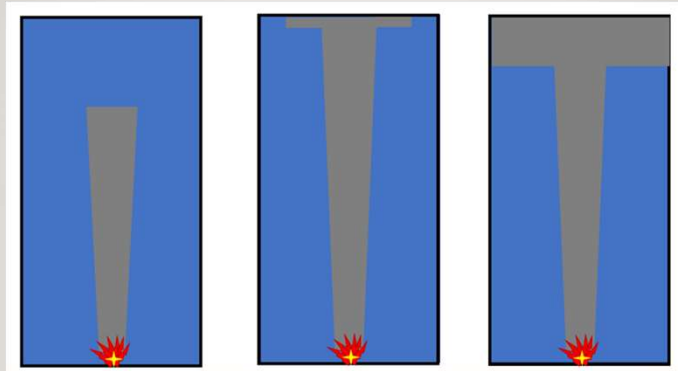
II

CHAPTER 4: SPECIAL DETAILED REQUIREMENTS BASED ON OCCUPANCY AND USE

12 ATRIUM SMOKE CONTROL



13 ATRIUM SMOKE CONTROL



14 ATRIUM SMOKE CONTROL

404.5 Smoke control.

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

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.

15 ATRIUM ENCLOSURES

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.

Exceptions:

[Exceptions 1-3 not shown]

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.

16 ATRIUM STAIRWAYS

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.

17 MECHANICAL-ACCESS PARKING GARAGES



18 MECHANICAL-ACCESS PARKING GARAGES

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.

[Sections 406.6.4.1 through 406.6.4.4 not shown]

19 GROUP I-2 CORRIDOR ACCESS

407.4.4.3 Access to corridor.

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.

20 HOSPITAL AUTOMATIC-CLOSING DOORS

407.6 Automatic-closing doors.

Automatic-closing doors with hold-open devices shall comply with Sections 709.5 and 716.5.

407.6.1 Activation of automatic-closing doors.

Automatic-closing doors on hold-open devices in accordance with Section 716.5.9.4 shall also close upon activation of a fire alarm system, an automatic sprinkler system, or both. The automatic release of the hold open device on one door shall release all such doors within the same smoke compartment.

21 ARTIFICIAL DECORATIVE VEGETATION

SECTION 419

ARTIFICIAL DECORATIVE VEGETATION

419.1 Artificial decorative vegetation.

Artificial decorative vegetation exceeding 6 feet (1830 mm) in height and permanently installed outdoors within 5 feet (1524 mm) of a building, or on the roof of a building, shall comply with the Florida Fire Prevention Code.

Exception: Artificial decorative vegetation located more than 30 feet (9144 mm) from the exterior wall of a building.

22 NURSING HOME DOORS

450.3.5.3

The use of pocket sliding or folding doors to any occupiable room shall not be permitted. A sliding door equipped with sliding hardware located outside of the room and without a bottom track shall be permitted. If a sliding door is used on a resident toilet or bathroom, a D-shaped handle at least 4 inches (10.16 cm) long shall be provided to open the door. A sliding door used for access to any room located on the exit access corridor may be manual or power operated and shall be smoke resistive and have latching hardware or other mechanism that prevents the door from rebounding to a partially open position if the door is forcefully closed.

23 SWIM-UP BARS

454.1.9.9 Swim-up bars.

Swim-up bars shall comply with the requirements of Sections 454.1.9.9.1 through 454.1.9.9.9.

[Sections 454.1.9.9.1 through 454.1.9.9.9 not shown]

24 CHAPTER 4 QUIZ QUESTION

A horizontal assembly is not required between the atrium and openings for _____ complying with Section 712.1.3.

- A. escalators
- B. fire walls
- C. fire sprinkler piping
- D. release vents

25

CHAPTER 5: GENERAL BUILDING HEIGHTS AND AREAS

26 OCCUPIED ROOFS

503.1.4 Occupied roofs.

A roof level or portion thereof shall be permitted to be used as an occupied roof provided the occupancy of the roof is an occupancy that is permitted by Table 504.4 for the story immediately below the roof. The area of the occupied roofs shall not be included in the building area as regulated by Section 506.

Exceptions:

1. The occupancy located on an occupied roof shall not be limited to the occupancies allowed on the story immediately below the roof where the building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2 and occupant notification in accordance with Sections 907.5.2.1 and 907.5.2.3 is provided in the area of the occupied roof. Emergency voice/alarm communication system notification per Section 907.5.2.2 shall also be provided in the area of the occupied roof where such system is required elsewhere in the building.

2. Assembly occupancies shall be permitted on roofs of open parking garages of Type I or Type II construction, in accordance with the exception to Section 903.2.1.6.

Elements or structures enclosing the occupied roof areas shall not extend more than 48 inches (1220 mm) above the surface of the occupied roof.

Exception: Penthouses constructed in accordance with Section 1510.2 and towers, domes, spires and cupolas constructed in accordance with Section 1510.5.

27 FRONTAGE INCREASE

TABLE 506.3.3 FRONTAGE INCREASE FACTOR^a

Percentage (%) of Perimeter	OPEN SPACE			
	0 to less than 20 feet	20 to less than 25 feet	25 to less than 30 feet	30 feet or greater
0 to less than 25	0	0	0	0
25 to less than 50	0	0.17	0.21	0.25
50 to less than 75	0	0.33	0.42	0.50
75 to 100	0	0.5	0.63	0.75

28 OPEN PARKING GARAGE LOCATED ABOVE

510.8 Group B or M buildings with Group S-2 open parking garage above.

Group B or M occupancies located below a Group S-2 open parking garage of a lesser type of construction shall be considered as a separate and distinct building from the Group S-2 open parking garage for the purpose of determining the type of construction where all of the following conditions are met:

[Conditions 1 through 6 not shown]

7. Exits serving the Group S-2 open parking garage shall discharge at grade with direct and unobstructed access to a street or public way and are separated from the building below the horizontal assembly by 2-hour fire barriers constructed in accordance with Section 707 or 2-hour horizontal assemblies constructed in accordance with Section 711, or both.

29

CHAPTER 7: FIRE AND SMOKE PROTECTION FEATURES

30 “NONCOMBUSTIBLE”

703.5.1 Noncombustible materials.

Materials required to be noncombustible shall be tested in accordance with ASTM E136. Alternately, materials required to be noncombustible shall be tested in accordance with ASTM E2652 using the acceptance criteria prescribed by ASTM E136.

Exception: Materials having a structural base of noncombustible material as determined in accordance with ASTM E136, or with ASTM E2652 using the acceptance criteria prescribed by ASTM E136, with a surfacing of not more than 0.125 inch (3.18 mm) in thickness having a flame spread index not greater than 50 when tested in accordance with ASTM E84 or UL 723 shall be acceptable as noncombustible.

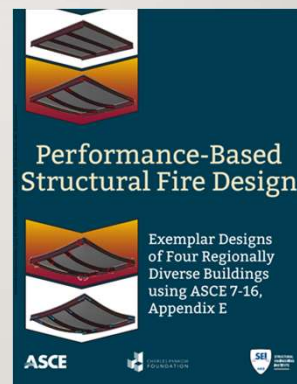
31 ALTERNATIVE TO 'FIRE RESISTANCE'

703.2.2 Analytical methods.

The fire resistance of building elements, components or assemblies established by an analytical method shall be by any of the methods listed in this section based on the fire exposure and acceptance criteria specified in ASTM E119 or UL 263.

