

SIGNIFICANT CHANGES TO THE 2007 FLORIDA RESIDENTIAL CODE WITH 2009 REVISIONS

January 23, 2009

The following list outlines the significant changes to the 2007 Florida Building Code with 2009 amendments, *Residential* as submitted by the membership of the Building Officials Association of Florida, Big Bend and Suwannee River Chapters. The narrative following each code section constitutes the combined interpretation for purposes of interpretation and enforcement of the various building inspection offices in Florida's Big Bend; specifically, Florida State University, City of Tallahassee, City of Quincy, Gadsden County, Hamilton County, Jefferson County, Lafayette County, Leon County, Madison County, Suwannee County and Wakulla County.

BUILDING

- 1) **Section R202 – DEFINITION, Accessory Structure:** Language has been deleted and new language inserted that gives specific limitations concerning the size and number of stories of accessory structures. An accessory structure is a structure not greater than 3,000 square feet in floor area and not over two stories in height, the use of which is customarily accessory to and incidental to that of the dwellings and which is located on the same lot.
- 2) **Section R202 – Garage Door Manufacturer:** The party responsible for the complete assembly of the garage door components.
- 3) **Section R202 – Permanent Label:** A label that cannot be removed without noticeable damage.
- 4) **Section R301.2.1.1.2 – Sunrooms:** This is a new code section that deals with the structural requirements of sunrooms. Sunrooms shall comply with AAMA/NPEA/NSA 2100 with the structural requirements and testing provisions of Chapter 5 modified to incorporate ASCE 7 and shall be categorized as category I, II, III, IV or V.
- 5) **Section R301.2.1.4 – Exposure Category, Exception:** New language has been added to this code section that now requires buildings located in a designated transition zone be designed to wind exposure category "C", unless a ration analysis is calculated allowing a reduced wind pressure. There are three types of transition zones identified in this code section. (1) Exposure B-type terrain where the building is within 100 feet horizontally in any direction of open areas of Exposure C-type terrain that extends more than 600 feet and has a width greater than 150 feet in the upwind direction. (2) Flat open country, grasslands, ocean and gulf shorelines which extend downwind for a distance of 1500 feet. (3) Within 600 feet of inland bodies of water that present a fetch of 1 mile or more or inland waterways or rivers with a width of 1 mile. *Note: A fetch is defined as the distance along open water or land over which the wind blows.*
- 6) **Table R301.5 – Minimum Uniformly Distributed Live Loads:** There have been modifications made to the footnotes of this table. Footnotes *b*, *g* & *h* have been added to address loading criteria for attics with and without storage. Footnote *b* defines attics without storage as those with a clear space dimension of less than 24" X 42" between joist and rafter or where there are not two or more adjacent trusses with a clear space dimension of less than 24" X 42". Footnote *g* defines attics with limited storage as those constructed with trusses and which have clear space dimensions of 24" X 42" within the plane of the truss. The live load requirements need only be applied to the bottom chord of those trusses with the 24" X 42" clear dimensions. Footnote *h* gives a requirement that all attic spaces served by a fixed stair shall be designed as sleeping room floors. Footnote *i* has been added to show a safety factor of 4 for glazing in handrail assemblies in order to be consistent with the FBCB.

