

Changes to the **Florida Building Code**

Enclosed please find an overview of expected impact of the Changes to the
FLORIDA-BUILDING CODE- ENERGY CONSERVATION RESIDENTIAL
8th EDITION.

Be advised: At the time of this publication (October 4, 2023) changes may still be made to the code. This report is preliminary.



Impact of the Changes to the FLORIDA-BUILDING CODE- ENERGY CONSERVATION- RESIDENTIAL 8TH EDITION (Source: *The Hickman Group*)

SECTIONS	REQUIREMENTS	BUILDER IMPACT
R402.4.6 (EN10072)	<p>Air-Sealed Electrical and Communication Boxes. Air-sealed electrical and communication boxes that penetrate the air barrier of the building thermal envelope shall be caulked, taped, gasketed, or otherwise sealed to the air barrier element being penetrated. Air-sealed boxes shall be buried in or surrounded by insulation. Air-sealed boxes shall be marked in accordance with NEMA OS 4. Air-sealed boxes shall be installed in accordance with the manufacturer's instructions.</p>	Increased time and cost for sealing.
R402.4.1.2 (EN10151)	<p>R402.4.1.2 Testing. The building or dwelling unit shall be tested and verified as having an air leakage rate not exceeding seven air changes per hour in Climate Zones 1 and 2, and three air changes per hour in Climate Zones 3 through 8. Testing shall be conducted in accordance with ANSI/RESNET/ICC 380 and reported at a pressure of 0.2 inch w.g. (50 pascals). Testing shall be conducted by either individuals as defined in Section 553.993(5) or (7), <i>Florida Statutes</i>, or individuals licensed as set forth in Section 489.105(3)(f), (g) or (i) or an approved third party. A written report of the results of the test shall be signed by the party conducting the test and provided to the <i>code official</i>. Testing shall be performed at any time after creation of all penetrations of the <i>building thermal envelope</i>.</p> <p>Exception: Testing is not required for additions, alterations, renovations or repairs of the building thermal envelope of existing buildings in which the new construction is less than 85 percent of the building thermal envelope.</p> <p>During testing:</p> <ol style="list-style-type: none"> 1. Exterior windows and doors, fireplace and stove doors shall be closed, but not sealed, beyond the intended weatherstripping or other infiltration control measures. 2. Dampers including exhaust, intake, makeup air, backdraft and flue dampers shall be closed, but not sealed beyond intended infiltration control measures. 3. Interior doors, if installed at the time of the test, shall be open. 4. Exterior doors for continuous ventilation systems and heat recovery ventilators shall be closed and sealed. 5. Heating and cooling systems, if installed at the time of the test, shall be turned off. 6. Supply and return registers, if installed at the time of the test, shall be fully open. 	Reduced testing burden for additions, renovations, or repairs for sealed attics with ducts in conditioned space.

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	<p><u>7. If an attic is both air sealed and insulated at the roof deck, interior access doors and hatches between the conditioned space volume and the attic shall be opened during the test and the volume of the attic shall be added to the conditioned space volume for purposes of reporting an infiltration volume and calculating the air leakage of the home.</u></p>																									
R403.3.1 (EN8854 / CE151-19 Part I)	<p>R403.3.1 Insulation (Prescriptive). Supply and return ducts in attics shall be insulated to an <i>R</i>-value of not less than <i>R</i>-8 for ducts 3 inches (76 mm) in diameter and larger and not less than <i>R</i>-6 for ducts smaller than 3 inches (76 mm) in diameter. Supply and return ducts in other portions of the building shall be insulated to not less than <i>R</i>-6 for ducts 3 inches (76 mm) in diameter and not less than <i>R</i>-4.2 for ducts smaller than 3 inches (76 mm) in diameter. <u>Ducts buried beneath a building shall be insulated as required per this section or have an equivalent thermal distribution efficiency. Underground ducts utilizing the thermal distribution efficiency method shall be listed and labeled to indicate the <i>R</i>-value equivalency.</u></p> <p>Exception: Ducts or portions thereof located completely inside the building thermal envelope.</p>	Permits ducts to be “buried” within the attic cavity insulation to comply with duct insulation requirements.																								
TABLE R403.6.1 (EN9046 / RE133-19)	<p style="text-align: center;">TABLE R403.6.1 WHOLE-HOUSE MECHANICAL VENTILATION SYSTEM FAN EFFICACY^a</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">FAN LOCATION</th> <th style="text-align: left;">AIR FLOW RATE MINIMUM(CFM)</th> <th style="text-align: left;">MINIMUM EFFICACY(CFM/WATT)</th> <th style="text-align: left;">AIR FLOW RATE MAXIMUM(CFM)</th> </tr> </thead> <tbody> <tr> <td>HRV or ERV</td> <td>Any</td> <td>1.2 cfm/watt</td> <td>Any</td> </tr> <tr> <td>Range hoods</td> <td>Any</td> <td>2.8 cfm/watt</td> <td>Any</td> </tr> <tr> <td>In-line fan</td> <td>Any</td> <td>2.8-3.8 cfm/watt</td> <td>Any</td> </tr> <tr> <td>Bathroom, utility room</td> <td>10</td> <td>1.4-2.8 cfm/watt</td> <td>< 90</td> </tr> <tr> <td>Bathroom, utility room</td> <td>90</td> <td>2.8-3.5 cfm/watt</td> <td>Any</td> </tr> </tbody> </table> <p>For SI: 1 cfm = 28.3 L/min. a. When tested in accordance with HVI Standard 916.</p>	FAN LOCATION	AIR FLOW RATE MINIMUM(CFM)	MINIMUM EFFICACY(CFM/WATT)	AIR FLOW RATE MAXIMUM(CFM)	HRV or ERV	Any	1.2 cfm/watt	Any	Range hoods	Any	2.8 cfm/watt	Any	In-line fan	Any	2.8-3.8 cfm/watt	Any	Bathroom, utility room	10	1.4-2.8 cfm/watt	< 90	Bathroom, utility room	90	2.8-3.5 cfm/watt	Any	Minimal impact. Increases stringency for WHV fan efficiency to ENERGY STAR 4.0. Fans are what are currently in the market.
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R404.1 (EN10517 AM with A1)	<p>R404.1 Lighting equipment (Mandatory). Not less than 90 percent of the lamps in <u>All</u> permanently installed luminaires, <u>excluding those in kitchen appliances</u>, shall have an efficacy of at least 45 lumens-per-watt or shall utilize lamps with an efficacy of not less than 65 lumens-per-watt.</p>	Minimal impact. Excludes kitchen appliances from complying with Lighting equipment minimum efficiencies.																								
R405.2 (EN10165)	<p>R405.2 Mandatory requirements. Compliance with this section requires that the mandatory provisions identified in Section R401.2 be met. All supply and return ducts not completely inside the <i>building thermal envelope</i> shall be insulated to a minimum of <i>R</i>-6, <u>except site-wrapped supply ducts not completely inside the building thermal envelope shall</u></p>	Possible cost increase. Requires <i>R</i> 8 for site wrapped ducts not completely within the building envelope. Cannot be traded off in																								

