

FLORIDA BUILDING CODE, ENERGY CONSERVATION**Residential Building Thermal Envelope Approach****R-Value Computation Method****FORM R402—2023****PROJECT NAME AND ADDRESS:** Jenkins Utility**BUILDER:** South Trust**PERMITTING OFFICE:****JURISDICTION NUMBER:****PERMIT NUMBER:****NUMBER OF UNITS:****CONDITIONED FLOOR AREA:** 2089**OWNER:****PERMIT TYPE:****WORST CASE?**

Scope: Compliance with Section R402.1.2 of the Florida Building Code, Energy Conservation, shall be demonstrated by the use of Form R402 for single- and multiple-family residences of three stories or less in height, additions to existing residential buildings, alterations, renovations and building systems in existing buildings, as applicable. To comply, a building must meet or exceed all of the energy efficiency requirements and applicable mandatory requirements summarized on this form. If a building does not comply with this method, or by the UA Alternative method, it may still comply under Section R405 or R406 of the Florida Building Code, Energy Conservation.

General Instructions:

1. Fill in all the applicable spaces of the "INSTALLED" row in the INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT table with the information requested. All "INSTALLED" values must be equal to or more efficient than the required levels. "AVG" indicates an area weighted average is allowed; "LOWEST" indicates the lowest R-value to be installed must be entered.
2. Complete the tables for air infiltration and installed equipment.
3. Read the MANDATORY REQUIREMENTS table and check each box to indicate your intent to comply with all applicable items.
4. Read, sign and date the "Prepared By" certification statement at the bottom of this form. The owner or owner's agent must also sign and date the form.

INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT¹

REQUIREMENTS	FENESTRATION U-FACTOR ^{2,3,4}	SKYLIGHT ² U-FACTOR	GLAZED FENESTRATION SHGC ²	CEILING R-VALUE	WOOD FRAME WALL R-VALUE ⁵
CLIMATE ZONE 1	NR	0.75	0.25	30	13
CLIMATE ZONE 2	0.40	0.65	0.25	38	13
VALUE	AVG	AVG	AVG	LOWEST	LOWEST

INSTALLED:**R-Value Calculation Method - [PASS / FAIL]**

For SI: 1 foot = 304.8 mm; NR = No requirement.

1. (1) R-values are minimums. U-factors and SHGC are maximums. When insulation is installed in a cavity which is less than the label or design thickness of the insulation, the installed R-value of the insulation shall not be less than the R-value specified in the table.
2. (2) The fenestration U-factor column excludes skylights. The SHGC column applies to all glazed fenestration. Exception: Skylights may be excluded from glazed fenestration SHGC requirements in Climate Zones 1 through 3 where the SHGC for such skylights does not exceed 0.30.
3. (3) For impact rated fenestration complying with Section R301.2.1.2 of the Florida Building Code, Residential or Section 1609.1.2 of the Florida Building Code, Building, the maximum U-factor shall be 0.65 in Climate Zone 2. An area-weighted average of U-factor and SHGC shall be accepted to meet the requirements, and up to 15 square feet of glazed fenestration area are exempted from the U-factor and SHGC requirement based on Section R402.3.1, R402.3.2 and R402.3.3.
4. (4) One side-hinged opaque door assembly up to 24 square feet is exempted from this U-factor requirement based on Section R402.3.4.
5. (5) R-values are for insulation material only as applied in accordance with manufacturer's installation instructions.
6. (6) The second R-value applies when more than half the insulation is on the interior of the mass wall.
7. (7) R-5 shall be added to the required slab edge R-values for heated slabs. Insulation depth shall be the depth of the footing or 2 feet, whichever is less in Climate Zones 1 through 3 for heated slabs.

Air Blower door test is required on the building envelope to verify leakage ≤ 7 ACH50; test report must be provided

infiltration: issued. Florida Building Code, Energy Conservation Section R402.4.1.2 testing exception may apply for add

FORM R402—continued

EQUIPMENT REQUIREMENTS AND INSTALLED VALUES

Fill in the "INSTALLED EFFICIENCY LEVEL" column with the information requested. For multiple systems of the same type, indicate the minimum efficient system. All "INSTALLED" values must be equal to or more efficient than the required level. If a listed "SYSTEM TYPE" is not to be installed, write in "N/A" for not applicable.

