Chapter 1
Scope and Administration

Florida Building Code
Existing Building, 5th Edition
2014

General Intent

- Encourage the reuse of existing homes and buildings.
- This code provides a departure from full compliance.
- Assure that adequate protection is provided.

- The type and extent of work governs the requirements.
- Unless specifically directed by this code, this code applies strictly to the areas known as the work areas.

- The design professional is responsible for the design.
- The contractor is responsible for constructing to code.
- The code official reviews activity via inspections.

Chapter 1
Scope and Administration

In addition to the provisions of this chapter, provisions of Chapter 1, FBC, Building, shall govern administration.

The provisions of the FBC, Existing Building, shall apply to the repair, alteration, change of occupancy, addition, and relocation of existing buildings, except:

- Public Educational Facilities and State Licensed Facilities

Typically, construction activity triggers enforcement.

Generally, if a permit is required, this code is applicable.

The intent of this code is to provide flexibility...
101.4 Applicability

This code shall apply to the repair, alteration, change of occupancy, addition and relocation of existing buildings, subject to the criteria of Sections 101.4.1 and 101.4.2.

- **101.4.1 Buildings not previously occupied.**
  - A building or portion that has not been previously occupied for its intended purpose in accordance with the laws in existence at the time of its completion shall comply with the provisions of the FBC, Building or FBC, Residential, for new construction or with any current permit for such use.

- **101.4.2 Buildings previously occupied.**
  - The legal occupancy of any building existing on the date of adoption of this code is permitted to continue without change, except as specifically covered in this code...

101.5 and 101.7

- **101.5 Safeguards during construction.**
  - All construction work covered in this code, including any related demolition, shall comply with the requirements of Chapter 15.

- **101.7 Correction of violations of other codes.**
  - Repairs or alterations mandated by any property, housing, or fire safety maintenance code or mandated by any licensing rule or ordinance adopted pursuant to law shall conform only to the requirements of that code, rule, or ordinance and shall not be required to conform to this code unless the code requiring such repair so provides.

101.8

- **101.8 Existing mechanical equipment.**
  - An agency or local government may not require that existing mechanical equipment located on or above the surface of a roof be installed in compliance with the requirements of the Florida Building Code except when the equipment is being replaced or moved during reroofing and is not in compliance with the provisions of the Florida Building Code relating to roof-mounted mechanical units.

Chapter 2 Definitions

- **201.1 Scope**
  - Unless otherwise expressly stated, the following words and terms shall, for the purpose of this code, have meanings shown in this chapter.

- **201.3 Terms defined in other codes.**
  - Where terms are not defined in this code and are defined in the Florida Building Codes or the Florida Fire Prevention Code, such terms shall have the meanings ascribed to them in those codes.

- **202, 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.

  - **CHANGE OF OCCUPANCY.**
    - A change in the purpose or level of activity within a building that involves a change in application of the requirements of this code.
202, Definitions

DANGEROUS.
- Any building, structure or portion thereof that meets any of the conditions described below shall be deemed dangerous:
  1. The building or structure has collapsed, has partially collapsed, has moved off its foundation or lacks the necessary support of ground.
  2. There exists a significant risk of collapse, detachment or dislodgment of any portion, member, appurtenance or ornamentation of the building or structure under service loads.

EQUIPMENT OR FIXTURE.
- Any plumbing, heating, electrical, ventilating, air conditioning, refrigerating, and fire protection equipment, and elevators, dumb waiters, escalators, boilers, pressure vessels and other mechanical facilities or installations that are related to building services.

EXISTING BUILDING.
- A building erected prior to the date of adoption of the appropriate code, or one for which a legal building permit has been issued.

LOAD-BEARING ELEMENT.
- Any column, girder, beam, joist, truss, rafter, wall, floor or roof sheathing that supports any vertical load or any lateral load.

REPAIR.
- The restoration to good or sound condition of any part of an existing building for the purpose of its maintenance.

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 intended.

SUBSTANTIAL DAMAGE.
- For the purpose of determining compliance with the flood provisions of this code, damage of any origin sustained by a structure whereby the cost of restoring the structure to its before-damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.

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.

SUBSTANTIAL STRUCTURAL DAMAGE.
- A condition where:
  - In any story, the vertical elements of the lateral force resisting system have suffered damage such that the lateral load-carrying capacity of the structure in any horizontal direction has been reduced by more than 33% from its pre-damaged condition, or
  - The capacity of any vertical load-carrying component, or any group of such components, that supports more than 30% of the total area of the structure’s floor(s) and roof(s) has been reduced more than 20% from its pre-damaged condition and the remaining capacity of such affected elements, with respect to all dead and live loads, is less than 75% of that required by this code for new buildings of similar structure, purpose and location.

VALUE.
- The estimated current replacement cost of the building in kind.

WORK AREA.
- That portion or portions of a building consisting of all reconfigured spaces as indicated on the construction documents.
- Work area excludes other portions of the building where incidental work entailed by the intended work must be performed and portions of the building where work not initially intended by the owner is specifically required by this code.
Chapter 3
Compliance Methods

Chapter 4

301.1 General

- Repair, alteration, change of occupancy, addition, or relocation of existing buildings shall comply with one of the methods listed in Sections 301.1.1 - 301.1.3 as selected by the applicant.
  - Application of a method shall be the sole basis for assessing the compliance of work performed under a single permit unless otherwise approved.
  - Exception: Subject to the approval of the code official, alterations complying with the laws in existence at the time the building was built shall be considered in compliance with the provisions of this code unless the building is undergoing more than a limited structural alteration as defined in Section 907.4.3.

301.1

301.1.1 Prescriptive Compliance Method
- Repairs, alterations, additions and changes of occupancy complying with Chapter 4 of this code in buildings complying with the Florida Fire Prevention Code shall be considered in compliance with provisions of this code.