1. Fire-resistance designs documented in approved sources.
2. Prescriptive designs of fire-resistance-rated building elements, components or assemblies as prescribed in Section 721.
3. Calculations in accordance with Section 722.
4. Engineering analysis based on a comparison of building element, component or assemblies designs having fire-resistance ratings as determined by the test procedures set forth in ASTM E119 or UL 263.
5. Fire-resistance designs certified by an approved agency.

32 ALTERNATIVE TO 'FIRE RESISTANCE'

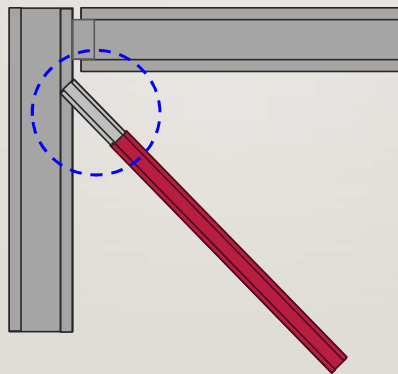


33 FIREPROOFING COAT-BACKS

704.6.1 Secondary attachments to structural members.

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.

34 FIREPROOFING COAT-BACKS



35 BUILDING PROJECTIONS

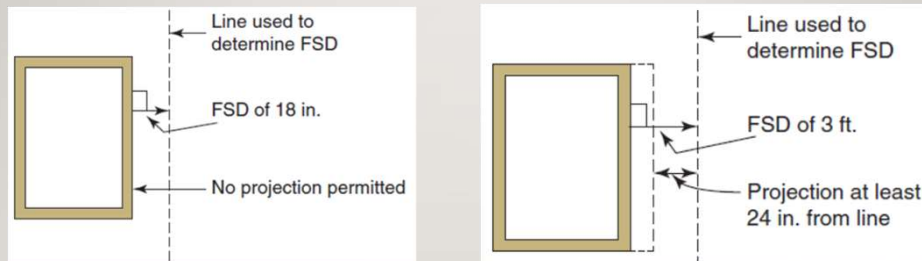


36 BUILDING PROJECTIONS

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

37 BUILDING PROJECTIONS



38 EXTERIOR WALLS (FIRE BARRIERS)

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, ramp 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.

39 FIRE BARRIERS CONTINUITY

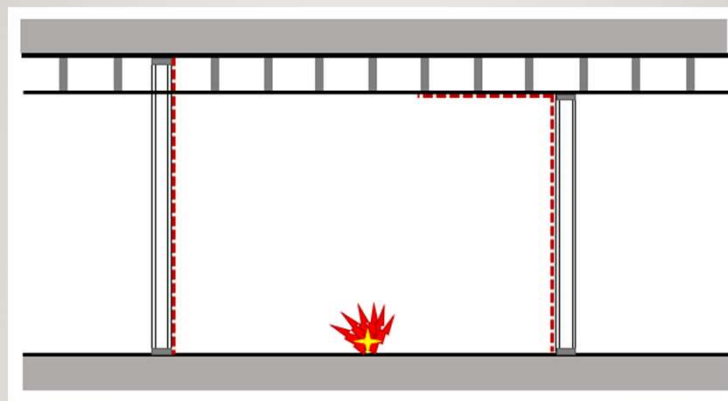
707.5 Continuity.

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.

40 FIRE PARTITIONS



41 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 1020.2.
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.

42 JOINT FIRE-SAFING



43 JOINT FIRE-SAFING

715.2 Installation.

Systems or materials protecting joints and voids shall be securely installed in accordance with the manufacturer's installation instructions in or on the joint or void for its entire length so as not to dislodge, loosen or otherwise impair its ability to accommodate expected building movements and to resist the passage of fire and hot gases. Fire-resistant joint systems or systems used to protect voids at exterior curtain walls and fire-resistance-rated floor intersections shall also be installed in accordance with the listing criteria.

44 FIRE DOORS

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

45 ENERGY STORAGE SYSTEM SEPARATIONS

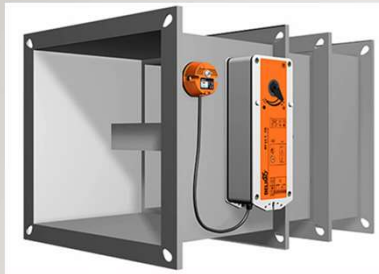


46 ENERGY STORAGE SYSTEM SEPARATIONS

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.

47 ENERGY STORAGE SYSTEM SEPARATIONS



48 ENERGY STORAGE SYSTEM SEPARATIONS

717.5.2 Fire barriers.

Ducts and air transfer openings of fire barriers shall be protected with listed fire dampers installed in accordance with their listing. Ducts and air transfer openings shall not penetrate enclosures for interior exit stairways and ramps and exit passageways, except as permitted by Sections 1023.5 and 1024.6, respectively.

Exception: Fire dampers are not required at penetrations of fire barriers where any of the following apply:

[Exceptions 1 and 2 not shown]

3. Such walls are penetrated by fully ducted HVAC systems, have a required fire-resistance rating of 1 hour or less, are in areas of other than Group H and are in buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2. For the purposes of this exception, a fully ducted HVAC system shall be a duct system for conveying supply, return or exhaust air as part of the structure's HVAC system. Such a duct system shall be constructed of sheet steel not less than No. 26 gage thickness and shall be continuous from the airhandling appliance or equipment to the air outlet and inlet terminals. Flexible air connectors shall be permitted in the following locations:

3.1. Nonmetal flex connections shall be permitted at the duct connection to the air handling unit or equipment located within the mechanical room in accordance with Section 603.9 of the Florida Building Code, Mechanical.

3.2. Nonmetal flex connections shall be permitted from an overhead metal duct to a ceiling diffuser within the same room in accordance with Section 603.6.2 of the Florida Building Code, Mechanical.

49 CHAPTER 7 QUIZ QUESTION

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 a distance of not less than _____ away from the protected members.

- A. 1 inch
- B. 12 inches
- C. 4 feet
- D. 6.5 feet

50

CHAPTER 8: INTERIOR FINISHES AND DECORATIVE MATERIALS

51 SITE-FABRICATED STRETCH SYSTEMS

803.10 Site-fabricated stretch systems.

Where used as interior wall or interior ceiling finish materials, site-fabricated stretch systems containing all three components described in the definition in Chapter 2 shall be tested in the manner intended for use, and shall comply with the requirements of **Section 803.1.2 or with the requirements of Class A in accordance with Section 803.1.1. If the materials are tested in** accordance with ASTM E84 or UL 723, specimen preparation and mounting shall be in accordance with ASTM E2573.

52 COMBUSTIBLE LOCKERS

806.9 Combustible lockers.

Where lockers constructed of combustible materials are used, the lockers shall be considered to be interior finish and shall comply with Section 803.

Exception: Lockers constructed entirely of wood and noncombustible materials shall be permitted to be used wherever interior finish materials are required to meet a Class C classification in accordance with Section 803.1.1.

53 ARTIFICIAL DECORATIVE VEGETATION

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.

