

**Advanced Florida Building Code**  
 8<sup>th</sup> Edition (2023)  
**Common Code, Standards, & Guidelines**  
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**CEI**

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**Advanced Building Code**

FBC Edition:  
**8<sup>th</sup> (2023)**

Method of Presentation:  
 Lecture: instructor led reading and review  
 of some of the most frequently encountered  
 codes in building construction.

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## Chapter 1, Scope and Administration

### Section 110, Inspections

#### 110.1 General.

Construction or work for which a *permit* is required shall be subject to **inspection** by the *building official* and such construction or work shall remain **exposed and provided with access** for inspection purposes until *approved*. Approval as a result of an inspection shall not be construed to be an approval of a violation of the provisions of this code or of other ordinances of the jurisdiction. Inspections presuming to give authority to violate or cancel the provisions of this code or of other ordinances of the jurisdiction shall not be valid. It shall be the duty of the *owner* or the owner's authorized agent to cause the work to remain exposed and provided with access for inspection purposes. Neither the *building official* nor the jurisdiction shall be liable for expense entailed in the removal or replacement of any material required to allow inspection.

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## Section 110 - Inspections

#### • 110.2 Preliminary inspection

Before issuing a *permit*, the *building official* is authorized to examine or cause to be examined buildings, structures and sites for which an application has been filed.

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**Chapter 1, Scope and Administration**

**Section 110, Inspections**

**110.3 Required Inspection**

**110.3 Required Inspection**

The building official upon notification from the permit holder or his or her agent shall make the following inspections, and shall either release that portion of the construction or shall notify the permit holder or his or her agent of any violations which must be corrected in order to comply with the technical codes. The building official shall determine the timing and sequencing of when inspections occur and what elements are inspected at each inspection.

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**Section  
110 -  
Inspections**

The following is a list of inspections. Refer to Florida Building Code 110.3.

**Building**

1. Foundation inspection. To be made after trenches are excavated and forms erected and shall at a minimum include the following:

- Stem-wall
- Monolithic slab-on-grade
- Piling/pile caps
- Footers/grade beams

1.1. In flood hazard areas, upon placement of the lowest floor, including basement, and prior to further vertical construction, the elevation certification shall be submitted to the authority having jurisdiction.

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## Section 110 - Inspections

The following is a list of **inspections**. Refer to Florida Building Code 110.3.

### Building

2. **Framing inspection.** To be made after the roof, all framing, fireblocking and bracing is in place, all concealing wiring, all pipes, chimneys, ducts and vents are complete and shall at a minimum:

- Window/door framing
- Vertical cells/columns
- Lintel/tie beams
- Framing/trusses/bracing/connectors
- Draft stopping/fire blocking
- Curtain wall framing
- Energy insulation
- Accessibility
- Verify rough opening dimensions are within tolerances.

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## Section 110 - Inspections

The following is a list of **inspections**. Refer to Florida Building Code 110.3.

### Building

3. **Sheathing inspection.** To be made either as part of a dry-in inspection or done separately at the request of the contractor after all roof and wall sheathing and fasteners are complete and shall at a minimum include the following building components:

- Roof sheathing
- Wall sheathing
- Sheathing fasteners
- Roof/wall dry-in

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## Section 110 - Inspections

The following is a list of **inspections**. Refer to Florida Building Code 110.3.

### Building

4. **Exterior wall coverings**. Shall at a minimum include the following building components in progress inspections:

- Exterior wall coverings and veneers
- Soffit coverings

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## Section 110 - Inspections

The following is a list of **inspections**. Refer to Florida Building Code 110.3.

### Building

5. **Roofing inspection**. Shall at a minimum include the following building components:

- Dry-in
- Insulation
- Roof coverings
- Flashing

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## Section 110 - Inspections

The following is a list of **inspections**. Refer to Florida Building Code 110.3.

### Building

- 6. Final inspection.** To be made after the building is completed and ready for occupancy.

6.1. In flood hazard areas, as part of the final inspection, a final certification of the **lowest floor elevation or the elevation to which a building is dry floodproofed, as applicable, shall be submitted to the authority having jurisdiction.**

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## Section 110 - Inspections

The following is a list of **inspections**. Refer to Florida Building Code 110.3.

### Building

- 7. Swimming pool inspection.** First inspection to be made after excavation and installation of reinforcing steel, bonding and main drain and prior to placing of concrete.

Final inspection to be made when the swimming pool is complete and all required enclosure requirements are in place. In order to pass final inspection and receive a certificate of completion, a residential swimming pool must meet the requirements relating to pool safety features as described in Section 454.2.17 of this code.

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## Section 110 - Inspections

The following is a list of **inspections**. Refer to Florida Building Code 110.3.

### **Building**

8. **Demolition inspections.** First inspection to be made after all utility connections have been disconnected and secured in such manner that no unsafe or unsanitary conditions shall exist during or after demolition operations. Final inspection to be made after all demolition work is completed.

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## Section 110 - Inspections

The following is a list of **inspections**. Refer to Florida Building Code 110.3.

### **Building**

9. **Manufactured building inspections.** The building department shall inspect construction of foundations; connecting buildings to foundations; installation of parts identified on plans as site installed items, joining the modules, including utility crossovers; utility connections from the building to utility lines on site; and any other work done on site which requires compliance with the *Florida Building Code*. Additional inspections may be required for public educational facilities (see Section 453.27.20 of this code).

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## Section 110 - Inspections

The following is a list of **inspections**. Refer to Florida Building Code 110.3.

### **Building**

10. Where **impact-resistant coverings** or impact-resistant systems are installed, the building official shall schedule adequate inspections of impact resistant coverings or impact-resistant systems to determine the following:

The system indicated on the plans was installed.

The system is installed in accordance with the manufacturer's installation instructions and the product approval

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## Electrical



1. **Underground inspection.** To be made after trenches or ditches are excavated, conduit or cable installed, and before any backfill is put in place.
2. **Rough-in inspection.** To be made after the roof, framing, fireblocking and bracing is in place and prior to the installation of wall or ceiling membranes.
3. **Final inspection.** To be made after the building is complete, all required electrical fixtures are in place and properly connected or protected, and the structure is ready for occupancy.
4. **Existing Swimming Pools.** To be made after all repairs or alterations are complete, all required electrical equipment, GFCI protection, and equipotential bonding are in place on said alterations or repairs.

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## Plumbing

1. **Underground inspection.** To be made after trenches or ditches are excavated, piping installed, and before any backfill is put in place.
2. **Rough-in inspection.** To be made after the roof, framing, fireblocking and bracing is in place and all soil, waste and vent piping is complete, and prior to this installation of wall or ceiling membranes.
3. **Final inspection.** To be made after the building is complete, all plumbing fixtures are in place and properly connected, and the structure is ready for occupancy.

**Note:** See Section 312 of the *Florida Building Code, Plumbing* for required tests.

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## Mechanical

1. **Underground inspection.** To be made after trenches or ditches are excavated, underground duct and fuel piping installed, and before any backfill is put in place.
2. **Rough-in inspection.** To be made after the roof, framing, fire blocking and bracing are in place and all ducting, and other concealed components are complete, and prior to the installation of wall or ceiling membranes.
3. **Final inspection.** To be made after the building is complete, the mechanical system is in place and properly connected, and the structure is ready for occupancy.



