Analysis of Changes for the 6th Edition (2017) Florida Codes

Changes to the Florida Building Code, Energy Conservation

This *Analysis of Changes for the 6th Edition (2017) of the Florida Codes* is intended to provide a comprehensive comparison of the provisions in the *5th Edition (2014) Florida Building Code, Energy Conservation* (FBCEC) and the *6th Edition (2017) Florida Building Code, Energy Conservation*. The *2012 International Energy Conservation Code* was the base code for the *5th Edition (2014)* FBCEC. The *2015 International Energy Conservation Code* is the base code for the 6th Edition (2017) FBCEC. As a result of changing the base code and Florida-specific amendments, certain provisions and criteria of the code have changed. This *Analysis* will serve a useful tool to facilitate the transition to the new code.

This *Analysis* is arranged so that comparable provisions in the two codes can be easily located. The left two columns contain section numbers and a brief overview of the corresponding requirements from the *5th Edition (2014)* FBCEC. The next two columns contain section numbers and a brief overview of the corresponding requirements in the *6th Edition (2017)* FBCEC. The far right column contains a brief analysis or comment on the differences between the provisions.

This *Analysis* is not intended to replace or interpret the provisions contained in either the *5th Edition (2014)* or the *6th Edition (2017)* FBCEC. This information simply points out the differences. The *Analysis* is not designed to be used without the aid of the representative code books, as all the details pertaining to a specific section may or may not be provided. However, this *Analysis* will provide an easy means for identifying differences in the two codes, as well as enabling the user to locate issue specific provisions in the *6th Edition (2017)* FBCEC by means of a numbered section cross reference.

This *Analysis* provides a cross-reference for the majority of the sections that changed in the *6th Edition (2017)* FBCEC. In some cases, sections were grouped together due to substantial differences. This grouping enables the extent of the differences to be more readily identified.

Notable changes deemed to be the most significant or to have the greatest impact have been highlighted in yellow.

Note: Seismic loading and snow loading provisions in the code are no longer reserved (deleted) in the *6th Edition (2017)* FBCEC, even though they do not apply in the State of Florida. While there are changes to some of these sections and provisions, they are not shown here in this *Analysis* because they do not apply to construction in the State of Florida.

5th Edition (2014) FBCEC		6th Edition (2017) FBCEC		Analysis
Section	**Requirement**	**Section**	**Requirement**	
Chapter 1 [CE]: Scope and Administration				
C101.4.1	Existing buildings	-	-	Provisions for existing buildings have been relocated to new Chapter 5 [CE]. See discussion on Chapter 5 [CE].
C101.4.2	Historic buildings			
C101.4.3	Additions, alterations, renovations or repairs			
C101.4.4	Change in occupancy or use			
C101.4.5	Change in space conditioning			
C101.5.2	Low-energy buildings	C402.1.1	General	Provision relocated as an exception to Section C402.1.1.
C101.4.7	Building systems and components	C501.7	Building systems and components	Provisions relocated to Chapter 5 [CE].
C101.4.7.1	Existing equipment efficiencies	C501.7.1	Existing equipment efficiencies	Provisions relocated to Chapter 5 [CE].
C103.2	Information on construction documents	C103.2	Information on construction documents	Adds new requirement that the location of daylight zones be shown on floor plans.
-	-	C103.2.1	Building thermal envelope depiction	Requires the building's thermal envelope to be represented on construction documents.
C103.3	Examination of documents	C103.3	Examination of documents	Section revised to permit the code official to utilize a registered design professional, or other approved entity not affiliated with the building design or construction, in conducting the review of the plans and specifications for compliance with the code.
C104	Inspections	C104	Inspections	Revises the inspection requirements to enhance the ability to ensure compliance with the code and improve the usability of the code. Adds individuals as defined in Section 553.993(5) or (7), Florida Statute as approved inspection agencies.
C106.2	Conflicting requirements	-	-	Section deleted.
Chapter 2 [CE]: Definitions				
C202	Definitions deleted: Above-grade Wall Basement Wall	-	-	Definitions deleted.

	High-Efficacy Lamps			
-	-	C202	New definitions added: Air Curtain Approved Agency Boiler, Modulating Boiler System Bubble Point Circulating Hot Water System Climate Zone Computer Room Condensing Unit Continuous Insulation Daylight Responsive Control Fan Efficiency Grade General Purpose Electric Motor (Subtype I) General Purpose Electric Motor (Subtype II) Greenhouse Historic Building Liner System Low-sloped Roof Low-Voltage Dry-Type Distribution Transformer Occupant Sensor Control Opaque Doors Powered Roof/Wall Ventilators Radiant Heating System Refrigerant Dewpoint Refrigerated Warehouse Cooler Refrigerated Warehouse Freezer Refrigeration System, Low Temperature Refrigeration System, Medium Temperature Registered Design Professional Reroofing Roof Recover Roof Repair	New definitions.

			Roof Replacement Rooftop Monitor Saturated Condensing Temperature Small Electric Motor Time Switch Control Variable Refrigerant Flow System Walk-in Cooler Walk-in Freezer Water Heater	
C202	Definitions: Alteration	C202	Definitions: Alteration	Definition expanded to include retrofits.
C202	Definitions: Conditioned space	C202	Definitions: Conditioned space	Definition revised to be consistent with ASHRAE 90.1.
C202	Definitions: Daylight Zone	C202	Definitions: Daylight Zone	Definition revised as that portion of a building's interior floor area that is illuminated by natural light.
C202	Definitions: Skylight	C202	Definitions: Fenestration, Skylight	Adds tubular daylight devices to glazing materials in skylights.
C202	Definitions: Repair	C202	Definitions: Repair	Revised for consistency with the way the definition is defined in FBCB and FBCR.
C202	Definitions: Wall	C202	Definitions: Wall, above-grade	The definition of "wall" has been split into 2 separate definitions for clarity. An above-grade wall is a wall associated with the building thermal envelope that is more than 15 percent above grade and is on the exterior of the building. A below-grade wall is a wall associated with the basement or first story of the building that is part of the building thermal envelope, is not less than 85 percent below grade and is on the exterior of the building. Criteria describing mass, metal, steel-framed and wood-framed walls has been deleted.
		C202	Definitions: Wall, below-grade	
Chapter 3 [CE]: General Requirements				
C303.1.1	Building thermal envelope insulation	C303.1.1	Building thermal envelope insulation	Requires labelling R-value on packaging of insulated siding and listing of same on the certification.
C303.1.3	Fenestration product rating	C303.1.3	Fenestration product rating	Adds the ANSI/DASMA standard 105 as an alternative to NFRC 100 for determining U-