BUILDING

- 7) **Section R309.2 – Separation Required:** New language has been added to this code section that requires garage walls located less than 3 feet from a dwelling unit on the same lot to be protected with not less than ½ inch gypsum board applied to the interior side of the exterior walls located within this area. Openings in these walls shall be regulated by section R309.1. This provision does not apply to walls that are perpendicular to the adjacent dwelling.
- 8) **Section R310.1.4 – Emergency Escape and Rescue Required:** The revised language of this code change mandates that all basements be provided with at least one emergency escape and rescue opening, except for those basements with no more than 200 square feet and used solely for housing mechanical equipment. The previous language of basements “with habitable space” has been deleted.
- 9) **Section R311.6.1 – Ramps, Maximum Slope:** This code section has been rewritten and now allows ramps to be sloped at a 1:12 ratio with an exception that allows a slope ratio of 1:8. The previous code (2004 FRC) required a maximum of 1:8 slope ratio.
- 10) **Section R313.2.1 – Smoke Alarms, Alterations, Repairs and Additions:** Language in this code section has been altered to say that when alterations, repairs or additions requiring a permit occur, or when one or more sleeping rooms are added or created in existing dwellings, the individual dwelling unit shall be equipped with smoke alarms located in the existing sleeping rooms and in the immediate vicinity outside the sleeping rooms. When the interior wall or ceiling finishes are not required to be removed in the existing building then the smoke alarms shall not required to be hardwired and interconnected unless there is an attic, crawlspace or basement available to make those connections. *Committee Interpretation:* For the purposes of this code section only, additions are considered to be those spaces added and connected to the existing dwelling and that are conditioned from the existing dwelling.
- 11) **Section R313.2.1 – Smoke Alarms, Alterations, Repairs and Additions, Exception:** Code language has been added to reflect that smoke alarms are not required in existing dwellings when the work is limited to door and window replacements, roof replacements, siding replacements or the addition of a deck.
- 12) **Section R404.5 – Retaining Walls:** This is a new code section that states that retaining walls which are not laterally supported at the top and that retain in excess of 24 inches of unbalanced fill shall be designed to ensure stability against overturning, sliding, excessive foundation pressure and water uplift. Retaining walls shall be designed for a safety factor of 1.5 against lateral sliding and overturning. *Committee Interpretation:* Retaining walls less than 24” in height will not require a building permit. However, other permits such as environmental permits may be required. Depending on site conditions, retaining walls with 24” of unbalanced fill up to and including 48” of unbalanced fill may not need the seal of a design professional. Retaining walls with unbalanced fill over 48” will require the seal of a design professional.
- 13) **Section R406.1 – Concrete and Masonry Foundation Dampproofing:** New language has been added to this code section that will make the FBCR more compatible with the FBCB and states that except where required to be waterproofed by section R406.2 dampproofing of concrete and masonry foundations for all interior and below grade spaces and not just habitable and useable spaces is now required.

BUILDING

- 14) **Section R406.2 – Concrete and Masonry Foundation Waterproofing:** New language has been added to this code section that will make the FBCR more compatible with the FBCB and states that in areas where a high water table or other severe soil-water conditions are known to exist, waterproofing of concrete and masonry foundations for all interior and below grade spaces and not just habitable and useable spaces is now required.
- 15) **Section R408.2 – Openings for Under Floor Ventilation:** All of the exceptions for reduction of ventilation openings have been deleted. The criteria for the elimination of ventilation openings for crawl and under-floor spaces has been revised and relocated to the new section R408.3.
- 16) **Section R408.3 – Unvented crawlspace:** Section R408.3 has been renamed and rewritten. Ventilation openings in under-floor spaces specified in section R408.1 & R408.2 shall not be required when the exposed earth is covered with a continuous vapor barrier, and one of the following is provided: mechanical exhaust, conditioned air supply or make the space a plenum complying with section M1601.4.
- 17) **Section R502.1.1.6 – Structural Log Members:** This is a new code section that requires all non-rectangular shaped structural log members to be grade mark stamped including those log members identified in sections R602.1.1.3 & R802.1.7. In lieu of a grade mark stamp, a certificate by a lumber grading or inspection agency meeting the requirements of this section shall be permitted to be accepted.
- 18) **Section R506.2.4 – Reinforcement Support:** This is a new code section that states that where provided in slabs on ground, welded wire mesh shall be supported to remain in place from the center to upper one-third of the slab, for the duration of the concrete placement.
- 19) **Section R506.2.5 – Slab on Ground Joints, Exception #2:** This is an exception to the requirement for joints in concrete slabs on ground. In one and two family dwellings where welded wire mesh is utilized in lieu of providing control joints the welded wire mesh shall be supported with approved supports not exceeding 3 feet on center or as per the manufacturer's installation instructions.
- 20) **Section R613.2 – Window Sills:** This is a new code section. The minimum clear opening height of an operable window that is more than 72" above the finished exterior grade or surface below shall not be less than 24" above the finished floor unless the opening in the window will not allow the passage of a 4" diameter sphere or the opening is protected by a guard complying with ASTM F 2006 or ASTM F 2090
- 21) **Section R613.3.1 – Testing and Labeling:** Additional language has been added to this code section that requires glass doors and windows to have a permanent label (a label that cannot be removed without noticeable damage) identifying the manufacturer, model/series number, performance characteristics and approved product certification agency, testing laboratory, evaluation entity, or Miami Dade product approval. New language has also been added that requires a temporary supplemental label to be placed on glass doors and windows that identify the manufacturer, product model/series number, positive and negative design pressure rating, product maximum size, glazing thickness, impact rating if applicable, product approval number and applicable test standards. This supplemental label is to remain on the window or glass door until final inspection.