301.1.2 Work Area Compliance Method
- Repairs, alterations, additions and changes in occupancy complying with the applicable requirements of Chapters 5 through 13 of this code shall be considered in compliance with provisions of this code.

301.1.3 Performance Compliance Method
- Repairs, alterations, additions and changes in occupancy complying with Ch. 14 shall be considered in compliance.

Chapter 4
Prescriptive Compliance Method

402 Additions

402.1 General.
- Additions to any building or structure shall comply with the requirements of the FBC, Building for new construction. Alterations to the existing building or structure shall be made to ensure that the existing building or structure together with the addition are no less conforming to the provisions of FBC, Building than prior to the addition. An existing building together with its additions shall comply with height and area provisions of Chapter 5 of the FBC, Building.
Chapter 4

402 Additions

- 402.3 Existing structural elements carrying gravity load. Any existing gravity load-carrying structural element for which an addition and its related alterations cause an increase in design gravity load of more than 5% shall be strengthened, supplemented, replaced or otherwise altered as needed to carry the increased gravity load required by the FBC, Building for new structures.

Chapter 4

403 Alterations

- 403.1 General
  - Alterations to any building or structure shall comply with the requirements of FBC, Building for new construction. Alterations shall be such that the existing building or structure is no less conforming than the existing building or structure was prior to the alteration.
  - Exceptions:
    - 1. An existing stairway shall not be required to comply with the requirements of Section 1009 of FBC, Building where the existing space and construction does not allow a reduction in pitch or slope.
    - 2. Handrails otherwise required to comply with Section 1009.12 of the FBC, Building shall not be required to comply with requirements of Section 1012.6 of the FBC, Building regarding full extension of the handrails where such extensions would be hazardous.

Chapter 4

403.6 Smoke Alarms.

- Individual sleeping units and individual dwelling units in Group R and I-1 occupancies shall be provided with smoke alarms in accordance with the FFPC.
- One- and two-family dwellings and townhomes undergoing a repair, or a Level 1 alteration as defined, may use smoke alarms powered by 10-year non-removable, non-replaceable batteries in lieu of retrofitting such dwelling with smoke alarms powered by the dwelling's electrical system. Effective January 1, 2015, a battery-powered smoke alarm that is newly installed or replaces an existing battery-powered smoke alarm must be powered by a non-removable, non-replaceable battery that powers the alarm for at least 10 years. The battery requirements of this section do not apply to a smoke detector that is electronically connected as a part of a centrally monitored or supervised alarm system.

Chapter 4

404 Repairs

- Buildings and structures, and parts thereof, shall be repaired in conformance with Sections 401.2 and 404.
- Work on non-damaged 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 requirements for alterations.

Chapter 4

405 Fire Escapes.

- 405.1.2 Existing fire escapes shall continue to be accepted as a component in the means of egress in existing buildings only.

Chapter 4

406 Glass Replacement.

- The installation or replacement of glass shall be as required for new installations.

Chapter 5

Classification of Work

- 407.1 Change of Occupancy.
  - No change shall be made in the use or occupancy of any building that would place the building in a different division of the same group of occupancy or a different group of occupancies, unless such building is made to comply with the requirements of the FBC, Building for such division or group of occupancy.
  - Subject to the approval of the building official, the use or occupancy of existing buildings shall be permitted to be changed and the building is allowed to be occupied for purposes in other groups without conforming to all of the requirements of this code for those groups, provided the new or proposed use is less hazardous, based on life and fire risk, than the existing use.
Chapter 5

501.1 Scope.
- Provisions of this chapter shall be used in conjunction with Chapters 6 through 13 and shall apply to the repair, alteration, addition and change of occupancy of existing structures as referenced in Section 301.1.2.
- The work performed on an existing building shall be classified in accordance with this chapter.

501.2 Work Area.
- The work area, as defined in Chapter 2, shall be identified on the construction documents.

501.3 Occupancy and Use.
- Occupancy shall be determined by Chapter 3 of FBC, B.

Chapter 5, Classification of Work.

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Section 502, Repairs

502.1 Scope.
- Repairs include the patching or restoration or replacement of damaged materials, elements, equipment, or fixtures for the purpose of maintaining such components in good or sound condition.

502.2 Application.
- Repairs shall comply with the provisions of Chapter 6.

502.3 Related Work.
- Work on non-damaged 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 Chapters 7, 8, 9, 10 or 11.

Section 503, Alteration - Level 1.

503.1 Scope.
- 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.

503.2 Application.
- Level 1 alterations shall comply with Chapter 7.

Section 504, Alteration - Level 2.

504.1 Scope.
- 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.

504.2 Application.
- Level 2 alterations shall comply with the provisions of Chapter 7 for Level 1 as well as provisions of Chapter 8.

Section 505, Alteration - Level 3.

505.1 Scope.
- Level 3 alterations apply where the work area exceeds 50 percent of the aggregate area of the building.

505.2 Application.
- Level 3 alterations shall comply with the provisions of Chapters 7 and 8 for Level 1 and 2 alterations, respectively, as well as the provisions of Chapter 9.
Chapter 5

Section 506, Change of Occupancy.
- 506.1 Scope.
  - Change of occupancy provisions apply where the activity is classified as a change of occupancy.
- 506.2 Application.
  - Changes of occupancy shall comply with the provisions of Chapter 10.

Chapter 5

Section 507, Additions.
- 507.1 Scope.
  - Provisions for additions shall apply where work is classified as an addition as defined in Chapter 2.
- 507.2 Application.
  - Additions to existing buildings shall comply with the provisions of Chapter 11.