				factors of garage doors, where required.
-	-	C303.1.4.1	Insulated siding	New section requiring the thermal resistance (R-value) of insulated siding shall be determined in accordance with ASTM C1363.
Chapter 4 [CE]: Commercial energy Efficiency				
C401.1	Scope	C401.1	Scope	Adds “building sites” to the scope of this chapter.
C401.2.1	Application to existing buildings	-	-	Provisions relocated to Chapter 5 [CE].
-	-	C401.2.1	Application to replacement fenestration products	New section clarifying that whenever an entire new fenestration product or assembly replaces some or all of an existing fenestration product (typically in the remodeling or modernizing of an existing building), the new fenestration product must meet the U-factor and SHGC requirements of the fenestration table.
C402.1	General (building envelope requirements)	C402.1	General (building envelope requirements)	Section revised to clarify the use and application of the codes prescriptive building thermal envelope provisions. Revised to provide specific references for Building thermal envelope assemblies for buildings that are intended to comply with the code on a prescriptive basis.
-	-	C402.1.2	Equipment buildings	New section exempting equipment buildings from the building thermal envelope provisions for buildings meeting the criteria specified.
402.1.1	Insulation and fenestration criteria	C402.1.3	Insulation component R-value method	Section revised to clarify the use and application of the codes prescriptive building thermal envelope provisions. Clarifies that commercial buildings built to the prescriptive option under Section 402 must meet all the requirements of the insulation and fenestration sections, and not just the prescriptive tables.
Table C402.1.2	Opaque Thermal Envelope Assembly Requirements	Table C402.1.4	Opaque Thermal Envelope Assembly Maximum Requirements, U-Factor Method	Clarifies the use and application of the codes prescriptive building thermal envelope provisions. Modifies the thermal envelope requirements for above-deck roof insulation to be consistent with ASHRAE 90.1. Corrects U-factor errors for Mass Walls,

				Above Grade" for the Climate Zones 1, 2, 3, 4, 5, 6, and 7. New Note b added recognizing results of hot box laboratory tests conducted in accordance with ASTM C1363 for compliance with the code.
C402.1.2	U-factor alternative	C402.1.4	Assembly *U*-factor, *C*-factor or *F*-factor-based method	Revised to clarify that the code contains both insulation component R-value and assembly U-/C-/F-factor methods, either of which can be used to comply with the code's prescriptive building thermal envelope provisions.
-	-	C402.1.4.1	Thermal resistance of cold-formed steel walls	New section and table for calculating U-factors for steel stud wall assemblies.
		Table C402.1.4.1	Effective R-Values for Steel Stud Wall Assemblies	
Table C402.2	Opaque Thermal Envelope Requirements	Table C402.1.3	Opaque Thermal Envelope Insulation Component Minimum Requirements, R-Value Method	Clarifies the use and application of the codes prescriptive building thermal envelope provisions. Modifies the thermal envelope requirements for above-deck roof insulation to be consistent with ASHRAE 90.1. Deletes the requirement for R-5 thermal blocks for metal buildings. "Roll-up" and "sliding" doors have been changes to "nonswinging" doors.
-	-	C402.1.5	Component performance alternative	New section providing a component performance path for commercial buildings similar to the "Total UA Alternative" for residential buildings, but accounts for slab edge F-factors, basement wall C-Factors, and fenestration areas in excess of the code limits.
C402.2.1	Roof assembly	C402.2.2	Roof assembly	New Exception 2 added to provide clearer, more concise wording addressing tapered insulation systems in roof assemblies using the insulation entire above deck configuration.
Table C402.2.1.1	Minimum Roof Reflectance and Emittance Options	Table C402.3	Minimum Roof Reflectance and Emittance Options	Adds CRRC-1 Standard for aged solar reflectance tests and aged thermal emittance test. Criteria for initial solar reflectance has been deleted from the table.

C402.2.2	Classification of walls	C202	Wall, Above-Grade Wall, Below-Grade	Provisions reformatted and relocated as definitions.
C402.2.2.1	Above-grade walls			
C402.2.2.1	Below-grade walls			
C402.2.3	Thermal resistance of above-grade walls	C402.2.3	Thermal resistance of above-grade walls	Revised to add a heat capacity provision to the mass wall description.
C402.2.4	Thermal resistance of below-grade walls	-	-	Criteria relocated to Sections C402.1.3 and C402.1.4.
C402.2.5	Floors over outdoor air or unconditioned space	C402.2.4	Floors	Criteria for mass floors relocated as Notes d and e of Tables C402.1.3 and C402.1.4 respectively. New language requires floor framing cavity insulation or structural slab insulation shall be installed to maintain permanent contact with the underside of the subfloor decking or structural slabs. Two exceptions to the requirement for permanent contact have been added.
C402.2.6	Slabs on grade	C402.2.5	Slabs on grade perimeter insulation	Revised to clarify this section applies only to perimeter insulation and only the R-value method.
C402.2.7	Opaque doors	C402.2.4	Doors	Revised to clarify that when doors are considered part of the opaque wall and subject to thermal requirements for the wall, and when doors are fenestration and subject to those requirements.
C402.2.8	Insulation of radiant heating systems	C402.2.6	Insulation of radiant heating systems	Revised to clarify that panels installed in building thermal envelope assemblies must be insulated in accordance with the requirements of the assembly in which they are installed. It also requires insulation of R-3.5 on the non-radiant surface when installed in interior assemblies and refer to the other applicable sections of the code for heated slab insulation.
-	-	C402.3.1	Aged solar reflectance	New section providing criteria for determining the aged solar reflectance where it is not available.
C402.3	Fenestration (prescriptive)	C402.3	Fenestration (prescriptive)	Terminology clarified.
Table C402.3	Building Envelope Requirements: Fenestration	Table C402.4	Building Envelope Fenestration Maximum U-Factor and SHGC Requirements	Revised to clarify the table values are maximum. Criteria regarding orientation has been added to the table based on criteria in