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## Gas

1. **Rough piping inspection.** To be made after all new piping authorized by the permit has been installed, and before any such piping has been covered or concealed or any fixtures or gas appliances have been connected.
2. **Final piping inspection.** To be made after all piping authorized by the permit has been installed and after all portions which are to be concealed by plastering or otherwise have been so concealed, and before any fixtures or gas appliances have been connected. This inspection shall include a pressure test.
3. **Final inspection.** To be made on all new gas work authorized by the permit and such portions of existing systems as may be affected by new work or any changes, to ensure compliance with all the requirements of this code and to assure that the installation and construction of the gas system is in accordance with reviewed plans.

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### Chapter 1, Scope and Administration

#### Section 110, Inspections

##### **110.3.5 Lath, gypsum board and gypsum panel product inspection.**

Lath, gypsum board and gypsum panel product inspections shall be made after lathing, gypsum board and gypsum panel products, interior and exterior, are in place, but before any plastering is applied or gypsum board and gypsum panel product joints and fasteners are taped and finished.

**Exception:** Gypsum board and gypsum panel products that are not part of a fire-resistance-rated assembly or a shear assembly.

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Section  
110 -  
Inspections

**110.5 Inspection requests**

It shall be the duty of the holder of the building *permit* or their duly authorized agent to notify the *building official* when work is ready for inspection. **It shall be the duty of the *permit* holder to provide access to and means for inspections of such work that are required by this code.**

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Section  
110 -  
Inspections

**110.6 Approval required**

- Work shall not be done beyond the point indicated in each successive inspection without first obtaining the approval of the *building official*. The *building official*, upon notification, shall make the requested inspections and shall either indicate the portion of the construction that is satisfactory as completed, or notify the *permit* holder or his or her agent wherein the same fails to comply with this code. **Any portions that do not comply shall be corrected and such portion shall not be covered or concealed until authorized by the *building official*.**

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## Chapter 1, Scope and Administration

### Section 110, Inspections

#### 110.8 Threshold building.

##### 110.8.1

During new construction or during repair or restoration projects in which the structural system or structural loading of a building is being modified, the enforcing agency shall require a **special inspector to perform structural inspections** on a threshold building pursuant to a structural inspection plan prepared by the engineer or architect of record. The structural inspection plan must be submitted to the enforcing agency prior to the issuance of a building permit for the construction of a threshold building. The purpose of the structural inspection plans is to provide specific inspection procedures and schedules so that the building can be adequately inspected for compliance with the permitted documents. The special inspector may not serve as a surrogate in carrying out the responsibilities of the building official, the architect, or the engineer of record. The contractor's contractual or statutory obligations are not relieved by any action of the special inspector.

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## Section 110 - Inspections

#### 110.8.3

The fee **owner of a threshold building shall select and pay all costs of employing a special inspector, but the special inspector shall be responsible to the enforcement agency.** The inspector shall be a person certified, licensed or registered under Chapter 471, *Florida Statutes*, as an engineer or under Chapter 481, *Florida Statutes*, as an architect.

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## Section 110 - Inspections

### 110.8.5

No enforcing agency may issue a building permit for construction of any **threshold building** except **to a licensed general contractor**, as defined in Section 489.105(3)(a), *Florida Statutes*, as defined in Section 489.105(3)(b), *or* to a licensed **building contractor** *Florida Statutes*, within the scope of her or his license. The named contractor to whom the building permit is issued shall have the responsibility for supervision, direction, management and control of the construction activities on the project for which the building permit was issued.

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## Section 110 - Inspections

### 110.8.6

The building department may allow a **special inspector to conduct the minimum structural inspection of threshold buildings** required by this code, Section 553.73, *Florida Statutes*, without duplicative inspection by the building department. The building official is responsible for ensuring that any person conducting inspections is qualified as a building inspector under Part XII of Chapter 468, *Florida Statutes*, or certified as a special inspector under Chapter 471 or 481, *Florida Statutes*. Inspections of threshold buildings required by Section 553.79(5), *Florida Statutes*, are in addition to the minimum inspections required by this code.

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## Quiz for Section 110

**1). Who determines the timing and sequence of inspections as well as the elements to be inspected?**

- A). The permit holder or his agent
- B). The building official
- C). The general contractor
- D). The architect

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## Quiz for Section 110

**1). Who determines the timing and sequence of inspections as well as the elements to be inspected?**

- A). The permit holder or his agent
- B). The building official**
- C). The general contractor
- D). The architect

**Answer found in Section: 110.3**

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Quiz for Section 110

2). A building Permit for a Threshold Building may be issued to a \_\_\_\_\_?

- A). The Building Owner
- B). Licensed Residential Contractor
- C). The General Contractor
- D). Building Official

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Quiz for Section 110

2). A building Permit for a Threshold Building may be issued to a \_\_\_\_\_?

- A). The Building Owner
- B). Licensed Residential Contractor
- C). The General Contractor**
- D). Building Official

**Answer found in Section: 110.8.5**

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### Quiz for Section 110

**3). Who has the responsibility of notifying the building official when work is ready to be inspected?**

- A). The owner of the building
- B). The Architect
- C). The owner of the construction company
- D). The permit holder or the agent

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### Quiz for Section 110

**3). Who has the responsibility of notifying the building official when work is ready to be inspected?**

- A). The owner of the building
- B). The Architect
- C). The owner of the construction company
- D). The permit holder or the agent**

**Answer found in Section: 110.5**

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### Quiz for Section 110

**4). Which of the following is not part of a Roofing Inspection?**

- A). Roof Sheathing
- B). Trusses
- C). Soffit Covering
- D). All of the above

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### Quiz for Section 110

**4). Which of the following is not part of a Roofing Inspection?**

- A). Roof Sheathing
- B). Trusses
- C). Soffit Covering
- D). All of the above**

**Answer found in Section: 110.3**

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## CHAPTER 2 DEFINITIONS

### CONCRETE.

**Carbonate aggregate.** Concrete made with aggregates consisting mainly of calcium or magnesium carbonate, such as limestone or dolomite, and containing 40 percent or less quartz, chert or flint.

**Cellular.** A lightweight insulating concrete made by mixing a preformed foam with Portland cement slurry and having a dry unit weight of approximately 30 pcf.

**Lightweight aggregate.** Concrete made with aggregates of expanded clay, shale, slag or slate or sintered fly ash or any natural lightweight aggregate meeting ASTM C330 and possessing equivalent fire-resistance properties and weighing 85 to 115 pcf.

**Perlite.** A lightweight insulating concrete having a dry unit weight of approximately 30 pcf made with perlite concrete aggregate. Perlite aggregate is produced from a volcanic rock which, when heated, expands to form a glass-like material of cellular structure.