Chapter 6

Repairs

601.1 Scope.
- Repairs shall comply with requirements of this chapter.

601.2 Conformance.
- The work shall not make the building less conforming...

601.3 Flood Hazard Areas
- In flood hazard areas, repairs that constitute substantial improvement shall require that the building comply with 1612 of the FBC, Building or R322 of FBC, Residential.

601.3.1 Coastal Construction Line.
- Structure located seaward of the coastal construction line shall be designed to resist the predicted forces of a 100 yr. storm event in accordance with 3109 of FBC, B.

602.1 Existing Building Materials.
- Materials already in use in a building in compliance with requirements or approvals in effect at the time of their erection or installation shall be permitted to remain in use unless determined by the code official to render the building or structure unsafe or dangerous as defined.

602.2 New and Replacement Materials.
- Except as otherwise permitted by this code, materials permitted by the applicable code for new construction shall be used.
- Like materials shall be permitted for repairs, provided no dangerous or unsafe condition is created.
Chapter 6

602.3 Glazing in Hazardous Locations.
- Replacement glazing in hazardous locations shall comply with safety glazing requirements of the FBC, Building.
- Exception: Glass block walls, louvered windows, and jalousies repaired with like materials.

Section 603 Fire Protection.
- Maintain the level of protection provided.

Section 604 Means of Egress.
- Maintain the level of protection provided.

Section 605 Accessibility.
- Maintain the level of accessibility provided.

Section 606 Structural.

606.1 General.
- Regardless of the scope of repair, new structural members and connections used for repair shall comply with the detailing provisions of the FBC, Building for new buildings of similar structure, purpose and location.

606.1.1 Nonstructural Repairs.
- Nonstructural repair exclusive of fixtures and furniture, the cost of which does not exceed 25 percent of the replacement value of the existing building, with the approval of the building official may be made of the same material of which the building is constructed.

603.2 Smoke Alarms.
- One-family and two-family dwellings and townhomes undergoing a repair, or a Level 1 alteration as defined in the FBC, may use smoke alarms powered by 10-year non-removable, non-replaceable batteries in lieu of retrofitting such dwelling with smoke alarms powered by the dwelling’s electrical system.
- Effective January 1, 2015, a battery-powered smoke alarm that is newly installed or replaces an existing battery-powered smoke alarm must be powered by a non-removable, non-replaceable battery that powers the alarm for at least 10 years.

606.2 Repairs to Damaged Buildings.

606.2.1 Less than Substantial Structural Damage
- The building shall be evaluated by a registered design professional, and the evaluation findings shall be submitted to the code official. The evaluation shall establish whether the damaged building, if repaired to its pre-damage state, would comply with provisions of the FBC, Building for load combinations including wind.

606.2.2 Substantial Structural Damage
- A building that has sustained substantial structural damage to the vertical elements of its lateral force resisting system shall be evaluated in accordance with Section 606.2.2.1, and either repaired in accordance with Section 606.2.2.2 or repaired and rehabilitated in accordance with Section 606.2.2.3, depending on results.

606.2.2.1 Evaluation.
- The building shall be evaluated by a registered design professional, and the evaluation findings shall be submitted to the code official. The evaluation shall establish whether the damaged building, if repaired to its pre-damage state, would comply with provisions of the FBC, Building for load combinations including wind.

606.2.2.2 Extent of Repair, Compliant Building.
- If the evaluation establishes that the building in its pre-damage condition complies with the provisions of Section 606.2.2.1, then the damaged elements shall be permitted to be restored to their pre-damage condition.

606.2.2.3 Extent of repair, for non-compliance.
- If the evaluation does not establish that the building in its pre-damage condition complies with the provisions of Section 606.2.2.1, then the building shall be rehabilitated to comply with the provisions of this section.

- The wind loads for the repair and rehabilitation shall be those required by the building code in effect at the time of original construction, unless the damage was caused by wind, in which case the wind loads shall be in accordance with the FBC, Building.
Chapter 6

- **607.1 Electrical Material.**
  - Existing electrical wiring and equipment undergoing repair shall be allowed to be repaired or replaced with like material. Replacement of electrical receptacles shall comply with Section 406.4(D) of NFPA 70.

- **608.1 Mechanical.**
  - Existing mechanical systems undergoing repair shall not make the building less conforming than it was before the repair was undertaken.

- **609.1 Plumbing.**
  - Plumbing materials and supplies shall not be used for repairs that are prohibited in the FBC, Plumbing.

Chapter 7

### Alterations - Level 1

Chapter 7

#### General

- **701.1 Scope.**
  - Level 1 alterations as described shall comply with the requirements of this chapter.

- **701.2 Conformance.**
  - An existing building shall not be altered such that the building becomes less safe than its existing condition.

- **701.3 Flood Hazard Areas.**
  - In flood hazard areas, alterations that constitute substantial improvement shall require that the building comply with Section 1612 of the FBC, Building or Section R322 of the FBC, Residential, as applicable.

### Building Elements and Materials

- **702.1 Interior Finishes.**
  - All newly installed interior wall and ceiling finishes shall comply with Chapter 8 of the FBC, Building.

- **702.2 Interior Floor Finish.**
  - New interior floor finish, including new carpeting used as an interior floor finish material, shall comply with Section 804 of the FBC, Building.

- **702.3 Interior Trim**
  - All newly installed interior trim materials shall comply with Section 806 of the FBC, Building.

- **702.4 Materials and Methods.**
  - All new work shall comply with the materials and methods requirements in FBC, Building, FBC, Energy Conservation, FBC, Mechanical, and FBC, Plumbing, as applicable, that specify material standards, detail of installation and connection, joints, penetrations, and continuity of any element, component, or system in the building.