				Table C402.3.3.1.
C402.3.1.1	Increased vertical fenestration area with daylighting controls	C402.4.1.1	Increased vertical fenestration area with daylight responsive controls	Revised to increase incentives for daylight zones
C402.3.2.1	Lighting controls in daylight zones under skylights	C402.4.1.2	Increased skylight area with daylight responsive controls.	Exceptions deleted.
C402.3.3.1	SHGC adjustment	-	-	Section and table deleted and provisions incorporated in Table C402.4.
Table C402.3.3.1	SHGC adjustment multipliers			
C402.3.3.5	Dynamic glazing	C402.4.3.4	Dynamic glazing	Revised to allow dynamic glazing to satisfy the SHGC requirements provided the ratio of upper to lower SHGC is 2.4 or greater and is automatically controlled to modulate the amount of solar gain into the space.
C402.4	Air leakage	C402.5	Air leakage	Criteria in Section C402.4.1.2.3 is relocated to Section R402.5. Provisions have been revised to clarify language pertaining to the sealing of penetrations in the building thermal envelope associated with continuous air barriers so that all three compliance options associated with air barriers are equivalent.
C402.4.1.2.3	Building test			
C402.4.1	Air barriers	C402.5.1	Air barriers	Exception has been revised to only exempt air barriers in buildings located in Climate Zone 2B.
C402.4.1.1	Air barrier construction	C402.5.1.1	Air barrier construction	Provisions for penetrations of air barriers have been relocated as Item 3 of Section C402.5.1.1. Requires sealing of concealed fire sprinklers, where required, to be in a manner that is recommended by the manufacturer. Caulking or other adhesive sealants is prohibited from being used to fill voids between fire sprinkler cover plates and walls or ceilings.
C402.4.2	Air barrier penetrations			
C402.4.1.2.1	Materials	C402.5.1.2.1	Materials	Adds solid or hollow masonry constructed of clay or shale masonry units as an air barrier.
C402.4.1.2.2	Assemblies	C402.5.1.2.2	Assemblies	Adds masonry walls constructed of clay or shale masonry units with a nominal width of 4 inches as deemed to comply with this section.

C402.4.3	Maximum Infiltration Rate for Fenestration Assemblies	C402.5.2	Maximum Air Leakage Rate for Fenestration Assemblies	Adds high speed doors to the table with a maximum air leakage rate of 1.3 cfm/ft^2.
-	-	C402.5.3	Rooms containing fuel-burning appliances	New section requiring open combustion appliances to be outside conditioned space or in a room isolated from conditioned space and ducted to the outside.
C402.4.4	Doors and access openings to shafts, chutes, stairways, and elevator lobbies	C402.5.4	Doors and access openings to shafts, chutes, stairways, and elevator lobbies	Revised to clarify that the components covered in the section on doors and access openings to shafts, chutes, stairways, and elevator lobbies are subject to air leakage provisions as components of the building thermal envelope, and provides a distinction between these doors and other doors that are already covered within the scope of fenestration assemblies
C402.4.5	Stairway and shaft vents	C403.2.4.3	Shuttoff dampers	Provisions associated with leakage rates, sealing, dampers, etc. of mechanical system openings, vents, grills, etc. for air intakes, exhaust openings, stairways and shafts have consolidated in new Section C403.2.4.3. Requires dampers to be labeled by an approved agency.
C402.4.5.1	Outdoor intakes and exhaust			
C402.4.7	Vestibules	C402.5.7	Vestibules	Revised to allow an air curtain with a velocity of not less than 6.56 fps and tested in accordance with ANSI/AMCA 220 to be used as alternative to a vestibule.
C402.4.8	Recessed lighting	C402.5.8	Recessed lighting	Revised to clarify that gasketing or caulking recessed fixtures is not required when not installed in the thermal envelope.
C403.1	General (building mechanical systems)	C403.1	General (building mechanical systems)	New language requires walk-in coolers, walk-in freezers, refrigerated warehouse coolers and refrigerated warehouse freezers shall comply with Section C403.2.15 or C403.2.16.
C403.2.2	Equipment and system sizing	C403.2.2	Equipment sizing	Revised to clarify that the provisions apply to the output capacity of the equipment that provides heating or cooling functions.
Tables C403.2.3(1) through	Efficiency requirements	Tables C403.2.3(1) through	Efficiency requirements	Tables updated to match the increased equipment efficiency requirements found in ASHRAE 90.1. New table added specifying

C403.2.3(10)		C403.2.3(11)		minimum efficiency requirements for air conditioners and condensing units serving computer rooms.
C403.2.3.1	Water-cooled centrifugal chilling packages	C403.2.3.1	Water-cooled centrifugal chilling packages	Revised for consistency with ASHRAE 90.1
C403.2.3.2	Positive displacement (air- and water-cooled) chilling packages	C403.2.3.2	Positive displacement (air- and water-cooled) chilling packages	Revised for consistency with ASHRAE 90.1
C403.2.4.2	Setpoint overlap restriction	C403.2.4.1.2	Deadband	Section title changed to deadband.
-	-	C403.2.4.1.3	Setpoint overlap restriction	New section addressing wherein a zone has a separate heating and a separate cooling system and a separate thermostat for each one.
-	-	C403.2.4.4	Zone isolation	New section to providing the ability to create isolation areas within zones under certain circumstances in order to allow for additional reductions in energy use and operating costs. Criteria is consistent with ASHRAE 90.1.
-	-	C403.2.4.6	Freeze protection system controls	New section added for freeze protection controls based on ASHRAE 90.1.
-	-	C403.2.4.7	Economizer fault detection and diagnostics (FDD)	New section requiring air-cooled unitary direct-expansion units and variable refrigerant flow units that are equipped with an economizer to be equipped with a fault detection and diagnostics system meeting the criteria specified.
-	-	C403.2.5	Hot water boiler outdoor temperature setback control	Adds requirement for outdoor setback control for hot water boilers that controls the boiler water temperature based on the outdoor temperature.
-	-	C403.2.6.2	Enclosed parking garage ventilation controls.	New section providing requirements for ventilation optimization control for enclosed parking garage ventilation systems. Consistent with ASHRAE 90.1.
C403.2.6	Energy recovery ventilation system	C403.2.7	Energy recovery ventilation system	Two new exceptions added to the required energy recovery ventilation system: 10. Systems exhausting toxic, flammable, paint, or corrosive fumes or dust; and 11. Commercial kitchen hoods used for collecting and removing grease vapors and