**Sand-lightweight.** Concrete made with a combination of expanded clay, shale, slag, slate, sintered fly ash, or any natural lightweight aggregate meeting ASTM C330 and possessing equivalent fire-resistance properties and natural sand. Its unit weight is generally between 105 and 120 pcf.

**Siliceous aggregate.** Concrete made with normal-weight aggregates consisting mainly of silica or compounds other than calcium or magnesium carbonate, which contains more than 40-percent quartz, chert or flint.

**Vermiculite.** A light weight insulating concrete made with vermiculite concrete aggregate which is laminated micaceous material produced by expanding the ore at high temperatures. When added to a Portland cement slurry the resulting concrete has a dry unit weight of approximately 30 pcf.

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## CHAPTER 2 DEFINITIONS

**CONVENTIONAL LIGHT-FRAME CONSTRUCTION.** Construction whose primary structural elements are formed by a system of repetitive wood-framing members. See Chapter 23 for conventional light-frame construction provisions.

**CRIPPLE WALL.** A framed stud wall extending from the top of the foundation to the underside of floor framing for the lowest occupied floor level.

**DEAD LOAD.** The weight of materials of construction incorporated into the building, including but not limited to walls, floors, roofs, ceilings, *stairways*, built-in partitions, finishes, cladding and other similarly incorporated architectural and structural items, and the weight of fixed service equipment, including cranes and material-handling systems.

**DWELLING.** A building that contains one or two *dwelling units* used, intended or designed to be used, rented, leased, let or hired out to be occupied for living purposes.

**DWELLING UNIT.** A single unit providing complete, independent living facilities for one or more persons, including permanent provisions for living, sleeping, eating, cooking and sanitation.

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## CHAPTER 2 DEFINITIONS

### **FENESTRATION, VERTICAL.**

Windows that are fixed or movable, opaque doors, glazed doors, glazed block and combination opaque and glazed doors installed in a wall at less than 15 degrees from vertical.

### **HABITABLE SPACE.**

A space in a building for living, sleeping, eating or cooking. Bathrooms, toilet rooms, closets, halls, screen enclosures, sunroom Categories I, II, III and IV as defined in Section 2002.6, storage or utility spaces and similar areas are not considered habitable spaces.

**HELICAL PILE.** Manufactured steel deep foundation element consisting of a central shaft and one or more helical bearing plates. A helical pile is installed by rotating it into the ground. Each helical bearing plate is formed into a screw thread with a uniform defined pitch.

**HIGH-RISE BUILDING.** A building with an occupied floor located more than 75' feet above the lowest level of fire department vehicle access.

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## CHAPTER 2 DEFINITIONS

**HIGH VELOCITY HURRICANE ZONE.** This zone consists of Broward & Miami-Dade counties.

**LIGHT-FRAME CONSTRUCTION.** Construction whose vertical and horizontal structural elements are primarily formed by a system of repetitive wood or cold-formed steel framing members.

**LISTED.** Equipment, materials, products or services included in a list published by an organization acceptable to the *building* official and concerned with evaluation of products or services that maintains periodic inspection of production of listed equipment or materials or periodic evaluation of services and whose listing states either that the equipment, material, product or service meets identified standards or has been tested and found suitable for a specified purpose.

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## CHAPTER 2 DEFINITIONS

### **MASONRY.**

A built-up construction or combination of building units or materials of clay, shale, concrete, glass, gypsum, stone or other *approved* units bonded together with or without *mortar* or grout or other accepted methods of joining.

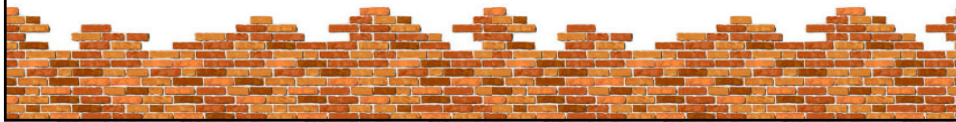
**Glass unit masonry.** Masonry composed of glass units bonded by *mortar*.

**Plain masonry.** Masonry in which the tensile resistance of the masonry is taken into consideration and the effects of stresses in reinforcement are neglected.

**Reinforced masonry.** Masonry construction in which reinforcement acting in conjunction with the masonry is used to resist forces.

**Solid masonry.** Masonry consisting of solid masonry units laid contiguously with the *joints* between the units filled with *mortar*.

**Unreinforced (plain) masonry.** Masonry in which the tensile resistance of masonry is taken into consideration and the resistance of the reinforcing steel, if present, is neglected.



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## CHAPTER 2 DEFINITIONS

### **MASONRY UNIT.**

*Brick*, tile, stone, glass block or concrete block conforming to the requirements specified in Section 2103.

**Hollow.** A masonry unit whose net cross-sectional area in any plane parallel to the load-bearing surface is less than 75 percent of its gross cross-sectional *area* measured in the same plane.

**Solid.** A masonry unit whose net cross-sectional *area* in every plane parallel to the load-bearing surface is 75 percent or more of its gross cross-sectional area measured in the same plane.



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## CHAPTER 2 DEFINITIONS

### MEANS OF EGRESS.

A continuous and unobstructed path of vertical and horizontal egress travel from any occupied portion of a building or structure to a *public way*. A means of egress consists of three separate and distinct parts: the *exit access*, the *exit* and the *exit discharge*.

### MORTAR.

A mixture consisting of cementitious materials, fine aggregates, water, with or without admixtures, that is used to construct unit masonry assemblies

**RISK CATEGORY.** A categorization of buildings and other structures for determination of *flood, wind, tornado and ice loads* based on the risk associated with unacceptable performance.

**STEEP SLOPE.** A roof slope two units vertical in 12 units horizontal (17-percent slope) or greater.

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## CHAPTER 2 DEFINITIONS

### SUBSTANTIAL IMPROVEMENT.

Any *repair*, reconstruction, rehabilitation, alteration, *addition* or other improvement of a building or structure, **the cost of which equals or exceeds 50 percent of the market value of the structure before the improvement or repair is started.** If the structure has sustained *substantial damage*, any *repairs* are considered substantial improvement regardless of the actual *repair* work performed. *The term does not include either.*

1. Any project for improvement of a building required to correct existing health, sanitary or safety code violations identified by the *building official* and that is the minimum necessary to assure safe living conditions.
2. Any *alteration* of a historic structure provided that the *alteration* will not preclude the structure's continued designation as a historic structure.



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## CHAPTER 2 DEFINITIONS

### **THRESHOLD BUILDING**

In accordance with *Florida Statute*, any building which is **greater than 3 stories or 50 feet in height**, or which has an assembly occupancy classification that **exceeds 5,000 square feet** in area and an occupant content of **greater than 500 persons**.

**UNDERLAYMENT.** One or more layers of felt, sheathing paper, nonbituminous saturated felt or other *approved* material over which a steep-slope *roof covering* is applied.

**VENEER.** A facing attached to a wall for the purpose of providing ornamentation, protection or insulation, but not counted as adding strength to the wall.

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## CHAPTER 2 DEFINITIONS

**WALL (for Chapter 21).** A vertical element with a horizontal length-to-thickness ratio greater than three, used to enclose space.

