FORM R405-2020

FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Business and Professional Regulation - Residential Performance Method

Project Name:	Lot 41 Jewel Lake II	Builder Name:	Century CMP Florida
Street:		Permit Office:	Columbia County
City, State, Zip:	Lake City , FL , 32025	Permit Number:	
Owner:		Jurisdiction:	
Design Location:	FL, Gainesville	County:	Columbia (Florida Climate Zone 2)

1. New construction or existing	New (From Plans)
2. Single family or multiple family	Detached
3. Number of units, if multiple family	1
4. Number of Bedrooms	4
5. Is this a worst case?	No
6. Conditioned floor area above grade (ft²)	1607
Conditioned floor area below grade (ft²)	0

7. Windows (153.3 sqft.)	Description	Area
a. U-Factor:	Dbl, U=0.36	153.33 ft²
SHGC:	SHGC=0.25	
b. U-Factor:	N/A	ft²
SHGC:		
c. U-Factor:	N/A	ft²
SHGC:		
Area Weighted Average Overhang Depth:		3.141 ft.
Area Weighted Average SHGC:		0.250

8. Skylights		Area
c. U-Factor:(AVG)	N/A	ft²
SHGC(AVG):	N/A	

9. Floor Types (1607.0 sqft.)	Insulation	Area
a. Slab-On-Grade Edge Insulation	R=0.0	1607.00 ft²
b. N/A	R=	ft²
c. N/A	R=	ft²

10. Wall Types (1464.0 sqft.)	Insulation	Area
a. Frame - Wood, Exterior	R=13.0	1162.70 ft²
b. Frame - Wood, Adjacent	R=13.0	301.33 ft²
c. N/A	R=	ft²
d. N/A	R=	ft²

11. Ceiling Types (1687.0 sqft.)	Insulation	Area
a. Under Attic (Vented)	R=38.0	1687.00 ft²
b. N/A	R=	ft²
c. N/A	R=	ft²

12. Ducts	R	ft²
a. Sup: Attic, Ret: Attic, AH: Main	6	401.75

13. Cooling systems	kBtu/hr	Efficiency
a. Central Unit	19.3	SEER:15.00

14. Heating systems	kBtu/hr	Efficiency
a. Electric Heat Pump	24.2	HSPF:8.20

15. Hot water systems	
a. Electric	Cap: 50 gallons
	EF: 0.920
b. Conservation features	
None	
16. Credits	CV, Pstat

Glass/Floor Area: 0.095

Total Proposed Modified Loads: 40.57

Total Baseline Loads: 41.36

PASS

I hereby certify that the plans and specifications covered by this calculation are in compliance with the Florida Energy Code.

PREPARED BY: Will C Fry

DATE: 3 / 10 / 2022

I hereby certify that this building, as designed, is in compliance with the Florida Energy Code.

OWNER/AGENT: Brittany Dunn

DATE:

Review of the plans and specifications covered by this calculation indicates compliance with the Florida Energy Code. Before construction is completed this building will be inspected for compliance with Section 553.908 Florida Statutes.

BUILDING OFFICIAL:

DATE:

- Compliance requires certification by the air handler unit manufacturer that the air handler enclosure qualifies as certified factory-sealed in accordance with R403.3.2.1.

- Compliance requires an Air Barrier and Insulation Inspection Checklist in accordance with R402.4.1.1 and this project requires an envelope leakage test report with envelope leakage no greater than 5.00 ACH50 (R402.4.1.2).

FORM R405-2020

INPUT SUMMARY CHECKLIST REPORT

PROJECT

Title:	Lot 41 Jewel Lake II	Bedrooms:	4	Address Type:	Lot Information
Building Type:	User	Conditioned Area:	1607	Lot #	41
Owner Name:		Total Stories:	1	Block/Subdivision:	Jewel Lake II
# of Units:	1	Worst Case:	No	PlatBook:	
Builder Name:	Century CMP Florida	Rotate Angle:	0	Street:	
Permit Office:	Columbia County	Cross Ventilation:	Yes	County:	Columbia
Jurisdiction:		Whole House Fan:	No	City, State, Zip:	Lake City , FL , 32025
Family Type:	Detached				
New/Existing:	New (From Plans)				
Comment:					