				smoke.
Table C403.2.6	Energy Recovery Requirement	Table C403.2.7(1)	Energy Recovery Requirement (Ventilation Systems Operating Less than 8,000 Hours Per Year)	Reduces the system size and outdoor air thresholds at which ERV is required. Relaxed in some climate zones. Adds new thresholds for systems that operate more than 8000 hours per year.
		Table C403.2.7(2)	Energy Recovery Requirement (Ventilation Systems Operating Not Less than 8,000 Hours Per Year)	
-	-	C403.2.8	Kitchen exhaust systems	New provisions for kitchen exhaust systems intended to prohibit "short-circuit" hoods. Provisions are consistent with ASHRAE 90.1.
		Table C403.2.8	Maximum Net Exhaust Flow Rate, CFM Per Linear Foot of Hood Length	
Table C403.2.8	Minimum Pipe Insulation Thickness	Table C403.2.10	Minimum Pipe Insulation Thickness	The mean rating temperature for evaluating the thermal properties of insulation on piping serving fluids below 40°F has been changed from 75°F to 50°F.
Table C403.2.10.1(2)	Fan Power Limitation Pressure Drop Adjustment	Table C403.2.12.1(2)	Fan Power Limitation Pressure Drop Adjustment	Adds a requirement that the sound attenuation credit is only available if there are background noise criteria requirements. Adds a deduction for systems without any central heating or cooling device. Adds a deduction for systems with electric resistance heating.
C403.2.10.2	Motor nameplate horsepower.	C403.2.12.2	Motor nameplate horsepower.	New exception to the required fan horsepower being indicated on the construction documents for systems complying with Section C403.2.12.1 fan system motor nameplate hp (Option 1).
-	-	C403.2.12.3	Fan efficiency	New provisions for fan efficiency requiring fans to have a fan efficiency grade (FEG) of not less than 67 when determined in accordance with AMCA 205. Exceptions provided for the specified conditions.
-	-	C403.2.14	Refrigeration equipment performance	Adds efficiency requirements for commercial refrigerators, freezers and refrigeration equipment. Based on ASHRAE 90.1.
		Table C403.2.14(1)	Minimum Efficiency Requirements: Commercial Refrigeration	
		Table C403.2.14(2)	Minimum Efficiency Requirements: Commercial Refrigerators and Freezers	
-	-	C403.2.15	Walk-in coolers, walk-in freezers, refrigerated warehouse coolers and	New section applicable to refrigerated warehouse coolers, refrigerated warehouse

			refrigerated warehouse freezers	freezers, and walk-in coolers and freezers that are not site assembled.
-	-	C403.2.16	Walk-in coolers and walk-in freezers	New section addressing energy efficiency requirements for walk-in coolers and walk-in freezers that are site-assembled.
-	-	C403.2.17	Refrigerated display cases	New section addressing energy efficiency requirements for refrigerated display cases that are site-assembled or site-constructed.
C403.3 through C403.3.2	Economizers (prescriptive)	C403.3 through C403.3.4.2	Economizers (prescriptive)	Sections have undergone significant revision and reorganization. Notable changes include: Increases cooling capacity threshold for air economizer to be required in DX cooling systems from 33,000 Btu/h to 54,000 Btu/h. Enhances the requirements for integrated economizer control and defines DX unit capacity staging requirements. Incorporates new provisions and changes for consistency with ASHRAE 90.1 Improves cooling efficiency by requiring a water-side economizer for non-fan systems (e.g. radiant cooling, passive chilled beam systems), and for systems with small individual fan systems served by chilled water systems at least 50 tons in size. Requires economizer intake dampers to be labeled, to be low-leakage, and that the low-leakage ratings are certified to ensure the design intent and energy savings. New exception permits the required air or water economizer to be eliminated if the minimum code required cooling efficiency of the HVAC unit rated with an IPLV, IEER, or SEER is increased by at least 17%. If the

				HVAC unit is only rated with a full-load metric like EER cooling then it must be increased by at least 17%.
C403.4 through C403.4.3.5	Complex HVAC systems and equipment (Prescriptive).	C403.4 through C403.4.3.4	Hydronic and multiple-zone HVAC systems controls and equipment	Scope of section changed to apply to hydronic and multiple-zone HVAC systems controls and equipment. Section reorganized as part of the changes to Section C403.3 to correct conflicts and provide clarity.
-	-	C403.4.1.1	Fan airflow control	Extends the requirements for fan speed control for unitary direct expansion systems based on cooling capacity and enhances the requirements for integrated economizer control. New table establishes effective dates for fan control based on cooling system type, fan motor size, and mechanical cooling capacity.
		Table C403.4.1.1	Effective Dates for Fan Control	
C403.4.2.1	Static pressure sensor location	C403.4.1.2	Static pressure sensor location	Sections revised for consistency with ASHRAE 90.1. Clarifies the location of static pressure sensors in relationship to VAV fans and systems with direct digital controls.
C403.4.2.2	Set points for direct digital control	C403.4.1.3	Set points for direct digital control	
C403.4.3.4	Part-load controls	C403.4.2.4	Part-load controls	Increases capacity threshold for hydronic system part-load controls and extends the control types.
-	-	C403.4.2.5	Boiler turndown	New provisions establishing minimum turndown for boilers and boiler plants with design input power of at least 1,000,000 Btu/h.
		Table C403.4.2.5	Boiler turndown	
-	-	C403.4.3.1 through C403.4.3.4	Heat rejection equipment	Enhances standards for cooling tower controls based on industry developed standards. New sections modifying heat rejection equipment (cooling tower) requirements to require that variable speed drive controlled fans operate all fans at the same speed instead of sequencing them, and require