**Cavity wall.** A wall built of *masonry units* or of concrete, or a combination of these materials, arranged to provide an airspace within the wall, and in which the inner and outer parts of the wall are tied together with metal ties.

**Dry-stacked, surface-bonded wall.** A wall built of concrete *masonry units* where the units are stacked dry, without *mortar* on the bed or *head joints*, and where both sides of the wall are coated with a surface-bonding *mortar*.

**Parapet wall.** The part of any wall entirely above the roof line.

**WYTHE.** Each continuous, vertical section of a wall, one *masonry unit* in thickness.

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**CHAPTER 3  
USE AND OCCUPANCY CLASSIFICATION**

**Section 302 Occupancy Classification & Use Designation**

**Subsection 302.1 Occupancy Classification**

*(see Code Book for full description)*

1. **Assembly** Groups A-1 to A-5.
2. **Business** Group B.
3. **Educational** Group E.
4. **Factory and Industrial** Groups F-1 and F-2.
5. **High Hazard** Groups H-1 to H-5.
6. **Institutional** Groups I-1 to I-4.
7. **Mercantile** Group M.
8. **Residential** Groups R-1 to R-4.
9. **Storage** Groups S-1 and S-2.
10. **Utility and Miscellaneous** Group U.

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**CHAPTER 3  
USE AND OCCUPANCY CLASSIFICATION**

**303.2 Assembly **Group A-1.****

Group A-1 occupancy includes assembly uses, usually with fixed seating, intended for the production and viewing of the performing arts or motion pictures including, but not limited to:

- Motion picture theaters
- Symphony and concert halls
- Television and radio studios admitting an audience
- Theaters

**303.3 Assembly **Group A-2.****

Group A-2 occupancy includes assembly uses intended for food and/or drink consumption including, but not limited to:

- Banquet halls
- Casinos (gaming areas)
- Nightclubs
- Restaurants, cafeterias and similar dining facilities (including associated commercial kitchens)
- Taverns and bars

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**CHAPTER 3  
USE AND OCCUPANCY CLASSIFICATION**

**303.4 Assembly Group A-3.**

Group A-3 occupancy includes assembly uses intended for worship, recreation or amusement and other assembly uses not classified elsewhere in Group A including, but not limited to:

- Amusement arcades
- Art galleries
- Bowling alleys
- Community halls
- Courtrooms
- Dance halls (not including food or drink consumption)
- Exhibition halls
- Funeral parlors
- Gymnasiums (without spectator seating)
- Indoor *swimming pools* (without spectator seating)
- Indoor tennis courts (without spectator seating)
- Lecture halls
- Libraries
- Museums
- Places of religious worship*
- Pool and billiard parlors
- Waiting areas in transportation terminals

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**CHAPTER 3  
USE AND OCCUPANCY CLASSIFICATION**

**303.5 Assembly Group A-4.**

Group A-4 occupancy includes assembly uses intended for viewing of indoor sporting events and activities with spectator seating including, but not limited to:

- Arenas
- Skating rinks
- Swimming pools*
- Tennis courts

**303.6 Assembly Group A-5.**

Group A-5 occupancy includes assembly uses intended for participation in or viewing outdoor activities including, but not limited to:

- Amusement park structures
- Bleachers*
- Grandstands*
- Stadiums

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**CHAPTER 3  
USE AND OCCUPANCY CLASSIFICATION**

**304.1 Business Group B.**

Business Group B occupancy includes, the use of a building or structure, or a portion thereof, for office, professional or service-type transactions, including storage of records and accounts.

- Airport traffic control towers
- Ambulatory care facilities*
- Animal hospitals, kennels and pounds
- Banks
- Barber and beauty shops
- Car wash
- Civic administration
- Clinic, outpatient*
- Dry cleaning and laundries: pick-up and delivery stations and self-service
- Educational occupancies for students above the 12th grade
- Electronic data processing
- Food processing establishments and commercial kitchens not associated with restaurants, cafeterias
- Laboratories: testing and research
- Motor vehicle showrooms
- Post offices
- Print shops
- Professional services (architects, attorneys, dentists, physicians, engineers)
- Radio and television stations
- Telephone exchanges
- Training and skill development ~~not in a school or academic program~~

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**CHAPTER 3  
USE AND OCCUPANCY CLASSIFICATION**

**309.1 Mercantile Group M.**

Mercantile Group M occupancy includes, among others, the use of a building or structure or a portion thereof for the display and sale of merchandise, and involves stocks of goods, wares or merchandise incidental to such purposes and accessible to the public. Mercantile occupancies shall include, but not be limited to, the following:

- Department stores
- Drug stores
- Markets
- Motor fuel-dispensing facilities
- Retail or wholesale stores
- Sales rooms

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**CHAPTER 6**  
**Types of Construction**

**602.2 Types I and II** construction are those types of construction in which the building elements are of **noncombustible materials**, except as permitted in Section 603 and elsewhere in this code.

**602.3 Type III** construction is that type of construction in which the **exterior walls are of noncombustible materials** and the **interior building elements are of any material** permitted by this code. *Fire-retardant-treated wood* framing complying with Section 2303.2 shall be permitted within *exterior wall* assemblies of a 2-hour rating or less.

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**CHAPTER 6**  
**Types of Construction**

**602.4 Type IV.**

Type IV construction is that type of construction in which the **exterior walls are of noncombustible materials** and the **interior building elements are of solid wood, laminated wood, heavy timber (HT) or structural composite lumber (SCL) without concealed spaces**. The minimum dimensions for permitted materials including solid timber, glued-laminated timber, structural composite lumber (SCL) and cross-laminated timber and details of Type IV construction shall comply with the provisions of this section and Section 2304.11. Exterior walls complying with Section 602.4.1 or 602.4.2 shall be permitted. Interior walls and partitions not less than 1-hour fire-resistance rating or heavy timber complying with Section 2304.11.2.2 shall be permitted.

**602.5 Type V.**

Type V construction is that type of construction in which the structural elements, *exterior walls* and interior walls are of **any materials permitted by this code**.

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### Quiz for Section 202, 302, & 602

1). Which of the following would be defined as a Habitable Space?

- A). Bathroom
- B). Kitchen
- C). Closet
- D). Sunroom

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### Quiz for Section 202, 302, & 602

1). Which of the following would be defined as a Habitable Space?

- A). Bathroom
- B). Kitchen**
- C). Closet
- D). Sunroom

**Answer found in Section: 202**

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### Quiz for Section 202, 302, & 602

2). Occupancy Group B would contain which of the following buildings?

- A). Post Office
- B). Library
- C). Townhome
- D). Department Store

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### Quiz for Section 202, 302, & 602

2). Occupancy Group B would contain which of the following buildings?

- A). Post Office**
- B). Library
- C). Townhome
- D). Department Store

**Answer found in Section: 302 - 304**

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### Quiz for Section 202, 302, & 602

3). What is the name of a wall that extends above the roof line?

- A). Gable balloon wall
- B). Cavity wall
- C). Cripple wall
- D). Parapet wall

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### Quiz for Section 202, 302, & 602

3). What is the name of a wall that extends above the roof line?