BUILDING

- 22) **Section R613.3.1.1 – Testing and Labeling of Skylights:** This is a new code section that requires testing and labeling of skylights. A permanent label (a label that cannot be removed without noticeable damage) is required to be attached to the skylight that identifies the manufacturer, product model/series number, performance characteristics and product evaluation entity. A temporary supplemental label is also required. This temporary supplemental label must identify the manufacturer, product model number, positive and negative design pressures, product maximum size, glazing thickness and Florida Product Approval number.
- 23) **Section R613.4.5 – Garage Door Labeling:** This is a new code section that requires garage doors to be provided with a permanent label (a label that cannot be removed without noticeable damage) by the manufacturer that identifies the manufacturer, the garage door model number positive and negative design pressure rating, the installation instruction drawing reference number and the Florida Product Approval number and applicable test standards. The installation instructions shall be provided and available on the job site. *Committee informational note:* Garage doors are identified as structural components and as such must be installed by properly licensed contractors or sub-contractors working under the direct supervision of a properly licensed contractor.
- 24) **Section R615.1 – Impact Resistant Coverings:** This is a new code section that has been added to the residential code. As per section R301.2.1.2 “Windows in buildings located in wind-borne debris regions shall have glazed openings protected from wind-borne debris.” These impact resistant coverings shall be tested to 1.5 times the design pressure. *Committee informational note: Contact your local building department for labeling and installation requirements.*
- 25) **Section R615.2.1 – Permanent Label Required:** A permanent label (a label that cannot be removed without noticeable damage) shall be provided by the product approval holder on all impact resistant coverings.
- 26) **Section R615.2.2 – Information Required on Label:** The following information shall be included on the labels on impact-resistant coverings. 1) Product approval holder name and address, 2) All applicable methods of approval, 3) The test standard or standards used to demonstrate code compliance and 4) The Florida Product Approval or the Miami-Dade NOA number.
- 27) **Section R615.3 – Installation:** All impact-resistant coverings shall be installed in accordance with the manufacturer’s installation instructions and in accordance with the product approval. Installation instructions shall be provided and shall be available to inspection personnel on the job site.
- 28) **Section R702.4.2 – Cement, Fiber-Cement and Glass Mat Gypsum Backers:** This is a new code section that requires cement, fiber-cement or glass mat gypsum backers installed as per manufacturer’s recommendations to be used as backers for wall tile in tub and shower areas and wall panels in shower areas.

BUILDING

- 29) **Section R806.4 – Unvented Attic Assemblies:** This code section outlines the conditions for attic assemblies to be unvented. 1) The unvented attic space is completely within the building thermal envelope. 2) No interior vapor retarder is installed on the ceiling side (attic floor) of the unvented attic assembly. 3) Where wood shingles or shakes are used, a minimum ¼” vented air space separates the shingles or shakes from the roofing underlayment. 4) One of the following shall be met, depending on the air permeability of the insulation under the structural roof sheathing.
- a. Air-impermeable insulation only. Insulation shall be applied in direct contact to the underside of the structural roof sheathing.
 - b. Air-permeable insulation only. In addition to air-permeable insulation installed directly below the structural sheathing, at least an R-5 rigid board or sheet insulation shall be installed directly above the structural roof sheathing for condensation control.
 - c. Air-impermeable and air-permeable insulation. At least an R-5 air-impermeable insulation shall be applied in direct contact to the underside of the structural roof sheathing for condensation control. The air-permeable insulation shall be installed directly under the air-impermeable insulation.
- 30) **FS 553.885 & 9B-3.0472 F.A.C. – Carbon Monoxide Detectors/Alarms:** This is a legislative change requiring that every building for which a building permit is issued for new construction on or after July 1, 2008 and having a fossil-fuel-burning heater or appliance, a fireplace or an attached garage shall have an approved operational carbon monoxide alarm installed within 10 feet of each room used for sleeping purposes. The carbon monoxide detectors installed as a result of this statute shall be listed or labeled as being in compliance with ANSI/UL 2034-96 or UL 2075-04 and shall receive their primary power from the building wiring when the building wiring is served from the local power utility. A battery back-up power supply is also required.