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	<u>be insulated to a minimum of R-8.</u>	performance path.
R405.3 (EN10230 AM A2)	R405.3 Performance-based compliance. Compliance based on simulated energy performance requires that a proposed residence (<i>proposed design</i>) be shown to have annual total normalized Modified Loads that are less than or equal to <u>95% of</u> the annual total loads of the <i>standard reference design</i> as calculated in accordance with Appendix RC of this standard.	Minimal impact. Increases stringency of Performance path by 5%.
R405.6.3.1 (EN10158)	R405.6.3.1 Water-heating Efficiency adjustment factors. The Energy Factor (EF) of an instantaneous water heater [those with capacity of two gallons (7.57 L) or less] in the Proposed home shall be reduced to 92 percent of the value in the manufacturer's documentation or AHRI <i>Directory of Certified Product Performance</i> . <u>The Uniform Energy Factor (UEF) of an instantaneous water heater in the Proposed home shall be reduced to 94 percent of the value in the manufacturer's documentation or AHRI <i>Directory of Certified Product Performance</i>.</u>	Minimal impact. Slightly better efficiency required for instantaneous water heaters. Widely available in the market.
R406.2.1 (EN10166)	R406.2.1 Site-wrapped supply ducts. Site-wrapped supply ducts not completely inside the <i>building thermal envelope</i> shall be insulated to a minimum of R-8.	Possible cost increase. Requires R8 for site wrapped ducts not completely within the building envelope.
R501.7.2 (EN10148)	R501.7.2 Electric space heating. Electric resistance shall not be the primary space heating system type used for complete central equipment replacements in Climate Zone 2.	Not sure how much this is being done in CZ2 anyway. May be minimal impact.
R503.1.4 (EN9093 / RE218-19)	R503.1.4 Lighting. New lighting systems that are part of the <i>alteration</i> shall comply with Section R404.1.R404.1. Exception: <i>Alterations</i> that replace less than <u>5010</u> percent of the luminaires in a space, provided that such <i>alterations</i> do not increase the installed interior lighting power.	Impact to alterations. Bar lowered for exception to requirement down to 10% lighting replacements rather than 50%