54

CHAPTER 9: FIRE PROTECTION SYSTEMS

55 CORRIDOR/BALCONY FIRE SPRINKLER PROTECTION



56 CORRIDOR/BALCONY FIRE SPRINKLER PROTECTION

903.3.1.2.2 Corridors and balconies in the means of egress.

Sprinkler protection shall be provided in corridors and for balconies in the means of egress where any of the following conditions apply:

1. Corridors with combustible floor or walls.
2. Corridors with an interior change of direction exceeding 45 degrees (0.79 rad).
3. Corridors that are less than 50 percent open to the outside atmosphere at the ends.
4. *Open-ended corridors* and associated *exterior stairways* and *ramps* as specified in Section 1027.6, Exception 3.
5. Egress balconies not complying with Sections 1021.2 and 1021.3

57 STANDPIPE VALVE SUPERVISION



58 STANDPIPE VALVE SUPERVISION

905.9 Valve supervision.

Valves controlling water supplies shall be supervised in the open position so that a change in the normal position of the valve will generate a supervisory signal at the supervising station required by Section 903.4. Where a fire alarm system is provided, a signal shall be transmitted to the control unit.

Exceptions:

1. Valves to underground key or hub valves in **roadway boxes do not require supervision.**
2. Valves locked in the normal position and inspected as provided in this code in buildings not equipped with a fire alarm system.

59 STORAGE SPACE FIRE ALARM



60 STORAGE SPACE FIRE ALARM

907.2.25 Group S.

A manual fire alarm system that activates the occupant notification system in accordance with Section 907.5 shall be installed in Group S public and self-storage occupancies three stories or greater in height for interior corridors and interior common areas. Visible notification appliances are not required within storage units.

Exception: Manual fire alarm boxes are not required where the building is equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1, and the occupant notification appliances will activate throughout the notification zones upon sprinkler water flow.

61 FIRE ALARM AUDIBILITY

907.5.2.1.3 Audible signal frequency in Group R-1 and R-2 sleeping rooms.

Audible signal frequency in Group R-1 and R-2 occupancies shall be in accordance with Sections 907.5.2.1.3.1 and 907.2.1.3.2.

907.5.2.1.3.1 Fire alarm system signal.

In sleeping rooms of Group R-1 and R-2 occupancies, the audible alarm activated by a fire alarm system shall be a 520-Hz low-frequency signal complying with NFPA 72.

907.5.2.1.3.2 Smoke alarm signal in sleeping rooms.

In sleeping rooms of Group R-1 and R-2 occupancies that are required by Section 907.2.8 or 907.2.9 to have a fire alarm system, the audible alarm signal activated by single- or multiple-station smoke alarms in the dwelling unit or sleeping unit shall be a 520-Hz signal complying with NFPA 72.

Where a sleeping room smoke alarm is unable to produce a 520-Hz signal, the 520-Hz alarm signal shall be provided by a listed notification appliance or a smoke detector with an integral 520-Hz sounder.

62 FIRE ALARM INTERFACE

908.3 Fire alarm system interface.

Where an emergency alarm system is interfaced with a building's fire alarm system, the signal produced at the fire alarm control unit shall be a supervisory signal.

63 SMOKE CONTROL SYSTEM RESPONSE TIME

909.17 System response time.

Smoke-control system activation shall be initiated immediately after receipt of an appropriate automatic or manual activation command. Smoke control systems shall activate individual components (such as dampers and fans) in the sequence necessary to prevent physical damage to the fans, dampers, ducts and other equipment. For purposes of smoke control, the fire fighter's control panel response time shall be the same for automatic or manual smoke control action initiated from any other building control point. The total response time, including that necessary for detection, shutdown of operating equipment and smoke control system startup, shall allow for full operational mode to be achieved before the conditions in the space exceed the design smoke condition. **Upon receipt of an alarm condition at the fire alarm control panel, fans, dampers and automatic doors shall have achieved their proper operating state and final status shall be indicated at the smoke control panel within 90 seconds. The system response time for each component and their sequential relationships shall be detailed in the required rational analysis and verification of their installed condition reported in the required final report.**

64 SMOKEPROOF ENCLOSURES

909.20 Smokeproof enclosures.

Where required by Section 1023.11, a smokeproof enclosure shall be constructed in accordance with this section. A smokeproof enclosure shall consist of an interior exit stairway or ramp that is enclosed in accordance with the applicable provisions of Section 1023 **and an open exterior balcony, ventilated vestibule or pressurized stair and pressurized entrance vestibule meeting** the requirements of this section. Where access to the roof is required by the Florida Fire Prevention Code, such access shall be from the smokeproof enclosure where a smokeproof enclosure is required.

65 SMOKE CONTROL CRITERIA

909.20.6 Pressurized stair and vestibule alternative.

The provisions of Sections 909.20.6.1 through 909.20.6.3 shall apply to smokeproof enclosures using a pressurized stair and pressurized entrance vestibule.

909.20.6.1 Vestibule doors.

The door assembly from the building into the vestibule shall be a fire door assembly complying with Section 716.5.3. The door assembly from the vestibule to the stairway shall not have less than a 20-minute fire protection rating and meet the requirements for a smoke door assembly in accordance with Section 716.5.3. The door shall be installed in accordance with NFPA 105.

909.20.6.2 Pressure difference.

The stair enclosure shall be pressurized to a minimum of 0.05 inch of water gage (12.44 Pa) positive pressure relative to the vestibule with all stairway doors closed under the maximum anticipated stack pressures. The vestibule, with doors closed, shall have a minimum of 0.05 inch of water gage (12.44 Pa) positive pressure relative to the fire floor. The pressure difference across doors shall not exceed 30 pounds (133-N) maximum force to begin opening the door.

909.20.6.3 Dampened relief opening.

A controlled relief vent capable of discharging a minimum of 2,500 cubic feet per minute (1180 L/s) of air at the design pressure difference shall be located in the upper portion of the pressurized exit enclosure.

66 FIRE PUMP CIRCUITS



67 FIRE PUMP CIRCUITS

913.2.2 Circuits supplying fire pumps.

Cables used for survivability of circuits supplying fire pumps shall be protected using one of the following methods:

1. Cables used for survivability of required critical circuits shall be listed in accordance with UL 2196 and shall have a fire-resistance rating of not less than 1 hour.
2. Electrical circuit protective systems shall have a fire-resistance rating of not less than 1 hour. Electrical circuit protective systems shall be installed in accordance with their listing requirements.
3. Construction having a fire-resistance rating of not less than 1 hour.
4. The cable or raceway is encased in a minimum of 2 inches (50 mm) of concrete.

Exception: This section shall not apply to cables, or portions of cables, located within a fire pump room or generator room which is separated from the remainder of the occupancy with fire-resistance-rated construction.

68 CHAPTER 9 QUIZ QUESTION

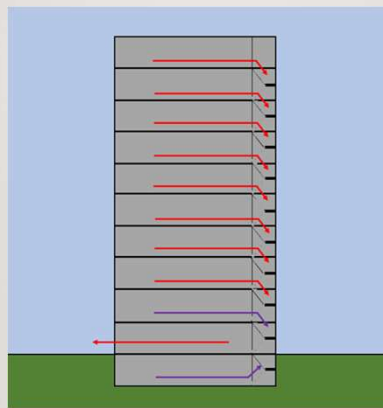
In sleeping rooms of Group R-1 and R-2 occupancies, the audible alarm activated by a fire alarm system shall be a _____ complying with NFPA 72.