- A). Gable balloon wall
- B). Cavity wall
- C). Cripple wall
- D). Parapet wall**

**Answer found in Section: 202**

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### Quiz for Section 202, 302, & 602

4). What Construction Type are the exterior walls made of noncombustible materials and the interior building elements are of any material permitted by the code?

- A). Type I
- B). Type II
- C). Type III
- D). Type IV

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### Quiz for Section 202, 302, & 602

4). What Construction Type are the exterior walls made of noncombustible materials and the interior building elements are of any material permitted by the code?

- A). Type I
- B). Type II
- C). Type III**
- D). Type IV

**Answer found in Section: 602**

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**CHAPTER 7  
FIRE AND SMOKE PROTECTION FEATURES**

**TABLE 722.2.1.1  
MINIMUM EQUIVALENT THICKNESS OF CAST-IN-PLACE OR PRECAST  
CONCRETE WALLS, LOAD-BEARING OR NONLOAD-BEARING**

CONCRETE TYPE	MINIMUM SLAB THICKNESS (inches) FOR FIRE-RESISTANCE RATING OF				
	1 hour	1½ hours	2 hours	3 hours	4 hours
Siliceous	3.5	4.3	5.0	6.2	7.0
Carbonate	3.2	4.0	4.6	5.7	6.6
Sand-lightweight	2.7	3.3	3.8	4.6	5.4
Lightweight	2.5	3.1	3.6	4.4	5.1

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**CHAPTER 7  
FIRE AND SMOKE PROTECTION FEATURES**

**TABLE 722.2.1.4(2)  
TIME ASSIGNED TO FINISH MATERIALS ON  
FIRE-EXPOSED SIDE OF WALL**

*\*Only a portion of the table is shown, see FBC Building, Table 722.2.1.4(2) for the complete table.*

FINISH DESCRIPTION	TIME (minutes)
Gypsum wallboard	
¾ inch	10
½ inch	15
⅝ inch	20
2 layers of ¾ inch	25
1 layer of ¾ inch, 1 layer of ½ inch	35
2 layers of ½ inch	40
Type X gypsum wallboard	
½ inch	25
⅝ inch	40

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**CHAPTER 10  
MEANS OF EGRESS**

**SECTION 1015  
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 1607.8.

**Exception:** *Guards* are not required for the following locations:

1. On the loading side of loading docks or piers.
2. On the audience side of *stages* and raised *platforms*, including *stairs* leading up to the *stage*.
3. On raised *stage* and *platform* floor areas, such as runways, *ramps* and side *stages* used for entertainment or presentations.
4. At vertical openings in the performance area of *stages* and *platforms*.
5. At elevated walking surfaces appurtenant to *stages* and *platforms* for access to and utilization of special lighting or equipment.
6. Along vehicle service pits not accessible to the public.
7. In assembly seating areas at cross aisles in accordance with Section 1029.17.2.
8. On the loading side of station platforms on fixed guideway transit or passenger rail systems.

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**CHAPTER 10  
MEANS OF EGRESS**

**SECTION 1015  
GUARDS**

**1015.3 Height.**

Required *guards* shall be not less than 42 inches high, measured vertically as follows:

1. From the adjacent walking surfaces.
2. On *stairways* and stepped *aisles*, from the line connecting the leading edges of the tread *nosings*.
3. On *ramps* and ramped *aisles*, from the *ramp* surface at the *guard*.

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**CHAPTER 12  
INTERIOR ENVIRONMENT**

**SECTION 1205  
LIGHTING**

**1205.2 Natural light.**

The minimum net glazed area shall be not less than 8 percent of the floor area of the room served.

**1205.3 Artificial light.**

Artificial light shall be provided that is adequate to provide an average illumination of 10 footcandles (107 lux) over the area of the room at a height of 30 inches (762 mm) above the floor level.



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**CHAPTER 16  
STRUCTURAL DESIGN**

**TABLE 1604.5  
RISK CATEGORY OF BUILDINGS AND OTHER STRUCTURES**

*Only a portion of the table is shown, see the Code book for the full table*

Risk Category	NATURE OF OCCUPANCY
<b>I</b>	Buildings and other structures that represent a <u>low hazard</u> to human life in the event of failure. Examples: Agricultural facilities, Certain temporary facilities, Minor storage facilities, & Screen enclosures
<b>II</b>	Buildings and other structures except those listed in Risk Categories I, III and IV
<b>III</b>	Buildings and other structures that represent a <u>substantial hazard</u> to human life in the event of failure. Examples: Buildings containing Group E occupancies with an occupant load greater than 250
<b>IV</b>	Buildings and other structures designated as <u>essential facilities</u> . Examples: Fire, rescue, ambulance and police stations and emergency vehicle garages

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★ 2023 Code update

## FBC Building

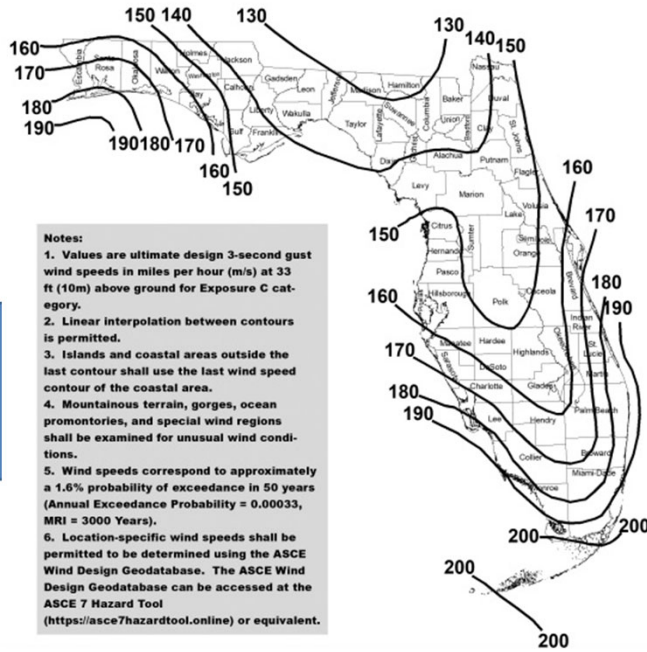
Ch 16

Structural Design

Figure 1609.3(3)

## Risk Category 4

(Hospitals, Emergency Shelters, First Responders)



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## CHAPTER 18 SOILS AND FOUNDATIONS

### SECTION 1803 GEOTECHNICAL INVESTIGATIONS

#### 1803.5.4 Ground-water table.

A subsurface soil investigation shall be performed to determine whether the existing ground-water table is above or within 5 feet below the elevation of the lowest floor level where such floor is located below the finished ground level adjacent to the foundation.

**Exception:** A subsurface soil investigation to determine the location of the ground-water table shall not be required where waterproofing is provided in accordance with Section 1805.