				that open-circuit towers with multiple cells operate all cells in parallel down to 50% of design flow.
C403.4.5	Requirements for complex mechanical systems serving multiple zones	C403.4.4	Requirements for complex mechanical systems serving multiple zones	Provides for optimization of multi-zones systems and gives the code official the authority to accept systems which are shown to be more energy efficient. Removes exception for VAV turndown for zones with special pressurization requirements.
-	-	C403.4.4.4	Fractional hp fan motors	New section requiring fractional horsepower motors ≥1/12 hp to be EC motors or have a minimum 70% efficiency in accordance with DOE 10 CFR 431. Also requires adjustable speed or other method to balance airflow.
-	-	C403.4.4.6	Multiple-zone VAV system ventilation optimization control.	New section requiring multi-zone VAV systems to have controls that optimize ventilation.
C403.4.7	Hot gas bypass limitation	C403.4.6	Hot gas bypass limitation	Exception for unitary packaged systems with cooling capacities not greater than 90,000 Btu/h has been deleted.
-	-	C403.5	Refrigeration systems	New section providing construction and efficiency standards for walk-in coolers and freezers as well as similar refrigeration equipment and systems consistent with ASHRAE 90.1 and new federal standards.
		C403.5.1	Condensers serving refrigeration systems	
		C403.5.2	Compressor systems	
C404.2	Service water-heating equipment performance efficiency	C404.2	Service water-heating equipment performance efficiency	Revised to require water-heating equipment also intended to be used to provide space heating to meet the applicable provisions of Table C404.2.
Table C404.2	Minimum Performance of Water Heating Equipment	Table C404.2	Minimum Performance of Water Heating Equipment	Table revised to reflect current Federal energy regulations for electric water heaters, to match the requirements of the newest edition ASHRAE 146 heat pump pool heater standard and to increase the minimum efficiency for certain oil storage water heaters from 78 to 80 percent for consistency with ASHRAE 90.1.
-	-	C404.2.1	High input-rated service water-	New section adding requirements for the

			heating systems	use of gas condensing service water heaters in newly constructed buildings.
C404.3	Temperature controls	-	-	Section deleted.
C404.5	Pipe insulation	C404.4	Insulation of piping	Revised to reference to existing insulation provisions in the FBCEC-Commercial chapter that specify the wall thickness of pipe insulation for different diameter piping. Clarifies that insulation does not need to be continuous when it passes throughvframing members. Exceptions provide providing a list of exmptions specific to heated water piping.
-	-	C404.5	Efficient heated water supply piping	New sections addressing the installation of hot water piping so that the delivery is more efficient. Specifies limits on pipe length and pipe volume.
		C404.5.1	Maximum allowable pipe length method	
		C404.5.2	Maximum allowable pipe volume method	
		C404.5.2.1	Water volume determination	
		Table C404.5.1	Piping Volume and Maximum Piping Lengths	
-	-	C404.6	Heated-water circulating and temperature maintenance systems	New sections clarifying the installation requirements for heated water circulation systems and for heat trace systems for consistency with FBCP, if they are installed. Adds temperature maintenance and demand control for circulation pump.
		C404.6.1	Circulation systems	
		C404.6.2	Heat trace systems	
		C404.6.3	Controls for hot water storage	
-	-	C404.7	Demand recirculation controls	New section clarifying the requirements for installing circulation pumps in applications that use a cold water supply pipe to circulate the water back to the water heater.
-	-	C404.8	Drain water heat recovery units	New section intended to allow credit for efficiency improvements due to the use of drain water heat recovery devices in the performance calculations.
C404.7 through C404.7.3	Pools and inground permanently installed spas (Mandatory)	C404.9 through C404.9.3	Energy consumption of pools and permanent spas (Mandatory)	Coordinates energy requirements for pools and spas with the ISPSC. Clarifies the provisions for on-off switches for heaters.

				Provides for clarity that the cover requirements are only for outdoor pools. Provides for options when it comes to pool and spa covers to ensure one can comply with more intricately designed pools and spas (shape, size/infinity pools/etc.).
-	-	C404.10	Energy consumption of portable spas (Mandatory)	New section requiring the energy consumption of electric-powered portable spas to be in accordance with the requirements of APSP 14.
-	-	C404.11	Service water heating systems commissioning and completion requirements	New section requiring service water heating systems, swimming pool water heating systems, spa water heating systems and the controls for those systems shall be commissioned and completed in accordance with Section C408.2.
C405.1	General (Mandatory) (electrical power and lighting systems)	C405.1	General (Mandatory) (electrical power and lighting systems)	Requires walk-in coolers, walk-in freezers, refrigerated warehouse coolers and refrigerated warehouse freezers shall comply with Section C403.2.15 or C403.2.16. Removes connection of ballasts from the scope of this section. Exception revised to require efficiency standards for lighting within dwelling units in multi-family buildings to comply with the lighting requirements in the residential provisions. Clarifies exterior lighting is regulated by limiting lighting power.
C405.2 through C405.2.4	Lighting controls	C405.2 through C405.2.5	Lighting controls	Sections pertaining to lighting controls have been completely reorganized into a more logical format. Adds lounge, locker room, and warehouse spaces to the list for occupancy sensor

				controls. Modifies control functions and threshold for both sidelight and toplight daylight controls. Requires automatic light controls for hotel and motel sleeping units. Exterior lighting controls are required rather than just control capability. Bi-level controls have been added for general all-night applications such as parking lots to reduce lighting when not needed. Control of facade and landscaping lighting not needed after midnight has been added. Clarifies the provisions for daylight zones and appropriate controls for each type of daylight space for alignment with ASHRAE 90.1.
C405.5.1	Total connected lighting power	C405.4.1	Total connected lighting power	Criteria in the 4 subsections have been replaced with an equation for simplicity. Modifies sleeping unit exception to lighting power limits by requiring they meet R404.1. Adds mirror lighting in dressing rooms to the exceptions.
C405.5.1.1	Screw lamp holders			
C405.5.1.2	Low-voltage lighting			
C405.5.1.3	Other luminaires			
C405.5.1.4	Line-voltage and plug-in busway			
Table C405.5.2(1)	Interior Lighting Power Allowances: Building Area Method	Table C405.4.2(1)	Interior Lighting Power Allowances: Building Area Method	The lighting power allowances have been adjusted to values and methodology for determining allowances that will lead to high energy-efficiency while still allowing high-quality lighting and sufficient light levels. Provides consistency with ASHRAE 90.1
Table C405.5.2(2)	Interior Lighting Power Allowances: Space-by-Space Method	Table C405.4.2(2)	Interior Lighting Power Allowances: Space-by-Space Method	
-	-	C405.4.2.2.1	Additional lighting power	New section created by relocating Note a to Table C405.5.2(2) to a new stand-alone section.
C405.6	Exterior lighting (Mandatory)	C405.5	Exterior lighting (Mandatory)	Exemption for low-voltage landscape lighting has been removed.