- **702.4.1 Florida Building Code, Fuel Gas.**
  - The following shall constitute the requirements for Level 1
    - All of Chapter 3, General Regulations, except 303.7 & 306.
    - All of Chapter 4, Gas Pipe Installation, except 401.8 & 402.3.
    - All of Chapter 5, Chimneys and Vents.
    - All of Chapter 6, Specific Appliances.

### Fire Protection

- **703.2 Smoke Alarms.**
  - One-family and two-family dwellings and townhomes undergoing a repair, or a Level 1 alteration as defined in the FBC, may use smoke alarms powered by 10-year non-removable, non-replaceable batteries in lieu of retrofitting such dwelling with smoke alarms powered by the dwelling's electrical system.

- **Effective January 1, 2015,** a battery-powered smoke alarm that is newly installed or replaces an existing battery-powered smoke alarm must be powered by a non-removable, non-replaceable battery that powers the alarm for at least 10 years.
704 Means of Egress.

- **704.1 General**
  
  Means of egress for buildings undergoing alteration shall comply with the requirements of Section 701.1 and the scoping provisions of Chapter 1 where applicable.

- **Exception: Door and Window Dimensions.**
  
  In residential dwellings and dwelling units, a maximum of 5% reduction in the clear opening dimensions of replacement doors and windows shall be allowed.

705 Accessibility.

- **705.1 Accessibility**
  
  Accessibility shall be in accordance with the provisions of the FBC, Accessibility.

706 Structural.

- **706.1 General.**
  
  Where alteration work includes replacement of equipment supported by the building or where a re-roofing permit is required, structural provisions of this section shall apply.

- **706.2 Where addition or replacement of roofing or replacement of equipment results in additional dead loads, structural components supporting such re-roofing or equipment shall comply with the gravity load requirements of the FBC, Building.**

  - **Exceptions:**
    
    - Structural elements where the additional dead load from the roofing or equipment does not increase the force in the element by more than 5%
    - Additions of a second layer of roof covering weighing 3 pounds per square foot or less over an existing, single layer of roofing.

706.3.2 Roof Diaphragms Resisting Wind Loads.

- Where roofing materials are removed from more than 50 percent of the roof diaphragm or section of a building located where the ultimate design wind speed is greater than 115 mph, as defined in Section 1609 of the FBC, Building, roof diaphragms, connections of the roof diaphragm to roof framing members, and roof to wall connections shall be evaluated for the wind loads specified in the FBC, Building, including wind uplift.

- If the diaphragms and connections in their current condition are not capable of resisting at least 75% of those wind loads, they shall be replaced or strengthened in accordance with the loads specified in FBC, Building.

706.4 Replacement of Windows and Doors.

- Replacement of garage doors, exterior doors, skylights, operative and inoperative windows shall be designed and constructed to comply with Chapter 16 of FBC, B.

  - **Exceptions:**
    
    - 1. For one- and two-family dwellings constructed under codes other than the Florida Building Code and located in wind-borne debris regions, the replacement of garage doors and exterior doors with glazing, sliding glass doors, glass patio doors, skylights, and operable and inoperable windows within any 12 month period shall not be required to have opening protection but shall be designed for wind pressures for enclosed buildings, provided the aggregate area of the glazing in the replaced components does not exceed 25% of the aggregate area of the glazed openings in the dwelling or dwelling unit.
    
    - 2. High-Velocity Hurricane Zones: For one- and two-family dwellings constructed under codes prior to September 1, 1994...

706.5 Openings in sunrooms, enclosed balconies and enclosed porches constructed under existing roofs or decks are not required to be protected, provided the space is separated from the building interior by a wall and all openings in the separating wall are protected in accordance with Section 1609.1.2 of the FBC, Building.

- Such spaces shall be permitted to be designed as enclosed or partially enclosed.

707 Energy Conservation

- **707.1 Minimum Requirements.**
  
  Alteration subject to this chapter shall comply with the requirements of the FBC, Energy Conservation.

708 Re-Roofing

- **708.1 General.**
  
  Materials and methods of application used for recovering or replacing an existing roof covering shall comply with the requirements of Chapter 15 of the FBC, Building or Chapter 9 of the FBC, Residential.

  - **Exception:** Reroofing shall not be required to meet the minimum design slope requirement of 1/4:12 in Section 1507 of the FBC, Building for roofs that provide positive roof drainage. High-velocity hurricane zones shall comply with Sections 1515.2.2.1 and 1516.2.4 of FBC, Building.
Chapter 7

708.1.1 Not more than 25 percent of the total roof area or roof section of any existing building or structure shall be repaired, replaced or recovered in any 12 month period unless the entire roofing system or roof section conforms to the requirements of this code.

708.2 Structural and Construction Loads.

The structural roof components shall be capable of supporting the roof covering system and the material and equipment loads that will be encountered during installation of the roof covering system.

Chapter 7

708.3 Recovering versus Replacement.

New roof coverings shall not be installed without first removing all existing layers of roof coverings where any of the following conditions occur:

1. Where the existing roof or roof covering is water soaked or has deteriorated to the point that the existing roof or roof covering is not adequate as a base for additional roofing.
2. Where the existing roof covering is wood shake, slate, clay, cement or asbestos-cement tile.
3. Where the existing roof has two or more applications of any type of roof covering.
4. Where blisters exist in any roofing, unless blisters are cut open and secured down before applying additional roofing.
5. Where the existing roof is to be used for attachment for a new roof system and compliance with securement provisions of Section 1504.1 of the FBC, Building cannot be met.

Chapter 7

708.4 Roof Recovering.

Where the application of a new roof covering over wood shingles or shakes creates a combustible concealed space, the entire existing surface shall be covered with gypsum board, mineral fiber or glass fiber fastened in place.

708.5 Reinstallation of Materials.

Existing slate, clay or cement tile shall be permitted for reinstallation, except that damaged, cracked or broken slate or tile shall not be reinstalled. Existing vent flashing, metal edgings, drain outlets, collars and metal counter flashings shall not be reinstalled where rusted or damaged. Aggregate surfacing materials shall not be reinstalled.