- A. 520-Hz low-frequency signal
- B. Type A signal
- C. Type C transmitter
- D. closed circuit

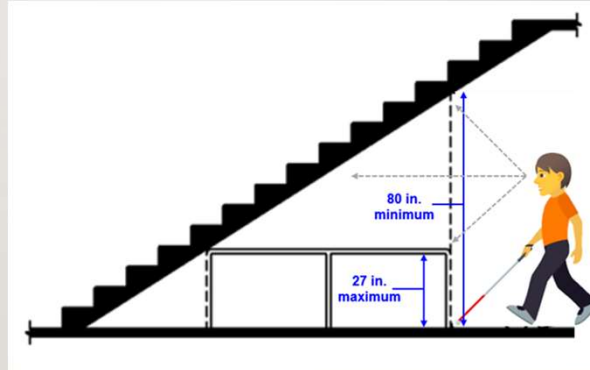
69

CHAPTER 10: MEANS OF EGRESS (GENERAL)

70 MEANS OF EGRESS SYSTEM



71 HEADROOM



72 HEADROOM

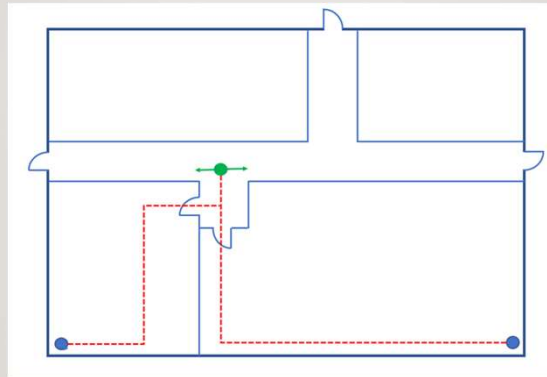
1003.3.1 Headroom.

Protruding objects are permitted to extend below the minimum ceiling height required by Section 1003.2 where a minimum headroom of 80 inches (2032 mm) is provided over any walking surface, including walks, corridors, aisles and passageways. Not more than 50 percent of the ceiling area of a means of egress shall be reduced in height by protruding objects.

Exception: Door closers, overhead door stops, frame stops, power door operators and electromagnetic door locks shall be permitted to project into the opening height not lower than 78 inches (1981 mm).

A barrier shall be provided where the vertical clearance is less than 80 inches (2032 mm) high. The leading edge of such a barrier shall be located 27 inches (686 mm) maximum above the floor.

73 COMMON PATH OF EGRESS TRAVEL DISTANCE



74 COMMON PATH OF EGRESS TRAVEL DISTANCE

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.

75 MEANS OF EGRESS LIGHTING



76 MEANS OF EGRESS LIGHTING

1008.2.1 Illumination level under normal power.

The means of egress illumination level shall be not less than 1 footcandle (11 lux) at the walking surface. Along exit access stairways, exit stairways and at their required landings, the illumination level shall not be less than 10 footcandles at the walking surface when the stairway is in use.

Exception: For auditoriums, theaters, concert or opera halls and similar assembly occupancies, the illumination at the walking surface is permitted to be reduced during performances by one of the following methods provided that the required illumination is automatically restored upon activation of a premises' fire alarm system:

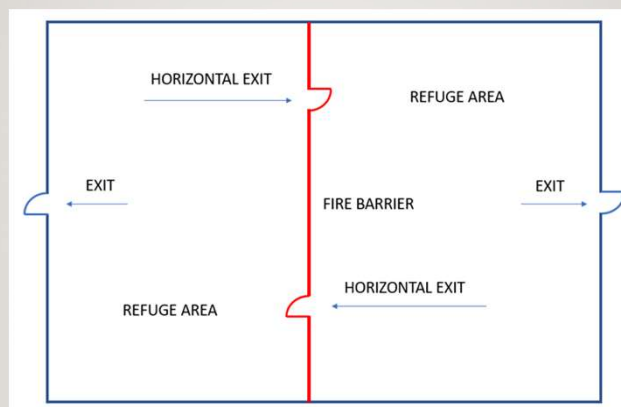
1. Externally illuminated walking surfaces shall be permitted to be illuminated to not less than 0.2 footcandle (2.15 lux).
2. Steps, landings and the sides of ramps shall be permitted to be marked with self-luminous materials in accordance with Sections 1025.2.1, 1025.2.2 and 1025.2.4 by systems listed in accordance with UL 1994.

77 RAISED CHARACTER/BRAILLE EXIT SIGNAGE

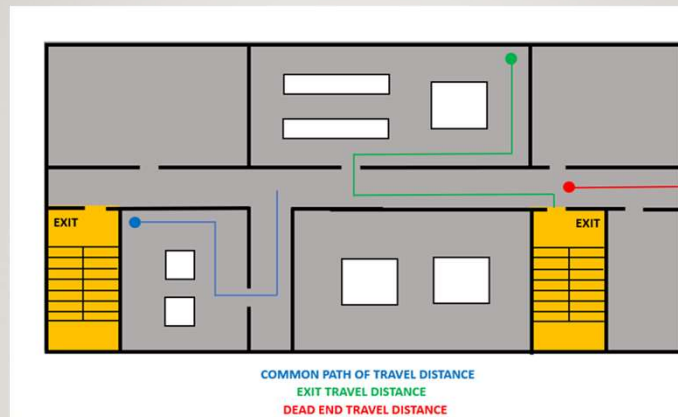
1013.4 Raised character and braille exit signs.

A sign stating EXIT in visual characters, raised characters and braille and complying with the Florida Building Code, Accessibility shall be provided adjacent to each door to an area of refuge providing direct access to a stairway, an exterior area for assisted rescue, an exit stairway or ramp, an exit passageway, a horizontal exit and the exit discharge.

78 RAISED CHARACTER/BRAILLE EXIT SIGNAGE



79 EXIT ACCESS TRAVEL DISTANCE



80 EXIT ACCESS TRAVEL DISTANCE

1017.3 Measurement.

Exit access travel distance shall be measured from the most remote point of each room, area or space along the natural and unobstructed path of horizontal and vertical egress travel to the entrance to an exit. Where more than one exit is required, exit access travel distance shall be measured to the nearest exit.

Exceptions:

1. In open parking garages, exit access travel distance is permitted to be measured to the closest riser of an exit access stairway or the closest slope of an exit access ramp.
2. In smoke protected seating and open air assembly seating, exit access travel distance shall be measured in accordance with Section 1029.7.

81 ASSEMBLY OPEN-AIR SEATING

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.

82 HANDRAILS



83 HANDRAILS

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.

Exceptions:

1. Handrails are not required for ramped aisles with seating on both sides.
2. Handrails are not required where, at the side of the aisle, there is a guard with a top surface that complies with the graspability requirements of handrails in accordance with Section 1014.3.
3. Handrail extensions are not required at the top and bottom of stepped aisles and ramped aisles to permit crossovers within the aisles.

84 EMERGENCY ESCAPE AND RESCUE OPENINGS

1030.4 Operational constraints.

Emergency escape and rescue openings shall be operational from the inside of the room without the use of keys or tools. Window-opening control devices and fall prevention devices complying with ASTM F2090 shall be permitted for use on windows serving as a required emergency escape and rescue opening. Bars, grilles, grates or similar devices are permitted to be placed over emergency escape and rescue openings provided the minimum net clear opening size complies with Section 1030.2 and such devices shall be releasable or removable from the inside without the use of a key, tool or force greater than that which is required for normal operation of the emergency escape and rescue opening. Where such bars, grilles, grates or similar devices are installed in existing buildings, smoke alarms shall be installed in accordance with Section 907.2.11 regardless of the valuation of the alteration.