SWIMMING POOLS

- 1) **Section R4101.19 – Final Inspection:** Final electrical and barrier code inspection shall be completed prior to filling the pool with water.
- 2) **Section R4101.19 – Final Inspection; Exception:** Vinyl liner and fiberglass pools are required to be filled with water upon installation.

PLUMBING

- 1) **Section P2603.3.1 – Penetration:** Protective sleeves around piping penetrating concrete slab-on-grade floors shall not be of cellulose containing materials. If soil treatment is used for subterranean termite protection, the sleeve shall have a maximum wall thickness of 0.010 inch, and be sealed within the slab using a non-corrosive clamping device to eliminate the annular space between the pipe and the sleeve. No termiticides shall be applied inside the sleeve.
- 2) **Section P2708.1.1 - Access:** This is a new code section that says that the shower compartment access and egress opening shall have a minimum clear and unobstructed finished width of 22 inches.
- 3) **Section P2708.4 - Showers:** New language has been added to this code section that requires hand-held showers to be provided with back flow protection.

PLUMBING

- 4) **Section P2713.3 - Bathtub and Whirlpool bathtub valves:** This code section has been renumbered, retitled and says that the hot water supplied to bathtubs and whirlpool bathtubs shall be limited to a maximum temperature of 120 degrees fahrenheit by a water temperature limiting device that conforms to ASSE 1070, except where such protection is otherwise provided by a combination tub/shower valve.
- 5) **Section P2720.1 – Access to Pump:** Access shall be provided to circulation pumps in accordance with the fixture or pump manufacturer’s installation instructions. Where the location and access opening size are not identified by the manufacturer’s instructions, a 12” X 12” field installed opening shall be provided for access to the pump. When the pump is located more than 24” from the access opening, an 18” X 18” access opening shall be provided. In all cases, the access opening shall be large enough to permit removal and replacement of the circulation pump. Note: The 2004 plumbing code required the circulation pump to be located above the weir of the fixture trap. That part of this code section has been deleted.
- 6) **Section P2721.2 – Bidet water temperature:** This is a new code section that limits the water temperature supplied to a bidet to 110 degrees fahrenheit.
- 7) **Section P2903.4.1 – Pressure Reducing Valve:** As per section P2903.4 for water service system sizes up to and including 2 inches, a device for controlling pressure shall be installed where, because of thermal expansion, the pressure on the down stream side of the pressure reducing valve exceeds the pressure reducing valve setting.
- 8) **Section P3102.2 – Installation:** This code section has been renamed and rewritten. One dry vent is now required to be connected to the building drain or an extension of a drain that is connected to a building drain. Such vent shall not be an island vent.
- 9) **Section P3201.6 – Fixture Traps:** New language has been added to this code section that says that the horizontal distance from the fixture outlet to the trap weir shall not exceed 30 inches.

MECHANICAL

- 1) **Section M1308.3 – Foundations and Supports:** This is a new code section that requires foundations and supports for outdoor mechanical systems to be raised at least 3 inches above the finished grade and to conform to the manufacturer’s installation instructions.
- 2) **Section M1411.3.1.1 – Water Level Monitoring Devices:** This is a new code section that requires a water-level monitoring device to be installed inside the primary drain pan when down-flow units and other coils do not have a secondary drain and do not have a means to install an auxiliary drain pan. Externally installed devices and devices installed in the drain line shall not be permitted.
- 3) **Section M1501.1 – Outdoor Discharge:** This is a new code section that requires the air removed by every mechanical exhaust system to be discharge to the outdoors. This exhaust air shall not be exhausted into an attic, soffit, ridge vent or crawl space.

MECHANICAL

- 4) **Section M1502.2 – CLOTHES DRYER EXHAUST; Duct Termination:** This is a new code section that requires exhaust ducts to terminate on the outside of the building. Exhaust duct terminations shall be in accordance with the dryer manufacturer's installation instructions. Exhaust ducts shall terminate not less than 3 feet in any direction from openings into buildings. Exhaust duct terminations shall be equipped with a backflow damper. Screens shall not be installed at the duct termination.