Chapter 7

708.6 Flashings.

Flashings shall be reconstructed in accordance with the roof covering manufacturer’s installation instructions. Metal flashing to which bituminous materials are to be adhered shall be primed prior to installation.

708.7 When a roof covering on an existing site-built, single-family residential structure is removed and replaced, the following procedures shall be permitted to be performed by the roofing contractor:

(a) Roof decking attachment as required by 708.7.1
(b) A secondary water barrier as required by 708.7.2

Chapter 7

708.7.1 Roof Decking Attachment.

8d nails shall be a minimum of 0.113” diameter and shall be a minimum of 2-1/4” long to qualify for the provisions of this section for existing nails regardless of head shape.

708.7.1.1 Roof decking consisting of sawn lumber or wood planks up to 12” wide secured with at least two nails (minimum 8d) to each roof framing member it crosses shall be deemed to be sufficiently connected. Existing vent flashing, metal edgings, drain outlets, collars and metal counter flashings shall not be reinstalled where rusted or damaged. Aggregate surfacing materials shall not be reinstalled.

Chapter 7

708.7.1.2 For roof decking of wood structural panels, fasteners and spacing required in columns 3 and 4 of Table 708.7.1.2 are deemed to comply with the requirements of 706.3 of this code for the indicated design wind speed range.

Supplemental fasteners shall be 8d ring shank nails

- 0.113” nominal Shank
- 0.010” ring over Shank
- 16 - 20 rings per inch
- 0.280” full round head
- Rings extending 1-1/2”
- Minimum 2-3/8” length

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708.7.2 Roof Secondary Water Barrier.

A secondary water barrier shall be installed using one of the following methods when the roof covering is removed and replaced.

1. In either HVHZ or Non-HVHZ regions,
   a) All joints in structural panel roof sheathing or decking shall be covered with a minimum 4 inch wide strip of self-adhering polymer modified bitumen tape applied directly to the sheathing or decking. The deck and self adhering polymer modified bitumen tape shall be covered with one of the underlayment systems approved for the particular roof covering to be applied to the roof.
   b) The entire roof deck shall be covered with an approved asphalt impregnated 30# felt underlayment or approved synthetic underlayment installed with nails and tin tabs in accordance with 1518.2, 1518.3, or 1518.4 of the FBC, B.

2. Outside the HVHZ:
   a) The entire roof deck shall be covered with an approved self-adhering polymer modified bitumen sheet meeting ASTM D 1970 or an approved self-adhering synthetic underlayment installed in accordance with the manufacturer’s installation instructions.
   or
   b) An underlayment system approved for the particular roof covering shall be applied with the following modification:

   - For roof slopes that require one layer of underlayment, a layer of approved asphalt impregnated ASTM D 226, Type I or Type II, ASTM D 4869, Type II or Type IV underlayment or approved synthetic underlayment shall be installed.
   - The felt is to be fastened with 1” round plastic cap, metal cap nails or nails and tin tabs attached to a nailable deck with two staggered rows in the field of the sheet with a maximum fastener spacing of 12” on center and one row at the overlaps fastened 6” on center.

708.8 Roof to Wall Connections.

When a roof covering on an existing site-built single-family residential structure is removed and replaced on a building that is located in the wind-borne debris region and that has an insured value of $300,000 or more or, if the building is uninsured, has a just valuation for the structure for purposes of ad valorem taxation of $300,000 or more:

a) Roof to wall connections shall be improved as required by Section 708.8.1.

b) Mandated retrofits of the roof to wall connection shall not be required beyond a 15% increase in the cost of re-roofing.

Exception: Single-family residential structures permitted subject to the FBC are not required to comply with this section.

Wind-Borne Debris Region? FBC, B, 1609.2

Areas within hurricane-prone regions located:

1. Within 1 mile of the coastal mean high water line where the ultimate design wind speed is 130 mph or greater;

   or

2. In areas where the ultimate design wind speed is 140 mph or greater.

The exact location of wind speed lines shall be established by local ordinance using recognized physical landmarks such as major roads, canals, rivers and lake shores wherever possible.
708.8.1 Roof-to-Wall Connections.
Where required by Section 708.8, the intersection of roof framing with the wall below shall provide sufficient resistance to meet the uplift loads specified in Table 708.8.1, either because of existing conditions or through retrofit measures. The prescriptive retrofit solutions provided in 708.8.1.1 - 708.8.1.7 shall be accepted as meeting the mandated roof to wall requirements.

Where the insured value of the residence, located in the wind borne debris region, is $300,000 or more, the roof to wall connections MAY have to be upgraded, but there are 2 exceptions to the mandated retrofit requirements.

Exceptions:
1. Where it can be demonstrated by code adoption date documentation and permit issuance date that roof-to-wall connections were required at time of original construction.
2. Roof-to-wall connections shall not be required unless the evaluation and installation of connections at gable ends or all corners can be completed for 15% of the cost of roof replacement.

Example $5,710.80 x .15
$ 856.62

This is the maximum the owner is required to invest...

708.8.1.1 Access for Retrofitting.
These provisions are not intended to limit the means for gaining access to the structural elements of the roof and wall for the purpose of retrofitting connectors.

- through the area under the eave
- from above through the roof
- from the interior of the house

Table 711.8.1
Required Uplift Capacities (PLF)

Prescriptive Retrofit Solutions are provided...