85 GUARDS

1015.2 Where required.

Guards shall be located along open-sided walking surfaces, including mezzanines, equipment platforms, aisles, stairs, ramps and landings that are located more than 30 inches (762 mm) measured vertically to the floor or grade below at any point within 36 inches (914 mm) horizontally to the edge of the open side. Guards shall be adequate in strength and attachment in accordance with Section 1607.9.

Exception: Guards are not required for the following locations:

(Exceptions 1 through 7 not shown)

8. On the loading side of station platforms on fixed guideway transit or passenger rail systems.

86 GUARDS



87 EGRESS THROUGH INTERVENING SPACES

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.

2. Egress from a room or space shall not pass through adjoining or intervening rooms or areas, except where such adjoining rooms or areas and the area served are accessory to one or the other, are not a Group H occupancy and provide a discernible path of egress travel to an exit.

Exception: Means of egress are not prohibited through adjoining or intervening rooms or spaces in a Group H, S or F occupancy where the adjoining or intervening rooms or spaces are the same or a lesser hazard occupancy group.

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. [Exceptions 4 and 5 unchanged/not shown]



88

CHAPTER 10: MEANS OF EGRESS (DOORS)



89 REFRIGERATION MACHINERY ROOMS

1006.2.2.2 Refrigeration machinery rooms.

Machinery rooms larger than 1,000 square feet (93 m²) shall have not less than two exits or exit access doorways. Where two exit access doorways are required, one such doorway is permitted to be served by a fixed ladder or an alternating tread device. Exit access doorways shall be separated by a horizontal distance equal to one-half the maximum horizontal dimension of the room.

All portions of machinery rooms shall be within 150 feet (45 720 mm) of an exit or exit access doorway. An increase in exit access travel distance is permitted in accordance with Section 1017.1.

Exit or exit access doorways shall swing in the **direction of egress travel and shall be equipped with panic hardware, regardless of the occupant load served.** Exit or exit access doorways shall be tight fitting and self-closing.

90 REFRIGERATION MACHINERY ROOMS



91 ELECTRICAL ROOMS

1006.2.2.4 Electrical rooms.

The location and number of exit or exit access doorways shall be provided for electrical rooms in accordance with Section 110.26 of NFPA 70 for electrical equipment rated 1,000 volts or less, and Section 110.33 of NFPA 70 for electrical equipment rated over 1,000 volts. Panic hardware shall be provided where required in accordance with Section 1010.2.9.2.

92 EGRESS DOOR TYPES

1010.1.2 Egress door types.

Egress doors shall be of the side-hinged swinging door, pivoted door or balanced door types.

Exceptions:

[Exceptions 1 through 4 not shown]

5. In other than Group H occupancies, revolving doors complying with Section 1010.3.1.
6. In other than Group H occupancies, special purpose horizontal sliding, accordion or folding door assemblies complying with Section 1010.3.3.
7. Power-operated doors in accordance with Section 1010.3.2.
8. Doors serving a bathroom within an individual sleeping unit in Group R-1.
9. In other than Group H occupancies, manually operated horizontal sliding doors are permitted in a means of egress from spaces with an occupant load of 10 or less.

93 DOOR OPENING FORCE

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 fullopen position when subjected to not more than a 15- pound (67 N) force.

94 MANUAL HORIZONTAL SLIDING DOORS

1010.1.3.2 Manual horizontal sliding doors.

Where a manual horizontal sliding door is required to latch, the latch or other mechanism shall prevent the door from rebounding into a partially open position when the door is closed.

95 DOORWAY THRESHOLDS



96 DOORWAY THRESHOLDS

1010.1.6 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 7/8 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 be allowed at a height necessary to comply with the water resistance requirements of Section 1709.5.**

97 DOOR LOCKS AND LATCHES (TABLE 1010.2.4)

APPLICATION WITH A PAIR OF DOORS WITH AN ACTIVE LEAF AND INACTIVE LEAF	THE PAIR OF DOORS ARE REQUIRED TO COMPLY WITH SECTION 716	PERMITTED USES OF MANUAL BOLTS, AUTOMATIC FLUSH BOLTS, AND CONSTANT LATCHING BOLTS ON THE INACTIVE LEAF OF A PAIR OF DOORS		
		Surface or Flush Mounted Manual Bolts	Automatic Flush Bolts	Constant Latching Bolts
Group B, F or S occupancies with occupant load less than 50	No	P	P	P
	Yes	NP	N ^{pb}	P
Group B, F or S occupancies where the building is equipped with an automatic sprinkler system in accordance with Section 903.3.1.1 and the inactive leaf is not needed to meet egress capacity requirements	No	P	P	P
	Yes	NP	N ^{pb}	P
Group I-2 patient care rooms where the inactive leaf is not needed to meet egress capacity requirements	No	NP	N ^{pb}	P
	Yes	NP	N ^{pb}	P
Any occupancy where panic hardware is not required, egress doors are used in pairs and both leaves are required to meet egress capacity requirements	No	NP	P	NP
	Yes	NP	N ^{pb}	NP
Storage or equipment rooms where the inactive leaf is not needed to meet egress capacity requirements	No	P ^a	P	P
	Yes	P ^a	P	P

98 EDUCATIONAL OCCUPANCY DOOR LOCKING

1010.2.8 Locking arrangements in educational occupancies.

In Group E occupancies, Group B educational occupancies and Group I-4 occupancies, egress doors from classrooms, offices and other occupied rooms with locking arrangements designed to keep intruders from entering the room shall comply with all of the following conditions:

1. The door shall be capable of being unlocked from outside the room with a key or other approved means.
2. The door shall be openable from within the room in **accordance with Section 1010.2.**
3. Modifications shall not be made to listed panic hardware, fire door hardware or door closer.
4. Modifications to fire door assemblies shall be in accordance with NFPA 80.

Remote locking or unlocking of doors from an approved location shall be permitted in addition to the unlocking operation in Item 1.

99 DOOR HARDWARE

1010.2.9 Panic and fire exit hardware.

Swinging doors serving a Group H occupancy and swinging doors serving rooms or spaces with an occupant load of 50 or more in a Group A or E occupancy shall not be provided with a latch or lock other than panic hardware or fire exit hardware.

Exceptions:

1. A main exit of a Group A occupancy shall be permitted to be locking in accordance with [Section 1010.2.4, Item 3](#).
2. Doors provided with panic hardware or fire exit hardware serving a Group A or E occupancy shall be permitted to be electronically locked in [accordance with Section 1010.2.11 or 1010.2.12](#).
3. Outdoor gates from residential and commercial swimming pools or swimming pool decks, except where the pool deck serves as a portion of the means of egress of a building or has an occupant load of 300 or greater.
4. Courtrooms shall be permitted to be locked in accordance with Section 1010.2.13, Exception 2.
5. Exit access doors serving occupied exterior areas shall be permitted to be locked in accordance with Section 1010.2.4, Item 8.

100 ELECTRICAL ROOMS

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.

101 ELEVATOR LOBBY EXIT ACCESS DOORS

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.

102 ELEVATOR LOBBY EXIT ACCESS DOORS CONTINUED

1010.2.16 Elevator lobby exit access doors. (continued)

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.