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**CHAPTER 18  
SOILS AND FOUNDATIONS**

**SECTION 1808 - FOUNDATIONS**

**1808.8 Concrete foundations.**

**TABLE 1808.8.1  
MINIMUM SPECIFIED COMPRESSIVE STRENGTH  $f'_c$  OF CONCRETE OR GROUT**

FOUNDATION ELEMENT OR CONDITION	SPECIFIED COMPRESSIVE STRENGTH, $f'_c$
1. Foundations	2,500 psi
2. Precast nonprestressed driven piles	4,000 psi
3. Socketed drilled shafts	4,000 psi
4. Micropiles	4,000 psi
5. Precast prestressed driven piles	5,000 psi

For SI: 1 pound per square inch = 0.00689 MPa.

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**CHAPTER 18  
SOILS AND FOUNDATIONS**

**SECTION 1809  
SHALLOW FOUNDATIONS**

**1809.4 Depth and width of footings.**

The minimum depth of footings below the undisturbed ground surface shall be 12 inches. Where applicable, the requirements of Section 1809.5 shall also be satisfied.

The minimum width of footings shall be 12 inches.

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## CHAPTER 18 SOILS AND FOUNDATIONS

**TABLE 1809.7**  
**PRESCRIPTIVE FOOTINGS SUPPORTING WALLS OF LIGHT-FRAME CONSTRUCTION** <sup>a,b,c,e</sup>

NUMBER OF FLOORS SUPPORTED BY THE FOOTING <sup>f</sup>	WIDTH OF FOOTING (inches)	THICKNESS OF FOOTING (inches)
1	12	6
2	15	6
3	18	8 <sup>g</sup>

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm.

- a. Depth of footings shall be in accordance with Section 1809.4.
- b. The ground under the floor shall be permitted to be excavated to the elevation of the top of the footing.
- c. Interior stud-bearing walls shall be permitted to be supported by isolated footings. The footing width and length shall be twice the width shown in this table, and footings shall be spaced not more than 6 feet on center.
- d. **Reserved.**
- e. For thickness of foundation walls, see Section 1807.1.6.
- f. Footings shall be permitted to support a roof in addition to the stipulated number of floors. Footings supporting roof only shall be as required for supporting one floor.
- g. Plain concrete footings for Group R-3 occupancies shall be permitted to be 6 inches thick.

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## CHAPTER 19 - CONCRETE

### SECTION 1907 MINIMUM SLAB PROVISIONS



#### **1907.1 General.**

The thickness of concrete floor slabs supported directly on the ground shall not be less than 3<sup>1</sup>/<sub>2</sub> inches. A 6-mil polyethylene vapor retarder with joints lapped not less than 6 inches shall be placed between the base course or subgrade and the concrete floor slab, or other *approved* equivalent methods or materials shall be used to retard vapor transmission through the floor slab.

**Exception:** A vapor retarder is not required:

1. For detached structures accessory to occupancies in Group R-3, such as garages, utility buildings or other unheated facilities.
2. For unheated storage rooms having an area of less than 70 square feet (6.5 m<sup>2</sup>) and carports attached to occupancies in Group R-3.
3. For buildings of other occupancies where migration of moisture through the slab from below will not be detrimental to the intended occupancy of the building.
4. For driveways, walks, patios and other flatwork that will not be enclosed at a later date.
5. Where *approved* based on local site conditions.

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## CHAPTER 31 - SPECIAL CONSTRUCTION

### SECTION 3109

#### STRUCTURES SEAWARD OF A COASTAL CONSTRUCTION CONTROL LINE

##### 3109.1 General.

The provisions of this section shall apply to the design and construction of *habitable structures*, and *substantial improvement* or repair of *substantial damage* of such structures, that are entirely seaward of, and portions of such structures that extend seaward of, the *coastal construction control line* or *seaward of the 50-foot setback line*, whichever is applicable.

This section does not apply to structures that are not *habitable structures*, as defined in this section. Section 1612 shall apply to *habitable structures* and structures that are not *habitable structures* if located in whole or in part in *special flood hazard areas* established in Section 1612.3.

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## CHAPTER 31 - SPECIAL CONSTRUCTION

### SECTION 3109

#### STRUCTURES SEAWARD OF A COASTAL CONSTRUCTION CONTROL LINE

##### 3109.2 Definitions

##### COASTAL CONSTRUCTION CONTROL LINE.

The line established by the State of Florida pursuant to Section 161.053, *Florida Statutes*, and recorded in the official records of the respective county and which defines that portion of the beach-dune system subject to severe fluctuations based on a 100-year storm surge, storm waves or other predictable weather conditions.

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## CHAPTER 33 - SAFEGUARDS DURING CONSTRUCTION

### SECTION 3304 SITE WORK

#### 3304.1.1 Slope limits.

Slopes for permanent fill shall be not steeper than one unit vertical in two units horizontal (50-percent slope). Cut slopes for permanent excavations shall be not steeper than one unit vertical in two units horizontal (50-percent slope). Deviation from the foregoing limitations for cut slopes shall be permitted only upon the presentation of a soil investigation report acceptable to the *building official*.

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## APPENDIX J - GRADING

*Not mandatory unless specifically referenced in the adopting ordinance.*

### SECTION J106 EXCAVATIONS

#### J106.1 Maximum slope.

The slope of cut surfaces shall be no steeper than is safe for the intended use, and shall be not more than one unit vertical in two units horizontal (50-percent slope) unless the owner or the owner's authorized agent furnishes a geotechnical report justifying a steeper slope.

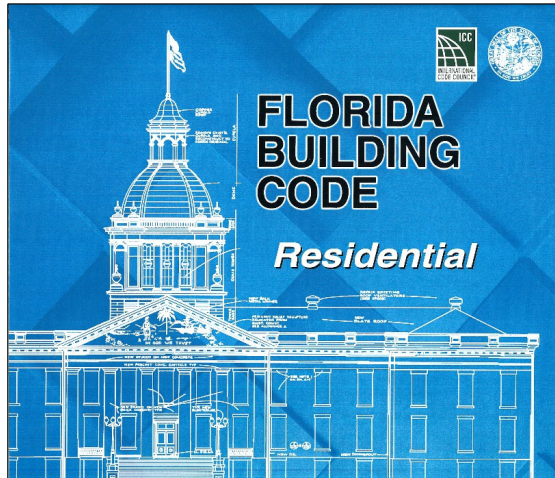
#### **Exceptions:**

1. A cut surface shall be permitted to be at a slope of 1.5 units horizontal to one unit vertical (67-percent slope) provided that all of the following are met:
  - 1.1. It is not intended to support structures or surcharges.
  - 1.2. It is adequately protected against erosion.
  - 1.3. It is no more than 8 feet (2438 mm) in height.
  - 1.4. It is approved by the building code official.
  - 1.5. Ground water is not encountered.
2. A cut surface in bedrock shall be permitted to be at a slope of one unit horizontal to one unit vertical (100-percent slope).

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# Residential

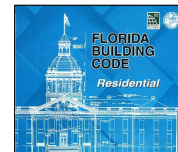


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# Residential

## Ch 2 - Definitions:



**ATTIC, HABITABLE.** A finished or unfinished area, not considered a *story*, complying with all of the following requirements:

1. The occupiable floor area is not less than 70 square feet, in accordance with Section R304.
2. The occupiable floor area has a ceiling height in accordance with Section R305.
3. The occupiable space is enclosed by the roof assembly above, knee walls (if applicable) on the sides and the floor-ceiling assembly below.