- 708.8.1.3 Gable Roofs on a Wood Frame Wall
- 708.8.1.4 Gable Roofs on a Masonry Wall
- 708.8.1.5 Hip Roofs on a Wood Frame Wall
- 708.8.1.6 Hip Roofs on a Masonry Wall
- 708.8.1.7 Priorities for Mandated Expenditures

1. The roof covering is being removed and replaced
2. The project is in the wind borne debris region
3. The project valuation is $300,000 or more
4. The retrofit is 15% or less of the reroofing bid
Opening Protection in the Wind Borne Debris Region

FBC, Building, 105.15 Opening Protection.
- When any activity requiring a building permit that is applied for on or after July 1, 2008, and for which the estimated cost is $50,000 or more for a site-built single-family detached residential structure that is located in the wind-borne debris region and that has an insured value of $750,000 or more, opening protections as required by this code or FBC, R shall be provided.

FBC, Building, 1609.1.2 Opening Protection
- Glazed openings in buildings located in wind-borne debris regions shall be impact resistant or protected with an impact resistant covering meeting the requirements of SSTD 12, ASTM E 1886 and ASTM E 1996, ANSI/DASMA 115, TAS 201, 202 and 203 or AAMA 506.
- There are exceptions for storage sheds 720 square feet or less, that are not designed for human habitation and for openings in sunrooms, balconies or enclosed porches constructed under existing roofs or decks where the spaces are separated from the building interior by a wall and all openings in the separating wall are protected.

Summary
- When a roof covering is removed and replaced, anywhere in this state, regardless of the value;
  - Roof Decking Attachment is to be Strengthened
  - A Secondary Water Barrier is to be Installed

- In the Wind Borne Debris Region only;
  - Where the residential value is $300,000 or more;
  - Roof to Wall Connections... up to the 15% threshold.
  - Where the residential value is $750,000 or more, and $50,000 or more work is being performed.
  - Opening Protection shall be installed and inspected.

Chapter 8
- 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 installation of any additional equipment.
- Triggers for additional work, but not full code compliance.
- Exception:
  - Buildings in which the reconfiguration is exclusively the result of compliance with the accessibility requirements of 705.1 shall be permitted to comply with Chapter 7.
Chapter 8

801 General

- 801.2 In addition to the requirements of this chapter, all work shall comply with requirements of chapter 7.
- 801.3 Compliance.
- All new construction elements, components, systems, and spaces shall comply with the FBC, Building.
- Exceptions:
  1. Windows may be added without requiring compliance with the light and ventilation requirements of the FBC, Building.
  2. Newly installed electrical equipment shall comply with 808.
  3. The length of dead-end corridors in newly constructed spaces shall only be required to comply with Section 805.6.
  4. The minimum ceiling height of the newly created habitable and occupiable spaces and corridors shall be 7 feet.

Chapter 8

803 Building Elements

- 803.1 Scope.
- The requirements of this section are limited to work areas in which Level 2 alterations are being performed, and shall apply beyond the work area where specified.
- 803.2 Existing Vertical Openings.
- All existing interior vertical openings connecting two or more floors shall be enclosed with approved assemblies having a fire resistance rating of not less than 1 hour with approved opening protectives.
- 14 Exceptions: having a reduced rating or no rating.

Chapter 8

803.2.1 Shaft and Floor Opening Enclosures.
- Where the work area on any floor exceeds 50% of that floor area, the enclosure requirements of 803.2 shall apply to vertical openings other than stairs throughout the floor.

803.2.3 Stairway Enclosure Requirements.
- Where the work area on any floor exceeds 50% of that floor area, stairways that are part of the means of egress serving the work area shall, at a minimum, be enclosed with smoke-tight construction on the highest work area floor and all floors below.

Chapter 8

803.4 Interior Finish.
- The interior finish of walls and ceilings in exits and corridors in any work area shall comply with the requirements of the FBC, Building.

Chapter 8

803.4.1 Supplemental Requirements.
- Where the work area on any floor exceeds 50% of the floor area, Section 803.4 shall also apply to the interior finish in exits and corridors serving the work area throughout the floor.

Chapter 8

803.5 Guards.
- The requirements of Sections 803.5.1 and 803.5.2 shall apply in all work areas.
- 803.5.1 Minimum Requirement.
- Every portion of a floor, such as a balcony or loading dock, that is more than 30” above the floor or grade below and is not provided with guards, or those in which the existing guards are judged to be in danger of collapsing, shall be provided with guards.
- 803.5.2 Design.
- Guards shall be designed according to FBC, Building.

Chapter 8

804 Fire Protection.

- 804.1 Scope.
- The requirements of this section shall be limited to work areas in which Level 2 alterations are being performed, and where specified they shall apply throughout the floor on which the work areas are located.
- 804.2 Automatic Sprinkler Systems.
- Automatic sprinkler systems shall be provided in accordance with Sections 804.2.1 through 804.2.5.
  - 804.2.1 High-Rise Buildings.
    - 804.2.2 Groups A, B, E, F-1, H, I, M, R-1, R-2, R-4, S-1 and S-2.
    - 804.2.3 Windowless Stories.
    - 804.2.4 Other Required Automatic Sprinkler Systems.
    - 804.2.5 Supervision.
804.4.3 Smoke Alarms.
- Individual sleeping units and individual dwelling units in any work area in Group R and I-1 occupancies shall be provided with smoke alarms in accordance with the Florida Fire Prevention Code.
- Exception:
  - Interconnection of smoke alarms outside of the rehabilitation work area shall not be required.

Exception:
- Interconnection of smoke alarms outside of the rehabilitation work area shall not be required.

805 Means of Egress.
- 805.1 Scope.
  - The requirements of this section shall be limited to work areas that include exits or corridors shared by more than one tenant within the work area in which Level 2 alterations are being performed, and where specified they shall apply throughout the floor on which the work areas are located or otherwise beyond the work area.
- 805.2 Means of egress shall comply with this section.
- Exceptions:
  - 1. Where the work area and the means of egress serving it complies with NFPA 101.
  - 2. Means of egress conforming to the requirements of the building code under which the building was constructed...