SYSTEM TYPE	MINIMUM EFFICIENCY LEVEL REQUIRED
Air distribution system ¹	Not allowed in attic
Air handling unit	Factory Sealed
Duct R-value	= R-8 (Ducts in unconditioned attics, Diameter $\geq$ 3 in.) = R-6 (Ducts in unconditioned non attics, Diam. $\geq$ 3 in.) = R-6 (Ducts in unconditioned attics, Diameter $<$ 3 in.) = R-4.2 (Ducts in unconditioned not attics, Diam. $<$ 3 in.) All ducts are in conditioned space (No minimum)
Air leakage/Duct test	Air handler installed: Total leakage = 4 cfm/100 s.f. Air handler not installed: Total leakage = 3 cfm/100 s.f.
Duct testing	Test not required if all ducts and AHU are within the building thermal envelope and for additions or alterations where ducts extended from existing heating and cooling system through unconditioned $<$ 40 linear ft.
Air conditioning systems:	Minimum federal standard required by NAECA ² :

Central system < 45,000 Btu/h SEER2 14.3 **Seer2: 20 mini split**

Central system ≥ 45,000 Btu/h SEER2 13.8

Central heat pump SEER2 = 14.3

PTAC, PTHP, SPVAC or SPVHP EER [from Table C403.2.3(3)]

Other: See Tables C403.2.3(1)–(11)

Heating systems: Minimum federal standard required by NAECA²:

Electric resistance Not allowed in Climate Zone 2

Heat pump HSPF ≥ 7.5 **HSPF2: 9 mini split**

Gas furnace, non-weatherized AFUE ≥ 80%

Oil furnace, non-weatherized AFUE ≥ 83%

PTHP or SPVHP COP_h [from Table C403.2.3(3)]

Other: See Tables C403.2.3(1)–(16)

Water heating system (storage type): Minimum federal standard required by NAECA²:

Electric^{3, 6} UEF 40 gal.: 0.931; 50 gal.: 0.930; 60 gal.: 2.176

Gas fired^{4, 6} UEF 40 gal.: 0.64; 50 gal.: 0.627; 60 gal.: 0.789

Other (describe)^{5, 6}:

Equipment Efficiency—[PASS / FAIL]

- (1) Ducts & AHU installed “substantially leak free” per Section R403.3.2. Test required by either individuals as defined in Section 553.993(5) or (7), Florida Statutes, or individuals licensed as set forth in Section 489.105(3)(f), (g), or (i), Florida Statutes. The total leakage test is not required for ducts and air handlers located entirely within the building thermal envelope, and for additions where ducts from an existing heating and cooling system extended to the addition through unconditioned space are less than 40 linear ft.
- (2) Minimum efficiencies are those set by the *National Appliance Energy Conservation Act* of 1987 for typical residential equipment and are subject to NAECA rules and regulations. For other types of equipment, see Tables C403.2.3 (1)–(11) of the Commercial Provisions of the Florida Building Code, Energy Conservation.
- (3) For electric storage volumes ≤ 55 gallons, minimum UEF = 0.9349 – (0.0001 * volume). For electric storage volumes > 55 gallons, minimum UEF = 2.2418 – (0.0011 * volume).
- (4) For natural gas storage volumes ≤ 55 gallons, minimum UEF = 0.692 – (0.0013 * volume). For natural gas storage volumes > 55 gallons, minimum UEF = 0.8072 – (0.0003 * volume).
- (5) For electric tankless, min. UEF = 0.92. For natural gas tankless, min. UEF = 0.81.
- (6) Referenced UEF's shown are for high draw pattern value provided by manufacturer.

OTHER REQUIREMENTS

Component	Section	
Air leakage	R402.4	To be caulked, gasketed, w lighting IC-rated as having ≤ (swinging doors: 0.5 cfm/sf) 2/A440. Fireplaces: Tight-fit

Programmable thermostat	R403.1.2	A programmable thermostat
Air distribution system	R403.3.2R403.3.4	Ducts shall be tested as per 553.993(5) or (7), Florida Statutes (g) or (i), Florida Statutes. Air
Water heaters	R403.5	Comply with efficiencies in other cases. Circulating system trap required for vertical pipe
Cooling/heating equipment	R403.7	Sizing calculation performed on separate system or variable
Swimming pools & spas	R403.10	Spas and heated pools must be proven to reduce heat loss required. Gas heaters minimum COP is 4.0.
Lighting equipment	R404.1	All permanently installed luminaire efficacy of at least 45 lumens-per-watt

I hereby certify that the plans and specifications covered by this form are in compliance with the Florida Building Code, Energy Conservation.