103 REVOLVING DOORS

1010.3.1 Revolving doors.

Revolving doors shall comply with the following:

1. Revolving doors shall comply with BHMA A156.27 and shall be installed in accordance with the manufacturer's instructions.
2. Each revolving door shall be capable of breakout in accordance with BHMA A156.27 and shall provide an aggregate width of not less than 36 inches (914 mm).
3. A revolving door shall not be located within 10 feet (3048 mm) of the foot or top of stairways or escalators. A dispersal area shall be provided between the stairways or escalators and the revolving doors.
4. The revolutions per minute (rpm) for a revolving door shall not exceed the maximum rpm as specified in BHMA A156.27. Manual revolving doors shall comply with Table 1010.3.1(1). Automatic or power-operated revolving doors shall comply with Table 1010.3.1(2).
5. An emergency stop switch shall be provided near each entry point of power or automatic operated revolving doors within 48 inches (1220 mm) of the door and between 34 inches (864 mm) and 48 inches (1220 mm) above the floor. The activation area of the emergency stop switch button shall be not less than 1 inch (25 mm) in diameter and shall be red.
6. Each revolving door shall have a side-hinged swinging door that complies with Section 1010.1 in the same wall and within 10 feet (3048 mm) of the revolving door.
7. Revolving doors shall not be part of an accessible route required by Chapter 11.

104 EMERGENCY ESCAPE AND RESCUE DOORS

1030.3.1 Emergency escape and rescue doors.

Where a door is provided as the required emergency escape and rescue opening, it shall be a swinging door or a sliding door.

105 CHAPTER 10 QUIZ QUESTION

Where more than one exit is required, exit access travel distance shall be measured to the _____.

- A. farthest exit
- B. ground level
- C. public street
- D. nearest exit

106

FLORIDA RESIDENTIAL CODE

107

FRC: FIRE/LIFE SAFETY PROVISIONS

108 STAIRWAYS

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.

109 ENERGY STORAGE SYSTEMS

SECTION R328

ENERGY STORAGE SYSTEMS

R328.1 General.

Energy storage systems (ESS) shall comply with the provisions of this section.

Exceptions:

1. ESS listed and labeled in accordance with UL 9540 and marked “For use in residential dwelling units” where installed in accordance with the manufacturer’s instructions and NFPA 70.
2. ESS less than 1 kWh (3.6 megajoules).

110 FIREPLACES

R1001.13 Fireplace accessories.

Listed and labeled fireplace accessories shall be installed in accordance with the conditions of the listing and the manufacturer’s instructions. Fireplace accessories shall comply with UL 907.

III OIL-FIRED APPLIANCES

M1802.4 Blocked vent switch.

Oil-fired appliances shall be equipped with a device that will stop burner operation in the event that the venting system is obstructed. Such device shall have a manual reset and shall be installed in accordance with the manufacturer's instructions.

I 12 GENERATORS

SECTION M1905

RESIDENTIAL PERMANENTLY INSTALLED

STAND-BY GENERATORS

M1905.1 Listed and labeled.

Permanently installed stand-by generators regulated by this code shall be listed and labeled for the application in which they are installed and used.

[subsections not shown]

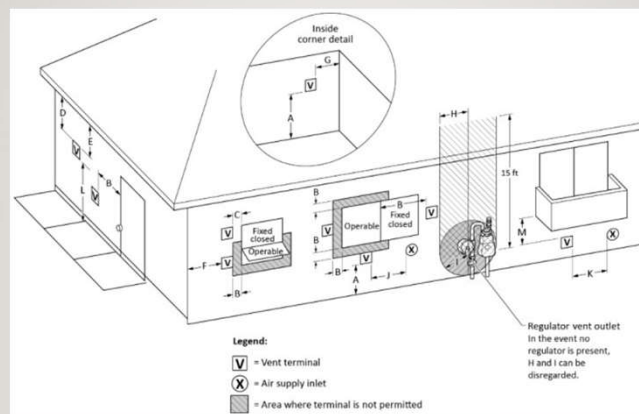
113 FUEL GAS APPLIANCE VENTING

G2427.8 (503.8) Venting system terminal clearances.

The clearances for through-the-wall direct-vent and nondirect-vent terminals shall be in accordance with Figure G2427.8 and Table G2427.8.

Exception: The clearances in Table G2427.8 shall not apply to the combustion air intake of a direct-vent appliance.

114 FUEL GAS APPLIANCE VENTING



115 FIRE SPRINKLERS IN AREAS SUBJECT TO FREEZING

P2904.2.3 Freezing areas.

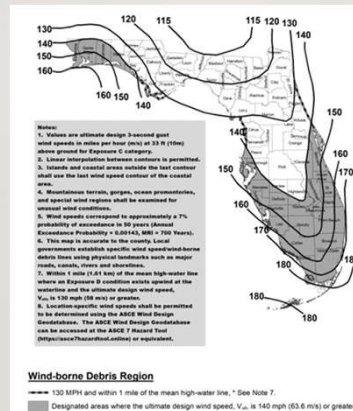
Piping shall be protected from freezing as required by Section P2603.5 or by using one of the following:

1. A dry pipe automatic sprinkler system that is listed for residential occupancy applications.
2. Dry-side-wall or dry-pendent sprinklers extending from a nonfreezing area into a freezing area.

116

FRC: OTHER PROVISIONS

117 ULTIMATE DESIGN WIND SPEEDS [FIGURE R301.2(4)]



118 SUN CONTROL STRUCTURES

R301.2.1.1.1.2 Sun control structure design.

A registered design professional shall design sun control structures.

R301.2.1.1.1.2.1.

Free-standing sun control structures shall be permitted to be designed to resist wind speeds for Risk Category I of Figure 1609.3(4) of the Florida Building Code, Building. Sun control structures relying on a host structure for support shall be designed for the Risk Category of the host structure.

119 MEP FLOOD PROTECTION

R322.1.6 Protection of mechanical, plumbing and electrical systems.

Electrical systems, equipment and components; heating, ventilating, air conditioning; plumbing appliances and plumbing fixtures; duct systems; and other service equipment shall be located at or above the **elevation required in Section R322.2 or R322.3. Replacement of exterior equipment and exterior appliances damaged by flood shall meet the requirements of this section.** If replaced as part of a substantial improvement, electrical systems, equipment and components; heating, ventilating, air conditioning and plumbing appliances and plumbing fixtures; duct systems; and other service equipment shall meet the requirements of this section. Systems, fixtures, and equipment and components shall not be mounted on or penetrate through walls intended to break away under flood loads.

[Exception not shown]

120 SIDING CLEARANCE

R703.3.5 Siding clearance at wall and adjacent surfaces.

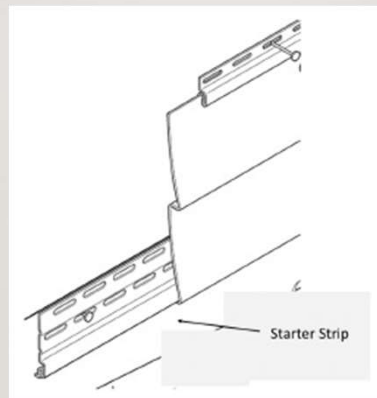
Unless otherwise specified by the material manufacturer, or this code, siding shall have a clearance of at least 6 inches (152 mm) from grade and at least 1/2 inch (13 mm) from other adjacent surfaces (decks, roofs, slabs).

121 SIDING STARTER STRIP

R703.11.1.4 Starter strip.