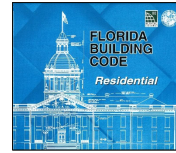
**EXTERIOR INSULATION AND FINISH SYSTEMS (EIFS).** EIFS are nonstructural, nonload-bearing *exterior wall* cladding systems that consist of an insulation board attached either adhesively or mechanically, or both, to the substrate; an integrally reinforced base coat; and a textured protective finish coat.

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# Residential

## Ch 2 - Definitions:



**HIGH-VELOCITY HURRICANE ZONE (HVHZ).** This zone consists of **Broward and Miami-Dade counties.**

**R-VALUE, THERMAL RESISTANCE.** The inverse of the time rate of heat flow through a *building thermal envelope* element from one of its bounding surfaces to the other for a unit temperature difference between the two surfaces, under steady state conditions, per unit area ( $h \cdot ft^2 \cdot ^\circ F/Btu$ )

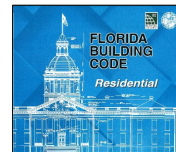
**STRUCTURAL INSULATED PANEL (SIP).** A structural sandwich panel that consists of a light-weight foam plastic core securely laminated between two thin, rigid wood structural panel facings

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# Residential

## Ch 2 - Definitions:



**STRUCTURAL COMPOSITE LUMBER.** Structural members manufactured using wood elements bonded together with exterior adhesives.

Examples of structural composite lumber are: *(See Code book for full examples)*

- Laminated strand lumber (LSL).
- Laminated veneer lumber (LVL).
- Oriented strand lumber (OSL).
- Parallel strand lumber (PSL).



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**TABLE R702.1 (2)**  
**GYPSUM PLASTER PROPORTIONS**

TABLE R702.1(2)  
GYPSUM PLASTER PROPORTIONS<sup>a</sup>

NUMBER	COAT	PLASTER BASE OR LATH	MAXIMUM VOLUME AGGREGATE PER 100 POUNDS NEAT PLASTER <sup>b</sup> (cubic feet)	
			Damp Loose Sand <sup>a</sup>	Perlite or Vermiculite <sup>c</sup>
Two-coat work	Base coat	Gypsum lath	2.5	2
	Base coat	Masonry	3	3
Three-coat work	First coat	Lath	2 <sup>d</sup>	2
	Second coat	Lath	3 <sup>d</sup>	2 <sup>e</sup>
	First and second coats	Masonry	3	3

For SI: 1 inch = 25.4 mm, 1 cubic foot = 0.0283 m<sup>3</sup>, 1 pound = 0.454 kg.

- Wood-fibered gypsum plaster shall be mixed in the proportions of 100 pounds of gypsum to not more than 1 cubic foot of sand where applied on masonry or concrete.
- Where determining the amount of aggregate in set plaster, a tolerance of 10 percent shall be allowed.
- Combinations of sand and lightweight aggregate shall be permitted to be used, provided the volume and weight relationship of the combined aggregate to gypsum plaster is maintained.
- If used for both first and second coats, the volume of aggregate shall be permitted to be 2.5 cubic feet.
- Where plaster is 1 inch or more in total thickness, the proportions for the second coat may be increased to 3 cubic feet.

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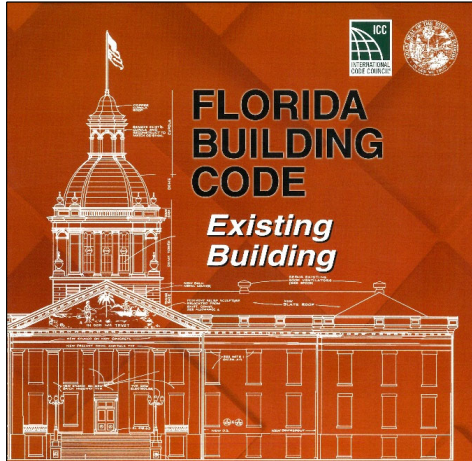
*\*Only a portion of the table is shown*

**TABLE R702.3.5**  
**MINIMUM THICKNESS AND APPLICATION OF GYPSUM BOARD AND GYPSUM PANEL PRODUCTS**

THICKNESS OF GYPSUM BOARD OR GYPSUM PANEL PRODUCTS (inches)	APPLICATION	ORIENTATION OF GYPSUM BOARD OR GYPSUM PANEL PRODUCTS TO FRAMING	MAXIMUM SPACING OF FRAMING MEMBERS (inches o.c.)	MAXIMUM SPACING OF FASTENERS (inches)		SIZE OF NAILS FOR APPLICATION TO WOOD FRAMING <sup>c</sup>	
				Nails <sup>a</sup>	Screws <sup>b</sup>		
<b>Application without adhesive</b>							
3/8	Ceiling <sup>d</sup>	Perpendicular	16	7	12	13 gage, 1 1/4" long, 19/64" head; 0.098" diameter, 1 1/4" long, ring shank; or 4d cooler nail, 0.080" diameter, 1 3/8" long, 7/32" head.	
	Wall	Either direction	16	8	16		
1/2	Ceiling	Either direction	16	7	12	13 gage, 1 3/8" long, 19/64" head; 0.098" diameter, 1 1/4" long, ring shank; 5d cooler nail, 0.086" diameter, 1 5/8" long, 15/64" head; or gypsum board nail, 0.086" diameter, 1 3/8" long, 9/32" head	
	Ceiling <sup>d</sup>	Perpendicular	24	7	12		
	Wall	Either direction	24	8	12		
5/8	Wall	Either direction	16	8	16	13 gage, 1 5/8" long, 19/64" head; 0.098" diameter, 1 3/8" long, ring shank; 6d cooler nail, 0.092" diameter, 1 7/8" long, 1/4" head; or gypsum board nail, 0.0915" diameter, 1 7/8" long, 19/64" head.	
	Ceiling	Perpendicular	24	7	12		
	Type X at garage ceiling beneath habitable rooms	Perpendicular	24	6	6		1 7/8" long 0.099" diameter galvanized nails or equivalent drywall screws. Screws shall comply with Section R702.3.5.1
	Wall	Either direction	24	8	12		
	Wall	Either direction	16	8	16		

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# Existing Building



Addition

Alteration Level 1

Alteration Level 2

Alteration Level 3

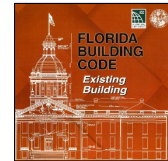
Repair

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# Existing Building

## Ch 2 - Definitions:



**ADDITION.** An extension or increase in floor area, number of stories, or height of a building or structure.

**ALTERATION.** Any construction or renovation to an existing structure other than a *repair* or *addition*. Alterations are classified as Level 1, Level 2 and Level 3

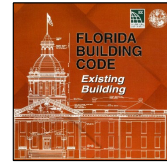
**REPAIR.** The reconstruction or renewal of any part of an *existing building* for the purpose of its maintenance or to correct damage.