- 805.3 Number of Exits.
  - The number of exits shall be in accordance with Sections 805.3.1 through 805.3.3.
  - 805.3.1 Minimum Number.
    - Every story utilized for human occupancy on which there is a work area that includes exits or corridors shared by more than one tenant within the work area shall be provided with the minimum number of exits based on the occupancy and the occupant load in accordance with the Florida Building Code, Building. In addition, the exits shall comply with Sections 805.3.1.1 and 805.3.1.2.
    - 805.3.1.1 Single Exit Buildings.
    - 805.3.1.2 Fire Escapes Required.

- 805.4 Egress Doorways.
  - Egress doorways shall comply with 805.4.1 - 805.4.5.
  - 805.4.1 Two Egress Doorways Required.
    - Work areas shall be provided with two egress doorways in accordance with Sections 805.4.1.1 and 805.4.1.2.
      - 805.4.1.1 Occupant Load and Travel Distance
        - In any work area, all rooms and spaces having an occupant load greater than 50 or in which the travel distance to an exit exceeds 75 feet shall have a minimum of two egress doorways.
      - 805.4.1.2 Group I-2
        - In buildings of I-2 occupancy, any patient sleeping room or suite of patient rooms greater than 1,000 square feet...

- 805.4.2 Door Swing.
  - In the work area and in the egress path from any work area to the exit discharge, all egress doors serving an occupant load greater than 50 shall swing in the direction of exit travel.
- 805.4.3 Door Closing.
  - In any work area, all doors opening onto an exit passageway at grade or an exit stair shall be self-closing or automatic-closing by listed closing devices.
- 805.4.4 Panic Hardware.
  - In any work area, and in the egress path from any work area to the exit discharge, in buildings or portions thereof of Group A assembly occupancies with an occupant load greater than 100, all required exit doors equipped with latching devices shall be equipped with approved panic hardware.

806 Accessibility.
- 806.1 General.
  - A building, facility, or element that is altered shall comply with the provisions of the FBC, Accessibility.
- 807 Structural.
  - 807.2 New Structural Elements.
    - New structural elements in alterations, including connections and anchorage, shall comply with FBC, B.
    - The minimum design loads on existing elements of a structure that do not support additional loads as a result of an alteration shall be the loads applicable at the time the building was constructed.
807.4 Existing Structural Elements... Gravity
Alterations shall not reduce the capacity of existing gravity load-carrying structural elements.
Existing structural elements supporting any additional gravity loads as a result of the alterations shall comply with the FBC, Building.
Exceptions:
1. Structural elements whose stress is not increased by more than 5 percent.
2. Buildings of Group R occupancy with not more than five dwelling or sleeping units used solely for residential purposes where the existing building and its alteration comply with the conventional light-frame construction methods of the FBC, Building or the provisions of the FBC, Residential.

807.5 Existing Structural Elements... Lateral.
Alterations affecting the demands or capacities of existing elements of the lateral load-resisting system shall be evaluated using the wind provisions of the FBC, Building.
Any existing lateral load-resisting structural elements whose demand-capacity ratio with the alteration considered is more than 10% greater than its demand-capacity ratio with the alteration ignored shall be brought into compliance with the wind provisions.
In addition, the alteration shall not create a structural irregularity prohibited by ASCE 7 unless the entire structure complies with Section 301.1.4.2.

808 Electrical.
808.1 New Installations.
Newly installed electrical equipment and wiring relating to work done in any work area shall comply with Ch. 7.
808.2 Existing Installations.
Existing wiring in all work areas in Group A-1, A-2, A-5, H, and I occupancies shall be upgraded to meet Ch. 7.
808.3 Residential Occupancies.
In Group R-2, R-3 and R-4 occupancies and buildings regulated by the FBC, Residential, the requirements of Sections 808.3.1 through 808.3.7 shall be applicable only to work areas located within a dwelling unit.

808.3.1 Enclosed Areas.
All enclosed areas, other than closets, kitchens, basements, garages, hallways, laundry areas, utility areas, storage areas, and bathrooms shall have a minimum of 2 duplex receptacles or 1 duplex receptacle and 1 ceiling or wall lighting outlet.
808.3.2 Kitchens.
... shall have a minimum of 2 duplex receptacle outlets.
808.3.3 Laundry Areas.
... shall have a minimum of 1 duplex receptacle located near the laundry equipment, installed on an independent circuit.
808.3.4 Ground Fault Circuit Interruption.
Newly installed receptacle outlets shall be provided with ground fault circuit interruption as required by NFPA 70.

808.3.5 Minimum Lighting Outlets.
At least one lighting outlet shall be provided in every bathroom, hallway, stairway, attached garage, and detached garage with electric power, and to illuminate outdoor entrances and exits.
808.3.6 Utility Rooms and Basements.
At least one lighting outlet shall be provided in utility rooms and basements where such spaces are used for storage or contain equipment requiring service.
808.3.7 Clearance for Equipment.
Clearance for electrical service equipment shall be provided in accordance with the NFPA 70.

809 Mechanical.
809.1 Reconfigured Spaces.
All reconfigured spaces intended for occupancy and all spaces converted to habitable or occupiable space in any work area shall be provided with natural or mechanical ventilation in accordance with the FBC, Mechanical.

810 Plumbing.
810.1 Minimum Fixtures.
Where the occupant load of the story is increased by more than 20%, plumbing fixtures for the story shall be provided in quantities specified in the FBC, Plumbing.

Chapter 9
Alterations - Level 3

901 General.

901.1 Scope.
Level 3 alterations apply where the work area exceeds 50 percent of the aggregate area of the building.

901.2 Compliance.
In addition to the provisions of this chapter, work shall comply with all of the requirements of Chapter 7 and 8. Requirements of 803, 804 and 805 shall apply within all work areas whether or not they include exits & corridors shared by more than one tenant and regardless of the occupant load.