C405.6.1	Exterior building grounds lighting	-	-	Section deleted.
Table C405.6.2(1)	Exterior Lighting Zones	Table C405.5.1(1)	Exterior Lighting Zones	Clarifies Zone 3 includes all areas that are not classified as lighting Zone 1, 2, or 4.
Table C405.6.2(2)	Individual Lighting Power Allowances for Building Exteriors	Table C405.5.1(2)	Individual Lighting Power Allowances for Building Exteriors	Clarifies the calculation of façade lighting.
C405.7.3	Voltage drop	C405.6.3	Voltage drop	Revised to require conductors for feeders and branch circuits combined shall be sized for maximum of 5% voltage drop total. Consistent with ASHRAE 90.1
C405.7.3.1	Feeders and customer owned service conductors			
C405.7.3.2	Branch circuits			
-	-	C405.7	Electrical transformers (Mandatory)	New section and table added addressing efficiency levels for low-voltage dry-type distribution transformers for consistency with ASHRAE 90.1.
		Table C405.7	Minimum Efficiency Levels for 10 CFR 431 Low-Voltage Dry-Type Distribution Transformers	
-	-	C405.8	Electrical Motors	New section and tables added addressing electrical motor efficiencies for consistency with ASHRAE 90.1.
		Tables C405.8(1) through C405.8(4)	Efficiencies for various types of electrical motors	
-	-	C405.9	Vertical and horizontal transportation systems and equipment	New sections added to reduce the amount of energy used by elevators and escalators. Consistent with ASHRAE 90.1.
		C405.9.1	Elevator cabs	
		C405.9.2	Escalators and moving walks	
		C405.9.2.1	Regenerative drive	
C406	Additional Efficiency Package Options	C406	Additional Efficiency Package Options	Section completely revised to increases the number of optional packages in the code from three to six. The equipment tables have been removed and replaced with a requirement for a 10% increase in efficiency over the base requirements. The LPD tables have been removed and replaced with a requirement for a 10% increase in efficiency over the base requirements for whole building or space-by-space.
Table 407.5.1(1)	Specifications for the Standard Reference and Proposed Designs	Table 407.5.1(1)	Specifications for the Standard Reference and Proposed Designs	Table modified to correct and inconsistency related to skylights and vertical fenestrations. Adds efficiency improvements due to the use of drain water heat recovery devices.
-	-	C407.6.3	Exceptional calculation methods	New section allowing credit for energy-

				efficiency measures that the hourly energy analysis software is not capable of directly modeling.
C408.2	Mechanical systems commissioning and completion requirements	C408.2	Mechanical systems and service water-heating systems commissioning and completion requirements	Expands the HVAC commissioning scope to also include the building service water heating systems. Editorial revisions for clarity.
C408.2.1	Commissioning plan	C408.2.1	Commissioning plan	Editorial revision to remove “at a minimum” from Item 4.
C408.2.3.2	Controls	C408.2.3.2	Controls	Adds building service water heating systems to HVAC commissioning scope.
C408.2.4	Preliminary commissioning report	C408.2.4	Preliminary commissioning report	Requires the report to be organized with mechanical and service hot water findings in separate sections to allow independent review.
C408.2.4.1	Acceptance of report	C408.2.4.1	Acceptance of report	Revised so that buildings cannot be considered for a final inspection until the owner indicates in writing they have the required commissioning report.
C408.2.5.2	Manuals	C408.2.5.2	Manuals	Adds service hot water to the scope of this section. Adds additional language for the documentation, maintenance, and inspection of lighting equipment and controls.
C408.2.5.4	Final commissioning report	C408.2.5.4	Final commissioning report	Requires the report to be organized with mechanical and service hot water findings in separate sections to allow independent review.
C408.3.1	Functional testing	C408.3.1	Functional testing	Section revised to provides specific functional testing requirements for the specific types of lighting controls that are addressed in Section C405. Provides specific, step-by-step instructions testing occupancy sensors, daylighting controls and automatic time switches to ensure that they are operating correctly before system acceptance. Requires that the Registered Design Professional perform to testing requirement to be consistent with the Section C408 commissioning requirements.
		C408.3.1.1	Occupant sensor controls	
		C408.3.1.2	Time-switch controls	
		C408.3.1.3	Daylight responsive controls	
		C408.3.2	Documentation requirements	

Chapter 5 [CE]: Existing Buildings				
-	-	Chapter 5	Existing buildings	Provisions pertaining to existing buildings that previously were located primarily in Chapter 1 have been relocated to a new Chapter 5. Language has been revised for consistency with the FBCEB. New definition of Historic Building has been added. New language clarifies that the provisions of this code do not apply to Historic Buildings where that provision would threaten, degrade or destroy the historic form, fabric or function of the building. New language added stating Surface-applied window film installed on existing single pane fenestration assemblies to reduce solar heat gain provided the code does not require the glazing or fenestration assembly to be replaced. Does not apply to additions. New exception for alterations and repairs stating Air barriers shall not be required for roof recover and roof replacement where the alterations or renovations to the building do not include alterations, renovations or repairs to the remainder of the building envelope.
Chapter 1 [RE]: Scope and Administration				
R101.4.1	Existing buildings	-	-	Provisions for existing buildings have been relocated to new Chapter 5 [RE]. See discussion on Chapter 5 [RE].
R101.4.2	Historic buildings			
R101.4.3	Additions, alterations, renovations or repairs			
R101.4.4	Change in occupancy or use			
R101.4.5	Change in space conditioning			
R101.4.7	Building systems and components	R501.7	Building systems and components	Provisions relocated to Chapter 5 [RE].
R101.4.7.1	Existing equipment efficiencies	R501.7.1	Existing equipment efficiencies	Provisions relocated to Chapter 5 [RE].