CLIMATE

√	Design Location	TMY Site	Design Temp 97.5 %	Design Temp 2.5 %	Int Design Temp Winter	Int Design Temp Summer	Heating Degree Days	Design Moisture	Daily Temp Range
_____	FL, Gainesville	FL_GAINESVILLE_REGI	32	92	70	75	1305.5	51	Medium

BLOCKS

Number	Name	Area	Volume
1	Block1	1607	12856

SPACES

Number	Name	Area	Volume	Kitchen	Occupants	Bedrooms	Infil ID	Finished	Cooled	Heated
1	Main	1607	12856	Yes	8	4	1	Yes	Yes	Yes

FLOORS

√	#	Floor Type	Space	Perimeter	R-Value	Area		Tile	Wood	Carpet
_____	1	Slab-On-Grade Edge Insulation	Main	183.33 ft	0	1607 ft²	----	0	0	1

ROOF

√	#	Type	Materials	Roof Area	Gable Area	Roof Color	Rad Barr	Solar Absor.	SA Tested	Emitt	Emitt Tested	Deck Insul.	Pitch (deg)
_____	1	Hip	Composition shingles	1797 ft²	0 ft²	Medium	Y	0.96	No	0.9	No	0	26.57

ATTIC

√	#	Type	Ventilation	Vent Ratio (1 in)	Area	RBS	IRCC
_____	1	Full attic	Vented	300	1607 ft²	Y	N

CEILING

√	#	Ceiling Type	Space	R-Value	Ins Type	Area	Framing Frac	Truss Type
_____	1	Under Attic (Vented)	Main	38	Double Batt	1687 ft²	0.11	Wood

INPUT SUMMARY CHECKLIST REPORT

WALLS

√	#	Ornt	Adjacent To	Wall Type	Space	Cavity R-Value	Width Ft	Width In	Height Ft	Height In	Area	Sheathing R-Value	Framing Fraction	Solar Absor.	Below Grade%
____	1	SW	Exterior	Frame - Wood	Main	13	17	8	8		141.3 ft²		0.23	0.75	0
____	2	SE	Garage	Frame - Wood	Main	13	18		8		144.0 ft²		0.23	0.75	0
____	3	SW	Garage	Frame - Wood	Main	13	19	8	8		157.3 ft²		0.23	0.75	0
____	4	SE	Exterior	Frame - Wood	Main	13	36		8		288.0 ft²		0.23	0.75	0
____	5	NE	Exterior	Frame - Wood	Main	13	28	8	8		229.3 ft²		0.23	0.75	0
____	6	NW	Exterior	Frame - Wood	Main	13	8		8		64.0 ft²		0.23	0.75	0
____	7	NE	Exterior	Frame - Wood	Main	13	9		8		72.0 ft²		0.23	0.75	0
____	8	NW	Exterior	Frame - Wood	Main	13	46		8		368.0 ft²		0.23	0.75	0

DOORS

√	#	Ornt	Door Type	Space	Storms	U-Value	Width Ft	Width In	Height Ft	Height In	Area
_____	1	E	Insulated	Main	None	.46	3		6	8	20 ft²
_____	2	N	Insulated	Main	None	.46	2	8	6	8	17.8 ft²

WINDOWS

Orientation shown is the entered, Proposed orientation.

√	#	Ornt	Wall ID	Frame	Panes	NFRC	U-Factor	SHGC	Imp	Area	Overhang Depth	Overhang Separation	Int Shade	Screening
_____	1	SW	1	Vinyl	Low-E Double	Yes	0.36	0.25	N	30.0 ft²	1 ft 0 in	3 ft 0 in	None	None
_____	2	SE	4	Vinyl	Low-E Double	Yes	0.36	0.25	N	15.0 ft²	1 ft 6 in	1 ft 0 in	None	None
_____	3	NE	5	Vinyl	Low-E Double	Yes	0.36	0.25	N	60.0 ft²	1 ft 6 in	1 ft 0 in	None	None
_____	4	NE	7	Metal	Low-E Double	Yes	0.36	0.25	N	33.3 ft²	9 ft 6 in	1 ft 0 in	None	None
_____	5	NW	8	Vinyl	Low-E Double	Yes	0.36	0.25	N	15.0 ft²	1 ft 6 in	1 ft 0 in	None	None