GAS

- 1) **Section G2414.6.3 – Regulator Vent Piping:** This is a new code section that requires plastic pipe, tubing and fittings used to connect regulator vents to remote vent terminations to be PVC conforming to UL 651. PVC vent piping shall not be installed indoors.
- 2) **Section G2415.5 – Protection Against Physical Damage:** In concealed locations, where piping other than black or galvanized steel is installed through holes or notches in wood studs, joists, rafters or similar members less than 1.5 inches from the nearest edge of the member, the pipe shall be protected by shield plates. Shield plates shall be a minimum of 0.0625-inch-thick (1.6 mm) steel, shall cover the area of the pipe where the member is notched or bored, and shall extend a minimum of 4 inches above sole plates, below top plates and to each side of a stud, joist or rafter.
- 3) **Section G2426.7 – VENTS, Protection from Physical Damage:** This is a new code section that requires vents to be protected by shield plates when in concealed locations and when it is installed through holes or notches in studs, joists, rafters or similar members less than 1.5 inches from the nearest edge of the member. The shield plates shall be a minimum of 1/16 inch thick steel, shall cover the area of the vent where the member is notched or bored and shall extend a minimum of 4 inches above sole plates, below top plates and to each side of a stud, joist or rafter.
- 4) **Section G2427.3.5 – VENTING of APPLIANCES, Above Ceiling Air-Handling Spaces:** This is a new code section that requires a venting system, when passing through an above-ceiling air-handling space or other non-ducted portion of an air-handling system to conform to one of the following requirements: 1) The venting system shall be a listed special gas vent; other venting system serving a category III or category IV appliance; or other positive pressure vent with joints sealed in accordance or vent manufacturer's instructions. 2) The vent system shall be installed such that fittings and joints between sections are not installed in the above-ceiling space. 3) The venting system shall be installed in a conduit or enclosure with sealed joints separating the interior of the conduit or enclosure from the ceiling space.

ENERGY

- 1) **Section N1113.A – Method A Compliance Simulation and End Use Load Determination:** Except as specified in this Section, the Baseline Home and As-Built Home shall be configured and analyzed using identical methods and techniques. The Baseline totals for Method A code compliance developed in accordance with the criteria in Sections N1113.A.1 and N1113.A.2 shall be adjusted by a factor of 0.85 to make the code 15 percent more stringent than the 2007 code Baseline features.

ENERGY

- 2) **Section N1110.0.2 – Building Systems:** Thermal efficiency standards are set for the following building systems where new products are installed or replaced in existing buildings, and for which a permit must be obtained. Such systems shall meet the minimum efficiencies allowed for that system on Form 1100B for residential buildings.
1. Heating, Ventilating or air conditioning systems;
 2. Service water or pool heating systems.
- Exceptions:**
1. Where part of a functional unit is repaired or replaced. For example, replacement of an entire HVAC system is not required because of a new compressor or other part does not meet code when installed with an older system. If the unit being replaced is itself a functional unit, such as a condenser, it does not constitute a repair. Outdoor and indoor units that are not designed to be operated together must meet the U.S. Department of Energy certification requirements contained in Section N1107.AB.3.1.1. Matched systems are required, this match may be verified by any of the following means.
 - 1) ARI (AHRI) data
 - 2) Accredited laboratory (example ARL labs)
 - 3) Manufacturer’s letter
 - 4) Letter from registered P.E. State of Florida
- 3) **Section N1110.A.2 – Installation Criteria for Homes Claiming the Tested Duct Option:** The tested duct option may be claimed in the EnergyGauge USA Fla/Res computer program where the air distribution system is tested in accordance with ASHRAE 152, in which case measured duct air leakage values shall be used. Tested duct leakage shall be determined and documented by a Certified Class 1 Florida Rater.
- 4) **Section N11107.AB.1 – Equipment Sizing:** A cooling and heating load calculation shall be performed on the building and shall be attached to the Form 1100 submitted when application is made for a building permit, or in the event the mechanical permit is obtained at a later time, the calculation shall be submitted with the application for the mechanical permit. HVAC sizing calculations shall account for the directional orientation of the building for which the load is calculated.; worst-case sizing calculations shall not be permitted. Cooling and heating design loads, for the purpose of sizing HVAC equipment and designing HVAC systems, shall be determined for the dwelling spaces (typically rooms or zones) served by each piece of equipment in accordance with ACCA Manual J, ACCA Manual N, or the ASHRAE Cooling and Heating Load Calculation Manual, Second Edition. This code does not allow designer safety factors, provisions for future expansion or other factors which affect equipment sizing in excess of the capacity limitations in Section N1107.AB.1.1. System sizing calculations shall not include loads created by local intermittent mechanical ventilation such as standard kitchen and bathroom exhaust systems. The engineered ventilation requirement of the various procedures shall not be used as an infiltration rate when estimating infiltration loads.