R101.5.2	Low-energy buildings	R402.1	General	Provision relocated as an exception to Section R402.1.
R102	Alternate Materials-Method of Construction, Design or Insulating Systems	R102	Alternate Materials, Design and Method of Construction and Equipment	Revises language requiring the code to apply to historic buildings if no “compromise to the historic nature and function of the building” occurs.
R103.1	General (construction documents)	R103.1	General (construction documents)	Adds “technical reports” as acceptable data for submittal with a permit application.
-	-	R103.1.1.2.1	Reporting to entity representing the Florida Building Commission	New section requiring a reporting form to be submitted to the local building department by the owner or owner’s agent with the submittal certifying compliance with this code.
-	-	R103.1.1.2.1.1	Reporting schedule	New section requiring the local building official to forward the reporting section of the proper form to the entity representing the Florida Building Commission on a quarterly basis.
R103.1	Information on construction documents	R103.2	Information on construction documents	Deletes text relating to commercial building components.
-	-	R103.2.1	Building thermal envelope depiction	Requires the building’s thermal envelope to be represented on construction documents.
R103.3	Examination of documents	R103.3	Examination of documents	Section revised to permit the code official to utilize a registered design professional, or other approved entity not affiliated with the building design or construction, in conducting the review of the plans and specifications for compliance with the code.
R104	Inspections	R104	Inspections	Revises the inspection requirements to enhance the ability to ensure compliance with the code and improve the usability of the code.
R106.2	Conflicting requirements	-	-	Section deleted.
Chapter 2 [RE]: Definitions				
R202	Definitions: Alteration	R202	Definitions: Alteration	Adds “retrofit” and other terms to definition of “alteration.”
-	-	R202	Definitions: Approved agency	New definition added.
-	-	R202	Definitions: Circulating Hot Water System	New definition added.
-	-	R202	Definitions: Climate zone	New definition added.

R202	Definitions: Conditioned space	R202	Definitions: Conditioned Space	Definition revised to be consistent with ASHRAE 90.1.
-	-	R202	Definitions: Continuous Insulation	New definition.
R202	Definitions: Entrance door	-	-	Definition deleted.
-	-	R202	Definitions: ERI Reference Design	New definition.
-	-	R202	Definitions: Historic Building	New definition.
-	-	R202	Definitions: Insulated Siding	New definition.
-	-	R202	Definitions: Rated Design	New definition.
R202	Definitions: Repair	R202	Definitions: Repair	Revised for consistency with the way the definition is defined in FBCB and FBCR.
-	-	R202	Definitions: Reroofing	New definition.
-	-	R202	Definitions: Roof Recover	New definition.
-	-	R202	Definitions: Roof Repair	New definition.
-	-	R202	Definitions: Roof Replacement	New definition.
R202	Definitions: Skylight	R202	Definitions: Skylight	Adds tubular daylight devices to glazing materials in skylights.
-	-	R202	Definitions: Vertical Fenestration	New definition.
Chapter 3 [RE]: General Requirements				
R303.1.1.2	Building thermal insulation markers	R303.1.1.2	Building thermal insulation markers	Requires labelling R-value on packaging of insulated siding and listing of same on the certification.
R303.1.3	Fenestration product rating	R303.1.3	Fenestration product rating	Adds the ANSI/DASMA standard 105 as an alternative to NFRC 100 for determining U-factors of garage doors, where required.
Chapter 4 [RE]: Residential Energy Efficiency				
R401.2	Compliance	R401.2	Compliance	Revised to clarify that the code's mandatory requirements are required to be met in all compliance paths.
-	-	R402.1.1	Vapor retarder	New section requiring compliance with the vapor retarder requirements in the FBCR and FBCB.
Table R402.1.1	Insulation and Fenestration Requirements by Component	Table R402.1.2	Insulation and Fenestration Requirements by Component	Clarifies footnote h text by rewording it and moving it to new section R402.2.7. Table and footnote j have been revised to require no maximum U-factor for impact rated fenestration in Climate Zone 1. Modifies footnote h to allow combined

				sheathing/siding.
R402.1.2	R-value computation	R402.1.3	R-value computation	Adds use of term “continuous insulation” instead of “insulating sheathing.” Subtracts out R-0.6 for insulating siding from R-value table to prevent double counting of siding.
Table R402.1.3	Equivalent U-factors	Table R402.1.3	Equivalent U-factors	Slightly increases frame wall U-factor in climate zones 1 and 2. The R-value table remains unchanged. Slightly increases frame wall U-factor in climate zones 1-5. The R-value table remains unchanged.
R402.2.1	Ceilings with attic spaces	R402.2.1	Ceilings with attic spaces	Clarifies decreased ceiling insulation allowance for ceilings with attic spaces only.
R402.2.4	Access hatches and doors	R402.2.4	Access hatches and doors	Clarifies that vertical doors are not “access doors” and are permitted to meet the fenestration requirements of Table 402.1.2.
-	-	R402.2.7	Walls with partial structural sheathing	New section created from rewording of Note h in Table R402.1.2
R402.2.7	Floors	R402.2.8	Floors	Revised to permit the floor cavity insulation to not be in contact with the underside of the subfloor decking if it is in contact with the topside of sheathing or continuous insulation installed on the bottom side of floor framing.
R402.3.2	Glazed fenestration SHGC	R402.3.2	Glazed fenestration SHGC	Revised to allow dynamic glazing to satisfy the SHGC requirements provided the ratio of upper to lower SHGC is 2.4 or greater and is automatically controlled to modulate the amount of solar gain into the space.
R402.3.5	Sunroom U-factor	R402.3.5	Sunroom fenestration	The exception has been expanded to include Climate Zones 2 and 3.
R402.3.6	Replacement fenestration	-	-	Provisions relocated to Chapter 5 [RE].
R402.4	Air leakage	R402.4	Air leakage	New exception added permitting Group R-2 buildings tested as a whole in accordance with Section C405.5.3.4, as is permitted for commercial buildings.
Table R402.4.1.1	Air Barrier and Insulation Installation	Table R402.4.1.1	Air Barrier and Insulation Installation	Table reorganized by adding an additional column and separating “air barrier criteria” from “insulation installation criteria,” for clarity.