BY: Breanna Rolling Date: 6/29/26 PREPARED BY

SIGNATURE: Breanna Rolling I hereby certify that this building is in compliance with the Florida Building Code, Energy

Conservation. OWNER/AGENT:

Date: OWNER/AGENT

SIGNATURE:

Review of plans and specifications for compliance with the Florida Building Code, Energy Conservation. Inspected for compliance

OFFICIAL:

SIGNATURE:

FORM [R402, TOTAL UA, R405, or R406]—2023

RESIDENTIAL ENERGY CONSERVATION CODE DOCUMENTATION CHECKLIST

Florida Department of Business and Professional Regulation [Compliance Method]

Applications for compliance with the 2023 Florida Building Code, Energy Conservation via the [compliance method] shall include:

- ☐ This checklist
- ☐ Form [R402, TOTAL UA, R405 or R406] report
- ☐ Input summary checklist that can be used for field verification (usually four pages/may be greater)
- ☐ Energy Performance Level (EPL) Display Card (one page)
- ☐ HVAC system sizing and selection based on ACCA Manual S or per exceptions provided in Section R403.7

☐ Mandatory Requirements (five pages)

Required prior to CO:

- ☐ Air Barrier and Insulation Inspection Component Criteria checklist (Table R402.4.1.1—one page)
- ☐ A completed Envelope Leakage Test Report (usually one page)
- ☐ If Form R405 or R406 duct leakage type indicated anything other than "default leakage," then a completed Duct Leakage Test Report (usually one page)

MM/DD/YY HH:MM [AM/PM]

[Approved Software Title and Version]-FBC 8th Edition (2023) Compliant Software

ENERGY PERFORMANCE LEVEL (EPL) DISPLAY CARD

ESTIMATED ENERGY PERFORMANCE INDEX* = _____
The lower the Energy Performance Index, the more efficient the home.

1. New home or, addition
2. Single-family or multiple-family -family
3. No. of units (if multiple-family) [#]
4. Number of Bedrooms [#] N/A
5. Is this a worst case? (yes/no)
6. Conditioned floor area (sq. ft.) 2080
7. Windows**
Description
a) U-factor: U-factor:
SHGC: SHGC:
b) U-factor: [Type or N/A], U =
SHGC: SHGC:
c) U-factor: [Type or N/A], U =
SHGC:
d) U-factor: [Type or N/A], U =
SHGC:
Area Weighted Average Overhang Depth:

Area Weighted Average SHGC:

8.	Skylights	Description
	a) U-factor	U-factor:
	SHGC:	SHGC:
9.	Floor type, insulation level:	Insulation
	a) [Type]	R=
	b) [Type or N/A]	R=
	c) [Type or N/A]	R=
10.	Wall type and insulation:	Insulation
	a) [Type] 2x6 wood	R= 19 556°
	b) [Type or N/A]	R=
	c) [Type or N/A]	R=
	d) [Type or N/A]	R=
11.	Ceiling type and insulation level	Insulation
	a) [Type] gable	R= 19 233° Spray foam
	b) [Type or N/A]	R=
	c) [Type or N/A]	R=

12. Ducts, location & insulation level
- a) Sup: [loc.], Ret: [loc.], AH: [loc.] R
- b) Sup, Ret, AH: [or N/A]
13. Cooling systems: mini split kBtu/hr 20
- a) [Type]
- b) [Type or N/A]
- c) [Type or N/A]
14. Heating systems mini split kBtu/hr 9
- a) [Type]
- b) [Type or N/A]
- c) [Type or N/A]
15. Water heating system N/A
- a) [Type] Cap: [#] gallons
- b) Conservation features UEF:
- Use medium draw pattern UEF provided by manufacturer.

Credits (Performance method)

I certify that this home has complied with the Florida Building Code, Energy Conservation, through the above energy saving (or exceeded) in this home before final inspection. Otherwise, a new EPL Display Card will be completed based on installed

Builder Signature: _____

Date: _____

Address of New Home: _____

City/FL Zip: _____

*Note: This is not a Building Energy Rating. If your Index is below 70, your home may qualify for energy efficient mortgage Energy Rating. For information about the Florida Building Code, Energy Conservation, contact the Florida Building Commi:

**Label required by Section R303.1.3 of the Florida Building Code, Energy Conservation, if not DEFAULT.

[Date and time]

[Software version and code compliance statement]

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FORM R400—2023

**DESUPERHEATER, HEAT RECOVERY UNIT (HRU) WATER HEATER EFFICIENCY CERTIFICATION
TESTS CONDUCTED IN ACCORDANCE WITH AHRI STANDARD 470**

Laboratory: _____

Report Approved By: _____

Manufacturer: _____

Construction Type: _____

Recommended for use with refrigeration system capacities of _____ tons.

Design Pressure: _____

Date of Test: _____

Report No: _____

Model No: _____

Water side: _____

Refrigerant side: _____

Test results at Standard Conditions:

Test refrigerant designation: _____

Tested at system capacity: _____ tons

Total system hot gas superheat: _____ Btu/h

Total useful heat exchange effect: _____ Btu/h

Water pump input: _____ watts

NET SUPERHEAT RECOVERY: _____ %