The first course of horizontal siding shall be secured using a starter strip as specified in the manufacturer's installation instructions. See Figure R703.11.1.4(1). Where the first course of siding has to be cut or trimmed, the bottom edge shall be secured with utility trim and snap locks as specified by the manufacturer's installation instructions.

122 SIDING STARTER STRIP

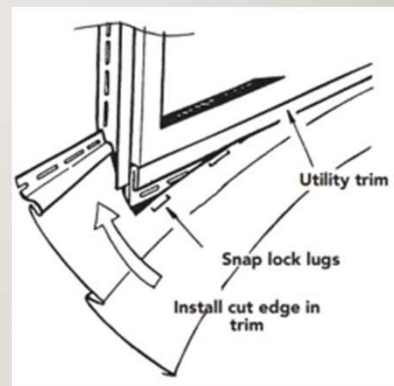
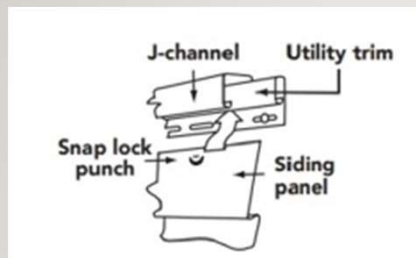


123 SIDING UTILITY TRIM

R703.11.1.5 Utility trim.

Where horizontal siding has to be cut or trimmed below windows and at the top of walls, the top edge of the siding shall be secured with utility trim and snap locks or as specified by the manufacturer's installation instructions. See Figures R703.11.1.5(1) and R703.11.1.5(2).

124 SIDING UTILITY TRIM

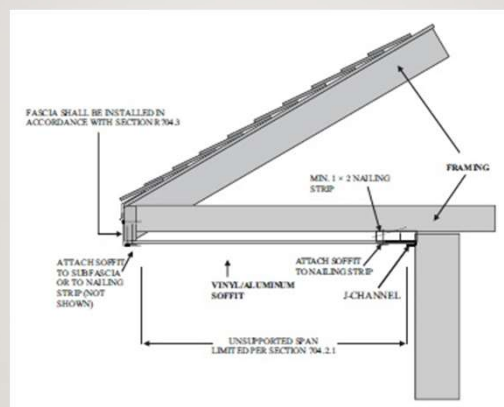


125 SOFFIT PANELS

R704.2.1 Vinyl and aluminum soffit panels.

Vinyl and aluminum soffit panels shall be installed using aluminum, galvanized, stainless steel or rust-preventative coated nails or other approved corrosion-resistant fasteners specified by the manufacturer and shall be fastened at both ends to a supporting component such as a nailing strip, fascia or subfascia component in accordance with Figure R704.2.1. Where the unsupported span of soffit panels is greater than 12 inches, intermediate nailing strips shall be provided in accordance with Figure R704.2.2 unless a larger span is permitted in accordance with the manufacturer's product approval specification. Vinyl and aluminum soffit panels shall be installed in accordance with the manufacturer's product approval specification and limitations of use. Fascia covers shall be installed in accordance with the manufacturer's product approval specification and limitations of use and Section R704.3.

126 SOFFIT PANELS



127 ALUMINUM FASCIA

R704.3 Aluminum fascia.

Aluminum fascia shall have a minimum thickness of 0.019 inches and be installed in accordance with the manufacturer's instructions and this code. Fasteners shall be aluminum or stainless steel. Aluminum fascia shall be attached in accordance with Section R704.3.1 or R704.3.2 and R704.4 or R704.5. The drip edge shall comply with R905.2.8.5, and the thickness of the drip edge shall be in accordance with Table R903.2.1.

[subsections not shown]

128 ROOF SHEATHING

R803.2.3.1 Sheathing fastenings.

Wood structural panel sheathing shall be fastened to roof framing in accordance with Table R803.2.3.1. Sheathing shall be fastened with ASTM F1667 RSRS-03 (2-1/2" × 0.131" × 0.281" head diameter) nails except that ASTM F1667 RSRS-01 (2-3/8" × 0.113") nails or ASTM F1667 RSRS-04 (3" × 0.120" × 0.281" head diameter) nails shall be permitted where sheathing thickness is 15/32 inches and less. RSRS-01, RSRS-03 and RSRS-04 are ring shank nails meeting the specifications in ASTM F1667.

129 ROOF COVERINGS

R905.1.1.1 Underlayment for asphalt shingles, metal roof panels or shingles, mineral surfaced roll roofing, slate and slate-type shingles, wood shakes and wood shingles.

Underlayment for asphalt shingles, metal roof panels or shingles, mineral surfaced roll roofing, slate and slate-type shingles, wood shakes and wood shingles shall comply with one of the following methods:

[Items 1-3 not shown]

130 TINY HOME ENERGY CONSERVATION



131 TINY HOME ENERGY CONSERVATION

SECTION AQ106 ENERGY CONSERVATION

Note: *appendices are not part of the code generally unless adopted locally by the authority having jurisdiction.*

AQ106.1 Air leakage testing.

The air leakage rate for tiny houses shall not exceed 0.30 cubic feet per minute at 50 Pascals of pressure per square foot of the dwelling unit enclosure area. The air leakage testing shall be in accordance with the testing methods required in Section R402.4.1.2 of the Florida Building Code, Energy Conservation. The dwelling unit enclosure area shall be the sum of the areas of ceilings, floors and walls that separate the conditioned space of a dwelling unit from the exterior, its adjacent unconditioned spaces and adjacent dwelling units.

AQ106.1.1 Whole-house mechanical ventilation.

Where the air leakage rate is in accordance with Section AQ106.1, the tiny house shall be provided with whole-house mechanical ventilation in accordance with Section M1507.3.

[Section AQ106.2 not shown]

132 COB CONSTRUCTION



133 COB CONSTRUCTION

APPENDIX AU

COB CONSTRUCTION (MONOLITHIC ADOBE)

The provisions contained in this appendix are not mandatory unless specifically referenced in the adopting ordinance.

SECTION AU101

GENERAL

AU101.1 Scope.

This appendix provides prescriptive and performance-based requirements for the use of natural cob as a building material. Buildings using cob walls shall comply with this code except as otherwise stated in this appendix.

[forthcoming sections not shown]

134 3-D PRINTED BUILDING CONSTRUCTION



135 3-D PRINTED BUILDING CONSTRUCTION

APPENDIX W

3D-PRINTED BUILDING CONSTRUCTION

SECTION W101

GENERAL

W101.1 Scope.

Buildings, structures and building elements fabricated in whole or in part using 3D printed construction techniques shall be designed, constructed and inspected in accordance with the provisions contained in this Appendix and other applicable requirements in this code.

[forthcoming sections not shown]

136

FLORIDA EXISTING BUILDING CODE

137 CHANGE OF OCCUPANCY

SECTION 202 GENERAL DEFINITIONS

CHANGE OF OCCUPANCY. Any of the following shall be considered as a change of occupancy where the current Florida Building Code, Building requires a greater degree of accessibility, structural strength, fire protection, means of egress, safety, 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.
3. A change of use.

138 EXTERIOR WALL COVERINGS/ENVELOPES

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

303.1 General.

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.

139 UNDAMAGED COMPONENTS

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.