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# Existing Building

## Ch 2 - Definitions:



**RETROFIT.** The voluntary process of strengthening or improving buildings or structures, or individual components of buildings or structures, for the purpose of making existing conditions better serve the purpose for which they were originally intended or the purpose that current building codes intend.

**SUBSTANTIAL IMPROVEMENT.** For the purpose of determining compliance with the flood provisions of this code, any *repair, alteration, addition, or improvement* of a building or structure, the cost of which equals or exceeds 50 percent of the market value of the structure, before the improvement or *repair* is started. If the structure has sustained *substantial damage*, any repairs are considered *substantial improvement* regardless of the actual *repair* work performed. The term does not, however, include either:

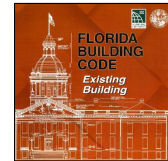
1. Any project for improvement of a building required to correct existing health, sanitary, or safety code violations identified by the *code official* and that is the minimum necessary to ensure safe living conditions; or
2. Any *alteration* of a historic structure, provided that the *alteration* will not preclude the structure's continued designation as a historic structure.

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# Existing Building

## Ch 6 – Classification of Work:



### ALTERATION—LEVEL 1 602.1Scope.

**Level 1 alterations** include the removal and replacement or the covering of existing materials, elements, equipment, or fixtures using new materials, elements, equipment, or fixtures that serve the same purpose.

### ALTERATION—LEVEL 2 603.1Scope.

**Level 2 alterations** include the reconfiguration of space, the addition or elimination of any door or window, the reconfiguration or extension of any system, or the installation of any additional **equipment; and shall apply where the work area is equal to or less than 50 percent of the building area.**

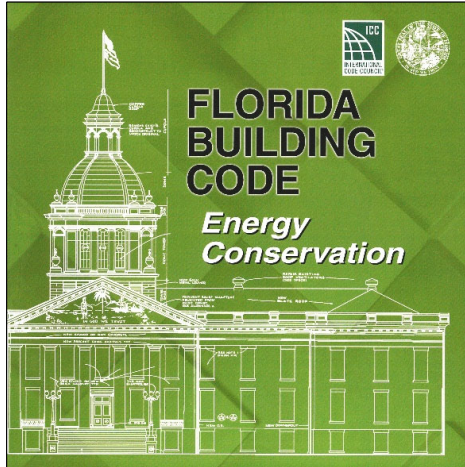
### ALTERATION—LEVEL 3 604.1Scope.

**Level 3 alterations** apply where the work area exceeds 50 percent of the building area.

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# Energy Conservation



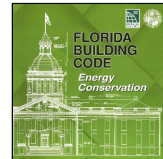
## Climate Zones

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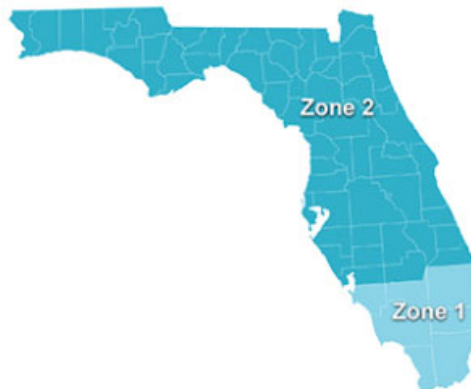
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# Energy Conservation

## Florida Climate Zones



- 1A Broward
- 1A Collier
- 1A Hendry
- 1A Lee
- 1A Miami-Dade
- 1A Monroe
- 1A Palm Beach
  
- 2A All other counties



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Quiz for Section 722, 1015, R702, & EB

**1). Which of the following walking surfaces located more than 30" above the finished floor would not require a guard?**

- A). Equipment Platforms
- B). Loading Dock
- C). Mezzanines
- D). Stair Landings

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Quiz for Section 722, 1015, R702, & EB

**1). Which of the following walking surfaces located more than 30" above the finished floor would not require a guard?**

- A). Equipment Platforms
- B). Loading Dock**
- C). Mezzanines
- D). Stair Landings

**Answer found in Section: 1015**

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Quiz for Section 722, 1015, R702, & EB

**2). If you do not have 1/2" Type X Gypsum Wallboard, what can you do to meet the same time assigned to finish materials on fire-exposed side of the wall?**

- A). 2 layers of 1/2" gypsum wallboard (40 mins)
- B). 1 layer of 3/8" & 1 layer of 1/2" gypsum wallboard (35 mins)
- C). 1 layer of 1/2" gypsum wallboard (15 mins)
- D). 2 layers of 3/8" gypsum wallboard (25 mins)

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Quiz for Section 722, 1015, R702, & EB

**2). If you do not have 1/2" Type X Gypsum Wallboard, what can you do to meet the same time assigned to finish materials on fire-exposed side of the wall?**

- A). 2 layers of 1/2" gypsum wallboard (40 mins)
- B). 1 layer of 3/8" & 1 layer of 1/2" gypsum wallboard (35 mins)
- C). 1 layer of 1/2" gypsum wallboard (15 mins)
- D). 2 layers of 3/8" gypsum wallboard (25 mins)**

**Answer found in Section: 722**

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Quiz for Section 722, 1015, R702, & EB

**3). What is the maximum screw spacing for 5/8" Type X gypsum board at a garage ceiling beneath habitable rooms?**

- A). Seven inches
- B). Twelve inches
- C). Sixteen inches
- D). Six inches

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Quiz for Section 722, 1015, R702, & EB

**3). What is the maximum screw spacing for 5/8" Type X gypsum board at a garage ceiling beneath habitable rooms?**

- A). Seven inches
- B). Twelve inches
- C). Sixteen inches
- D). Six inches**

**Answer found in Section: R702**

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Quiz for Section 722, 1015, R702, & EB

**4). What level of alteration includes the reconfiguration of space, the addition or elimination of any door or window, the reconfiguration of any systems?**

- A). Repair
- B). Level 1 Alteration
- C). Level 2 Alteration
- D). Level 3 Alteration

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Quiz for Section 722, 1015, R702, & EB

**4). What level of alteration includes the reconfiguration of space, the addition or elimination of any door or window, the reconfiguration of any systems?**

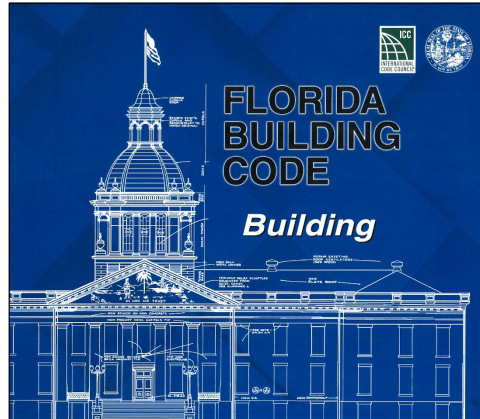
- A). Repair
- B). Level 1 Alteration
- C). Level 2 Alteration**
- D). Level 3 Alteration

**Answer found in Section: Existing, Ch 6**

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# Conclusion of Section One Advanced Florida Building Code



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**THANK YOU**

*From all of us at CEI  
See you next CE cycle!*

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