				Exempts fire sprinklers from air sealing requirements. Specifies that air sealing shall be provided in fire separation assemblies. Floor component has been revised for correlation with the changes to Section R402.2.8. Clarifies requirements for wall corner and headers to have insulation that has at least R-3 per inch, and clarifies that it is the cavities in such components that require the insulation. Allows a combination of cavity and continuous insulation to meet the floor R-value requirement. Fireplace criteria deleted from table because of changes to Section R402.4.2.
R402.4.1.2	Testing	R402.4.1.2	Testing	Blower door testing requirements will be applicable at the effective date of the 6th Edition (2014) FBCEC. Requires an air leakage rate of not less than 7 air changes per hour. Requires testing to be conducted in accordance with ANSI/RESNET/ICC 380. New exception to testing added for additions, alterations, renovations, or repairs, of the building thermal envelope of existing buildings in which the new construction is less than 85% of the building thermal envelope.
R402.4.2	Fireplaces	R402.4.2	Fireplaces	Clarifies language relating to fireplace sealing/door requirements.
-	-	R402.4.4	Rooms containing fuel-burning appliances.	New section requiring open combustion appliances to be outside conditioned space

				or in a room isolated from conditioned space and ducted to the outside.
R403.1.2	Programmable thermostat	R403.1.2	Programmable thermostat	Adds requirements for the thermostat to be pre-programmed by the manufacturer. Makes the programmable thermostat requirement apply to any heating/cooling system.
-	-	R403.2	Hot water boiler outdoor temperature setback	Adds requirement for outdoor setback control for hot water boilers that controls the boiler water temperature based on the outdoor temperature.
R403.3 through R403.2.3	Ducts	R403.3 through R403.3.5	Ducts	Increases insulation requirements for return ducts in attics from R-6 to R-8. Makes the maximum allowable duct leakage rates prescriptive, allowing performance path trade-offs.
R403.4.1	Circulating hot water systems	R403.5.1 through R403.5.1.2	Heated water circulation and temperature maintenance systems (Mandatory)	Section revised to add requirements for demand-activated control on hot water circulation systems and heat trace systems. Makes FBCED, FBCR, and FBCP consistent and clarifies requirements for these systems.
-	-	R403.5.2	Demand recirculation systems	New section adds demand control requirements for recirculating systems that use a cold water supply pipe to return water to the tank.
R403.4.2	Hot water pipe insulation	R403.5.3	Hot water pipe insulation	Deletes requirement for domestic hot water (DHW) pipe insulation to kitchen and the generic requirement on long/large-diameter pipes. However, adds DHW pipe insulation for 3/4-inch pipes.
Table R403.4.2	Maximum run length			
-	-	R403.5.4	Drain water heat recovery units	New section requiring drain water heat recovery systems to comply with CSA B55.2 and be tested in accordance with CSA B55.1.
R403.5	Mechanical ventilation	R403.6	Mechanical ventilation	Adds natural, infiltration, or mechanical as approved means of ventilation.
R403.6.1	Equipment sizing	R403.7.1	Equipment sizing	Requires heating, ventilation, and air-

				conditioning equipment to meet Federal efficiency standards.
R403.9 through R403.9.3	Swimming pools, inground spas and portable spas	R403.9 through R403.12	Pools and spas energy consumption	Changes wording to use defined terms, as found in Chapter 2 of the ISPSC. Clarifications added regarding on-off switches for heaters. Revises verbiage for time switch requirements for consistency. Provides for clarity that the cover requirements are only for outdoor pools. Provides for options when it comes to pool and spa covers to ensure one can comply with more intricately designed pools and spas (shape, size/infinity pools/etc.). Provides for a new subsection to address portable residential spas, requiring their compliance with the APSP-14 energy standard, consistent with the ISPSC.
405.4.2	Compliance report	R405.4.2	Compliance report	Section revised to clearly outline a process by which the proposed design is submitted, inspections take place, and additional analysis is preformed to ensure that the proposed design was achieved or bettered for the purposes of compliance.
Table R405.5.2(1)	Specifications for the Standard Reference and Proposed Designs	Table R405.5.2(1)	Specifications for the Standard Reference and Proposed Designs	Corrects missing standard reference design specifications for thermal distribution systems. Adjusts Table R405.5.2(1) (the performance path) terminology for doors and fenestration.
Table R405.5.2(2)	Default Distribution System Efficiencies for Proposed Designs	Table R405.5.2(2)	Default Distribution System Efficiencies for Proposed Designs	Deletes the default distribution factor for distribution system components located in unconditioned spaces for forced air systems.
405.7.4	Installation criteria for homes using the cross ventilation option	405.7.4	Installation criteria for homes using the cross ventilation option	Revised to include operable skylights in addition to windows.
R405.7.6	Installation criteria for homes using the ceiling fan option	R405.7.6	Installation criteria for homes using the ceiling fan option	Revised to require ceiling fans to be ENERGY STAR certified.
R406.6.1	Compliance software tools (ERI Compliance Alternative)	R406.6.1	Compliance software tools (ERI Compliance Alternative)	Revised to require computer software utilized for demonstration of code

				compliance to be approved by the Florida Building Commission in accordance with requirements of this code.
Chapter 5 [RE]: Existing Buildings				
-	-	Chapter 5	Existing buildings	Provisions pertaining to existing buildings that previously were located primarily in Chapter 1 have been relocated to a new Chapter 5. Language has been revised for consistency with the FBCEB. New definition of Historic Building has been added. New language clarifies that the provisions of this code do not apply to Historic Buildings where that provision would threaten, degrade or destroy the historic form, fabric or function of the building. New language added stating Surface-applied window film installed on existing single pane fenestration assemblies to reduce solar heat gain provided the code does not require the glazing or fenestration assembly to be replaced. Roof recovers are not required to comply with the requirements for new construction provided the energy use of the building is not increased.
Appendix RA: Recommended Procedure for Worst-Case Testing of Atmospheric Venting Systems Under R402.4 or R405 Conditions ≤ 5 ACH_{50}				
-	-	Appendix RA	Combustion venting systems	New informative appendix providing requirements for testing of combustion venting systems.
Appendix RB: Solar-Ready Provisions – Detached One- and Two-Family Dwellings, Multiple Single-Family Dwellings (Townhouses)				
-	-	Appendix RB	Solar ready provisions	New nonmandatory appendix added providing provisions for one- and two-family dwellings and townhouses to be solar ready.