GARAGE

√	#	Floor Area	Ceiling Area	Exposed Wall Perimeter	Avg. Wall Height	Exposed Wall Insulation
_____	1	396.435 ft²	396.435 ft²	42.2 ft	8 ft	1

INFILTRATION

#	Scope	Method	SLA	CFM 50	ELA	EqLA	ACH	ACH 50
1	Wholehouse	Proposed ACH(50)	.000254	1071.3	58.78	110.35	.098	5

HEATING SYSTEM

√	#	System Type	Subtype	Speed	Efficiency	Capacity	Block	Ducts
_____	1	Electric Heat Pump/	None	Single	HSPF:8.2	24.16 kBtu/hr	1	sys#1

FORM R405-2020

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COOLING SYSTEM

√	#	System Type	Subtype	Subtype	Efficiency	Capacity	Air Flow	SHR	Block	Ducts
_____	1	Central Unit/	None	Single	SEER: 15	19.3 kBtu/hr	570 cfm	0.7	1	sys#1

HOT WATER SYSTEM

√	#	System Type	SubType	Location	EF	Cap	Use	SetPnt	Conservation
_____	1	Electric	None	Main	0.92	50 gal	40 gal	120 deg	None

SOLAR HOT WATER SYSTEM

√	FSEC Cert #	Company Name	System Model #	Collector Model #	Collector Area	Storage Volume	FEF
_____	None	None			ft²		

DUCTS

√	#	---- Supply ---- Location	R-Value	Area	---- Return ---- Location	Area	Leakage Type	Air Handler	CFM 25 TOT	CFM25 OUT	QN	RLF	HVAC # Heat	Cool
_____	1	Attic	6	401.75 f	Attic	80.35 ft²	Default Leakage	Main	(Default) c	(Default) c			1	1

TEMPERATURES

Programable Thermostat: Y

Ceiling Fans:

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Cooling	[ ]	[ ]	[ ]	[ ]	[ ]	[X]	[X]	[X]	[X]	[ ]	[ ]	[ ]
Heating	[X]	[X]	[X]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[X]	[X]
Venting	[ ]	[ ]	[X]	[X]	[ ]	[ ]	[ ]	[ ]	[ ]	[X]	[X]	[ ]

Thermostat Schedule: HERS 2006 Reference

Schedule Type		Hours 1	2	3	4	5	6	7	8	9	10	11	12
Cooling (WD)	AM	78	78	78	78	78	78	78	78	80	80	80	80
	PM	80	80	78	78	78	78	78	78	78	78	78	78
Cooling (WEH)	AM	78	78	78	78	78	78	78	78	78	78	78	78
	PM	78	78	78	78	78	78	78	78	78	78	78	78
Heating (WD)	AM	66	66	66	66	66	68	68	68	68	68	68	68
	PM	68	68	68	68	68	68	68	68	68	68	66	66
Heating (WEH)	AM	66	66	66	66	66	68	68	68	68	68	68	68
	PM	68	68	68	68	68	68	68	68	68	68	66	66

MASS

Mass Type	Area	Thickness	Furniture Fraction	Space
Default(8 lbs/sq.ft.	0 ft²	0 ft	0.3	Main

FORM R405-2020

ENERGY PERFORMANCE LEVEL (EPL) DISPLAY CARD

ESTIMATED ENERGY PERFORMANCE INDEX* = 98

The lower the EnergyPerformance Index, the more efficient the home.

, Lake City, FL, 32025

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a. Central Unit	19.3	SEER:15.00
14. Heating systems	kBtu/hr	Efficiency
a. Electric Heat Pump	24.2	HSPF:8.20
15. Hot water systems		
a. Electric		Cap: 50 gallons
		EF: 0.92
b. Conservation features		
None		
Credits (Performance method)		CV, Pstat

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

Builder Signature: Brittany Dunn 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 (EEM) incentives if you obtain a Florida Energy Rating. For information about the Florida Building Code, Energy Conservation, contact the Florida Building Commission's support staff.

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