140 FLOOD HAZARD AREAS

502.2 Flood hazard areas.

For buildings and structures in flood hazard areas established in Section 1612.3 of the Florida Building Code, Building, or Section R322 of the Florida Building Code, Residential, as applicable, any addition that constitutes substantial improvement of the existing structure shall comply with the flood design requirements for new construction, and all aspects of the existing structure shall be brought into compliance with the requirements for new construction for flood design. For new foundations, foundations raised or extended upward, and replacement foundations, the foundations shall be in compliance with the requirements for new construction for flood design.

For buildings and structures in flood hazard areas established in Section 1612.3 of the Florida Building Code, Building, or Section R322 of the Florida Building Code, Residential, as applicable, any additions that do not constitute substantial improvement of the existing structure are not required to comply with the flood design requirements for new construction, provided that both of the following apply:

1. The addition shall not create or extend a nonconformity of the existing building or structure with the flood resistant construction requirements than the existing building or structure was prior to the addition
2. The lowest floor of the addition shall be at or above the lower of the lowest floor of the existing building or structure or the lowest floor elevation required in Section 1612 of the Florida Building Code, Building or Section R322 of the Florida Building Code, Residential, as applicable.

I41 CLASSROOM ACOUSTICS

502.7 Enhanced classroom acoustics.

In Group E occupancies, enhanced classroom acoustics shall be provided in all classrooms in the addition with a volume of 20,000 cubic feet (565 m³) or less. Enhanced classroom acoustics shall comply with the reverberation time in Section 808 of ICC A117.1.

I42 EDUCATIONAL FACILITY SECURITY

503.16 Locking arrangements in educational occupancies.

In Group E occupancies, Group B educational occupancies and Group I-4 occupancies, egress doors with locking arrangements designed to keep intruders from entering the room shall comply with Section 1010.2.8 of the Florida Building Code, Building.

143 WINDOW FALL PROTECTION

505.2 Window fall prevention on replacement windows.

In Group R-2 or R-3 buildings containing dwelling units and one- and two-family dwellings and townhouses regulated by the Florida Building Code, Residential, window opening **control devices or other window fall prevention devices complying** with ASTM F2090 shall be installed where an existing window is replaced and where all of the following apply to the replacement window:

[Items 1-5 not shown]

144 EMERGENCY ESCAPE AND RESCUE OPENINGS

506.4 Existing emergency escape and rescue openings.

Where a change of occupancy would require emergency escape and rescue opening in accordance with Section 1030.1 of the Florida Building Code, Building operable windows serving as the emergency escape and rescue opening shall comply with the following:

1. An existing operable window shall provide a minimum net clear opening of 4 square feet (0.38 m²) with a minimum net clear opening height of 22 inches (559 mm) and a minimum net clear opening width of 20 inches (508 mm).
2. A replacement window where such window complies with both of the following:
 - 2.1. The replacement window meets the size requirements in Item 1.
 - 2.2. The replacement window is the manufacturer's largest standard size window that will fit within the existing frame or existing rough opening. The replacement window shall be permitted to be of the same operating style as the existing window or a style that provides for an equal or greater window opening area than the existing window.

145 LEVEL 3 ALTERATION

904.1.4 Groups A, B, E, F-1, H, I-1, I-3, I-4, M, R-1, R-2, R-4, S-1 and S-2.

In buildings with occupancies in Groups A, B, E, F-1, H, I-1, I-3, I-4, M, R-1, R-2, R-4, S-1 and S-2 work areas shall be provided with automatic sprinkler protection where all of the following conditions occur:

1. The work area is required to be provided with automatic sprinkler protection in accordance with the Florida Building Code, Building, as applicable to new construction; and
2. The building site has sufficient municipal water supply for design and installation of an automatic sprinkler system.

Exception: If the building site does not have sufficient municipal water supply for design of an automatic sprinkler system, work areas shall be protected by an automatic smoke detection system throughout all occupiable spaces other than sleeping units or individual dwelling units that activates the occupant notification system in accordance with Sections 907.4, 907.5 and 907.6 of the Florida Building Code, Building.

146 WINDOWLESS STORIES



I47 WINDOWLESS STORIES

904.1.6 Windowless stories.

Work located in a windowless story, as determined in accordance with the Florida Building Code, Building shall be sprinklered where the work area is required to be sprinklered under the provisions of the Florida Building Code, Building for newly constructed buildings and the building site has a sufficient municipal water supply for the design and installation of an automatic sprinkler system.

I48 PLUMBING DEMAND (CHANGE OF OCCUPANCY)

1010.1 Increased demand.

Where the occupancy of an existing building or part of an existing building is changed such that the new occupancy is subject to increased or different plumbing fixture requirements or to increased water supply requirements in accordance with the Florida Building Code, Plumbing, the new occupancy shall comply with the intent of the respective Florida Building Code, Plumbing provisions.

Exception: Only where the occupant load of the story is increased by more than 20 percent, plumbing fixtures for the story shall be provided in quantities specified in the Florida Building Code, Plumbing based on the increased occupant load.

149 HEALTHCARE CHANGE OF OCCUPANCY

1012.1.5 Change of occupancy in healthcare.

Where a change of occupancy occurs to a Group I-2 or I-1 facility, the work area with the change of occupancy shall comply with the Florida Building Code, Building.

Exception: A change in use or occupancy in the following cases shall not be required to meet the Florida Building Code, Building:

1. Group I-2, Condition 2 to Group I-2, Condition 1.
2. Group I-2 to ambulatory healthcare.
3. Group I-2 to Group I-1.
4. Group I-1, Condition 2 to Group I-1, Condition 1.

150 PERFORMANCE COMPLIANCE METHOD

1401.2.2 Partial change in occupancy.

Where a portion of the building is changed to a new occupancy classification and that portion is separated from the remainder of the building with fire barrier or horizontal assemblies having a fire-resistance rating as required by Table 508.4 of the Florida Building Code, Building or Section R302 of the Florida Building Code, Residential for the separate occupancies, or with approved compliance alternatives, the portion changed shall be made to conform to the provisions of this section. Only the portion separated shall be required to be evaluated for compliance.

Where a portion of the building is changed to a new occupancy classification and that portion is not separated from the remainder of the building with fire barriers or horizontal assemblies having a fire-resistance rating as required by Table 508.4 of the Florida Building Code, Building or Section R302 of the Florida Building Code, Residential for the separate occupancies, or with approved compliance alternatives, the provisions of this section which apply to each occupancy shall apply to the entire building. Where there are conflicting provisions, those requirements which secure the greater public safety shall apply to the entire building or structure.

151 FLOOD HAZARD COMPLIANCE

1401.3.3 Compliance with flood hazard provisions.

In flood hazard areas, buildings that are evaluated in accordance with this section shall comply with Section 1612 of the Florida Building Code, Building, or Section R322 of the Florida Building Code, Residential, as applicable, if the work covered by this section constitutes **substantial improvement. If the work covered by this section is a structurally connected horizontal addition that does not constitute substantial improvement, the addition is not required to comply with the flood design requirements for new construction, provided that both of the following apply:**

1. The addition shall not create or extend any nonconformity of the existing building with the flood resistant construction requirements.
2. The lowest floor of the addition shall be at or above the lower of the lowest floor of the existing building or the lowest floor elevation required in Section 1612 of the Florida Building Code, Building or Section R322 of the Florida Building Code, Residential as applicable.

152



This concludes this AIA CES and IDCEC continuing professional education presentation.

Should you have any questions, please do hesitate to reach out:

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THANK YOU

**MERCI / 谢谢 / DANKE / GRAZIE / شُكْرًا
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