Exception:
Buildings in which the reconfiguration of space affecting exits or shared egress access is exclusively the result of compliance with the accessibility requirements of Section 705.2.

903 Building Elements.

903.1 Existing Shafts and Vertical Openings.
Existing stairways that are part of the means of egress shall be enclosed in accordance with Section 803.2.1 from the highest work area floor to, and including, the level of exit discharge and all floors below.

905 Means of Egress.

905.1 General.
Means of egress shall comply with the requirements of Section 805 except as required in 905.2 and 905.3.

905.2 Means of Egress Lighting.
Means of egress from the highest work area floor to the floor of exit discharge shall be provided with artificial lighting within the exit enclosure in accordance with the requirements of FBC, Building.

905.3 Exit Signs.
Means of egress from the highest work area floor to the floor of exit discharge shall be provided with exit signs in accordance with the requirements of the FBC, Building.

Chapter 10
Change of Occupancy
Change of Occupancy Defined.

- A change in the purpose or level of activity within a building that involves a change in the application of the requirements of this code.

- Group A, B, E, F, H, I, M, R, S, U and D.

- There are sub-classifications for several of these:
  - Group F Factory F-1, F-2, F-3
  - Group I Institutional I-1, I-2, I-3, I-4
  - Group R Residential R-1, R-2, R-3, R-4
  - Group S Storage S-1, S-2

One where the classification remains the same
- Group A-2 Restaurant changed to Group A-2 Nightclub

One where the occupancy classification changes
- Group B Business changed to Group M Mercantile

One where a portion of the building is changed
- Group B units and 1 unit is changed to Group A-3

In addition, there are three hazard classification tables
- Means of Egress
- Heights and Areas
- Exposure of Exterior Walls

1001.4 Certificate of Occupancy Required.
- A certificate of occupancy shall be issued where a change of occupancy occurs that results in a different occupancy classification as determined by the FBC, B.
Chapter 11

1101 General

1101.1 Scope.
An addition to a building shall comply with the Florida Codes as adopted for new construction without requiring the existing building to comply with any requirements of those codes or of these provisions, except as required by this chapter. Where an addition impacts the existing building, that portion shall comply with this code.

1101.2 Creation or Extension of Nonconformity
An addition shall not create or extend a nonconformity in the existing building with regard to accessibility, structural strength, fire safety, means of egress, or the capacity of mechanical, plumbing, or electrical systems.

Chapter 11

1102 Heights and Areas

1102.1 Height Limitations.
No addition shall increase the height of an existing building beyond that permitted by the provisions of Chapter 5 of FBC, Building.

1102.2 Area Limitations.
No addition shall increase the area of an existing building beyond that permitted by the provisions of Chapter 5 of FBC, Building, unless fire separation as required by FBC Building is provided.

Chapter 11

1103 Structural

1103.1 Vertical Addition.
Any element of the lateral-force-resisting system of an existing building subjected to an increase in vertical or lateral loads from the vertical addition shall comply with the FBC, Building wind provisions.

1103.2 Horizontal Addition.
Where horizontal additions are structurally connected to an existing structure, all lateral-force-resisting elements of the existing structure affected by such addition shall comply with the FBC, Building wind provisions.

Chapter 11

1104 Smoke Alarms in Groups R and I-1

1104.1 Smoke Alarms in Existing Portions.
Where an addition is made to a building or structure of a Group R or I-1 occupancy, the existing building shall be provided with smoke alarms as required by the FFPC or Section R314 of the FBC, Residential as applicable.

Chapter 15

Construction Safeguards

1105 Accessibility

1105.1 Minimum Requirements.
Provisions for new construction shall apply to additions.

1106 Energy Conservation

1106.1 Minimum Requirements.
Additions shall comply with FBC, Energy Conservation.
1501.2 Storage and Placement.
- Construction equipment and materials shall be stored and placed so as not to endanger the public, the workers or adjoining property for the project duration.

1501.4 Manner of Removal.
- Waste materials shall be removed in a manner which prevents injury or damage to persons, adjoining properties and public rights-of-way.

1501.7 Facilities Required.
- Sanitary facilities shall be provided during construction or demolition activities in accordance with the FBC, Plumbing.

1503.1 Storage and Handling of Materials.
- The temporary use of streets or public property for the storage or handling of materials or equipment required for construction or demolition, and the protection provided to the public shall comply with the provisions of the applicable governing authority and this chapter.

1503.2 Obstructions.
- Construction materials and equipment shall not be placed or stored so as to obstruct access to fire hydrants, standpipes, fire or police alarm boxes, catch basins or manholes, nor shall material or equipment be located within 20 feet of a street intersection, or placed so as to obstruct normal observations of traffic signals or to hinder the use of public transit loading platforms.

1504.1 Fire Extinguishers. Where Required.
- Structures under construction, alteration or demolition shall be provided with not less than one approved portable fire extinguisher in accordance with the FFPC and sized for not less than ordinary hazard as follows:
  1. At each stairway on all floor levels where combustible materials have accumulated.
  2. In every storage and construction shed.
  3. Additional portable fire extinguishers shall be provided where special hazards exist including, but not limited to, the storage and use of flammable and combustible liquids.

1505.2 Maintenance of Means of Egress.
- Required means of egress shall be maintained at all times during construction, demolition, remodeling or alterations and additions to any building.

1509.1 Water Supply. When Required.
- An approved water supply for fire protection, either temporary or permanent, shall be made available as soon as combustible material arrives on the site.
Conclusion!

5th Edition

Florida Building Code

Existing Building

Thank You, Jeff Hyde