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<p>EN10213</p>	<p>APPENDIX RC CALCULATION OF END USE ENERGY LOADS</p> <p>[Keep previously TAC approved Table C403.2.3(1) changes, and also modify related residential energy Appendix RC Table RC-1(1) as follows.]</p> <p style="text-align: center;">TABLE RC-1(1) COEFFICIENTS 'a' AND 'b'</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">FUEL TYPE AND END USE</th><th style="text-align: center;">a</th><th style="text-align: center;">b</th></tr> </thead> <tbody> <tr> <td>Electric space heating</td><td style="text-align: center;">2.4026 -2.5853</td><td style="text-align: center;">0.0000</td></tr> <tr> <td>Fossil fuel* space heating</td><td style="text-align: center;">1.0370 -0.7618</td><td style="text-align: center;">0.2962 -0.0477</td></tr> <tr> <td>Biomass space heating</td><td style="text-align: center;">0.7297 0.5361</td><td style="text-align: center;">0.1583 -0.1490</td></tr> <tr> <td>Electric air conditioning</td><td style="text-align: center;">4.1020 4.4104</td><td style="text-align: center;">0.0000</td></tr> <tr> <td>Electric water heating</td><td style="text-align: center;">0.9500</td><td style="text-align: center;">0.0000</td></tr> <tr> <td>Fossil fuel* water heating</td><td style="text-align: center;">1.3774</td><td style="text-align: center;">1.2217</td></tr> </tbody> </table> <p>* Such as natural gas, LP, fuel oil</p> <p>[No other changes to Appendix RC.]</p>	FUEL TYPE AND END USE	a	b	Electric space heating	2.4026 -2.5853	0.0000	Fossil fuel* space heating	1.0370 -0.7618	0.2962 -0.0477	Biomass space heating	0.7297 0.5361	0.1583 -0.1490	Electric air conditioning	4.1020 4.4104	0.0000	Electric water heating	0.9500	0.0000	Fossil fuel* water heating	1.3774	1.2217	<p>Possible cost increase but these are minimum efficiencies and currently available and used in the market. Updates minimum efficiency requirements of Unitary Air Conditioners and Condensing Units based on federal minimum standards.</p>
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<p>Appendix RE (EN10370 AM) with comment post October 2022 TAC meeting</p>	<p>APPENDIX RE: ELECTRIC VEHICLE CHARGING PROVISIONS FOR ONE- AND TWO-FAMILY DWELLINGS AND TOWNHOUSES</p> <p><i>(The provisions contained in this appendix are not mandatory unless specifically referenced in the adopting ordinance.)</i></p> <p style="text-align: center;"><u>SECTION RE 101</u></p> <p style="text-align: center;"><u>SCOPE</u></p> <p><u>RE 101.1 General.</u></p> <p><u>These provisions shall be applicable for new construction where electric vehicle charging provisions are required.</u></p> <p style="text-align: center;"><u>SECTION RE 102</u></p> <p style="text-align: center;"><u>DEFINITIONS</u></p> <p><u>ELECTRIC VEHICLE (EV).</u><i>An automotive-type vehicle for on-road use, such as passenger</i></p>	<p>Impact only if implemented at local jurisdiction. New appendix for EV charging.</p>																					

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automobiles, buses, trucks, vans, neighborhood electric vehicles, electric motorcycles, and the like, primarily powered by an electric motor that draws current from a rechargeable storage battery, fuel cell, photovoltaic array, or other source of electric current. Plug-in hybrid electric vehicles (PHEV) are electric vehicles having a second source of motive power. Off-road, self-propelled electric mobile equipment, such as industrial trucks, hoists, lifts, transports, golf carts, airline ground support equipment, tractors, boats, and the like are not considered electric vehicles.

ELECTRIC VEHICLE SUPPLY EQUIPMENT (EVSE). The conductors, including the ungrounded, grounded, and equipment grounding conductors, and the *Electric Vehicle* connectors, attachment plugs, and all other fittings, devices, power outlets, or apparatus installed specifically for the purpose of transferring energy between the premises wiring and the *Electric Vehicle*.

EV CAPABLE SPACE. Electrical panel capacity and space to support a minimum 40-ampere, 240-volt branch circuit for each EV parking space, and the installation of raceways, both underground and surface mounted, to support the *EVSE*.

SECTION RE 103

REQUIREMENTS FOR ELECTRIC VEHICLE CHARGING

RE 103.1 New one- and two-family dwellings and townhouses with attached or detached private garages. Each dwelling unit with an attached or detached garage shall be designed with provision for future installation of *electric vehicle supply equipment* in accordance with this section.

RE 103.2 Raceway.

A listed raceway of minimum trade size 1 shall be installed to accommodate a branch circuit for *electric vehicle supply equipment*.

The raceway shall originate at the main electrical panel or a properly rated sub-panel, and terminate in a listed box or enclosure in close proximity to the proposed location of the *electric vehicle supply equipment*.

The raceway shall be continuous from the point of origin to the termination at the proposed location of the *electric vehicle supply equipment*.

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<p>The enclosure provided for future <i>electric vehicle supply equipment</i> shall be labeled "EV CAPABLE". The label shall comply with NFPA 70 Section 110.21(B).</p> <p><u>RE 103.3 Service capacity.</u></p> <p>The electrical panel from which the <i>electric vehicle supply equipment</i> branch circuit originates shall be rated for, and be provided with open space for installation of a two-pole 40-ampere overcurrent protective device. The provided overcurrent device space(s) shall be identified in the panel circuit directory as "EV CAPABLE".</p>		
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https://www.floridabuilding.org/fbc/thecode/2023_Code_Development/2023_Code_Development_Process.htm

Using the above link, please scroll down to the matrix titled:

"SUPPLEMENTS - POST COMMISSION -December 13, 2022"