

FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Business and Professional Regulation - Residential Performance Method

Project Name: Lot 88 Emerald Cove Street: City, State, Zip: Lake City, FL, 32024 Owner: N/A Design Location: FL, Gainesville	Builder Name: Gibraltar Contracting, Inc. Permit Office: Columbia County Permit Number: Jurisdiction: County: Columbia (Florida Climate Zone 2)
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1. New construction or existing New (From Plans) 2. Single family or multiple family Single-family 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) 1771 Conditioned floor area below grade (ft²) 0 7. Windows (353.3 sqft.) Description Area a. U-Factor: Dbl, U=0.36 353.33 ft² SHGC: SHGC=0.25 b. U-Factor: N/A ft² SHGC: c. U-Factor: N/A ft² SHGC: d. U-Factor: N/A ft² SHGC: Area Weighted Average Overhang Depth: 3.985 ft. Area Weighted Average SHGC: 0.250 8. Floor Types (1771.0 sqft.) Insulation Area a. Slab-On-Grade Edge Insulation R=0.0 1771.00 ft² b. N/A R= ft² c. N/A R= ft²	9. Wall Types (1906.8 sqft.) Insulation Area a. Frame - Wood, Exterior R=13.0 1615.80 ft² b. Frame - Wood, Adjacent R=13.0 291.00 ft² c. N/A R= ft² d. N/A R= ft² 10. Ceiling Types (1860.0 sqft.) Insulation Area a. Under Attic (Vented) R=38.0 1860.00 ft² b. N/A R= ft² c. N/A R= ft² 11. Ducts R ft² a. Sup: Attic, Ret: Attic, AH: Garage 6 440.75 12. Cooling systems kBtu/hr Efficiency a. Central Unit 21.2 SEER:15.00 13. Heating systems kBtu/hr Efficiency a. Electric Heat Pump 30.3 HSPF:8.20 14. Hot water systems Cap: 40 gallons a. Electric EF: 0.920 b. Conservation features None 15. Credits CF, CV, Pstat
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Glass/Floor Area: 0.200	Total Proposed Modified Loads: 52.62 Total Baseline Loads: 54.82	PASS
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I hereby certify that the plans and specifications covered by this calculation are in compliance with the Florida Energy Code. PREPARED BY:  DATE: 7/1/2020 I hereby certify that this building, as designed, is in compliance with the Florida Energy Code. OWNER/AGENT: _____ 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: _____
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- 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).

INPUT SUMMARY CHECKLIST REPORT

PROJECT

Title:	Lot 88 Emerald Cove	Bedrooms:	4	Address Type:	Lot Information
Building Type:	User	Conditioned Area:	1771	Lot #	88
Owner Name:	N/A	Total Stories:	1	Block/Subdivision:	Emerald Cove
# of Units:	1	Worst Case:	No	PlatBook:	
Builder Name:	Gibraltar Contracting, Inc.	Rotate Angle:	0	Street:	
Permit Office:	Columbia County	Cross Ventilation:	Yes	County:	Columbia
Jurisdiction:		Whole House Fan:	No	City, State, Zip:	Lake City , FL , 32024
Family Type:	Single-family				
New/Existing:	New (From Plans)				
Comment:					

CLIMATE

✓	Design Location	TMY Site	Design Temp 97.5 %	2.5 %	Int Design Temp Winter	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	1771	15939

SPACES

Number	Name	Area	Volume	Kitchen	Occupants	Bedrooms	Infil ID	Finished	Cooled	Heated
1	Main	1771	15939	Yes	4	4	1	Yes	Yes	Yes

FLOORS

✓	#	Floor Type	Space	Perimeter	R-Value	Area		Tile	Wood	Carpet
_____	1	Slab-On-Grade Edge Insulation	Main	210 ft	0	1771 ft²	----	0	0	1

ROOF

✓	#	Type	Materials	Roof Area	Gable Area	Roof Color	Rad Barr	Solar Absor.	SA Tested	Emitt Tested	Emitt Tested	Deck Insul.	Pitch (deg)
_____	1	Hip	Composition shingles	2051 ft²	0 ft²	Medium	Y	0.96	No	0.9	No	0	30.3

ATTIC

✓	#	Type	Ventilation	Vent Ratio (1 in)	Area	RBS	IRCC
_____	1	Full attic	Vented	300	1771 ft²	Y	N

CEILING

✓	#	Ceiling Type	Space	R-Value	Ins Type	Area	Framing Frac	Truss Type
_____	1	Under Attic (Vented)	Main	38	Double Batt	1860 ft²	0.11	Wood

INPUT SUMMARY CHECKLIST REPORT

WALLS

✓ #	Ornt	Adjacent To	Wall Type	Space	Cavity R-Value	Width Ft	In	Height Ft	In	Area	Sheathing R-Value	Framing Fraction	Solar Absor.	Below Grade%
1	S	Exterior	Frame - Wood	Main	13	12	8	10		126.7 ft²		0.23	0.75	0
2	S	Exterior	Frame - Wood	Main	13	8	0	10		80.0 ft²		0.23	0.75	0
3	E	Exterior	Frame - Wood	Main	13	2	4	10		23.3 ft²		0.23	0.75	0
4	S	Exterior	Frame - Wood	Main	13	10	8	9		96.0 ft²		0.23	0.75	0
5	E	Exterior	Frame - Wood	Main	13	35	6	9		319.5 ft²		0.23	0.75	0
6	N	Exterior	Frame - Wood	Main	13	37	6	9		337.5 ft²		0.23	0.75	0
7	W	Exterior	Frame - Wood	Main	13	6		9		54.0 ft²		0.23	0.75	0
8	E	Exterior	Frame - Wood	Main	13	8		10		80.0 ft²		0.23	0.75	0
9	N	Exterior	Frame - Wood	Main	13	16	10	10		168.3 ft²		0.23	0.75	0
10	E	Exterior	Frame - Wood	Main	13	5		10		50.0 ft²		0.23	0.75	0
11	W	Exterior	Frame - Wood	Main	13	31	2	9		280.5 ft²		0.23	0.75	0
12	W	Garage	Frame - Wood	Main	13	10	4	9		93.0 ft²		0.23	0.75	0
13	S	Garage	Frame - Wood	Main	13	22		9		198.0 ft²		0.23	0.75	0

DOORS

✓ #	Ornt	Door Type	Space	Storms	U-Value	Width Ft	In	Height Ft	In	Area
1	S	Insulated	Main	None	.46	3		6	8	20 ft²
2	S	Insulated	Main	None	.46	3		6	8	20 ft²

WINDOWS

Orientation shown is the entered, Proposed orientation.

✓ #	Ornt	Wall ID	Frame	Panes	NFRC	U-Factor	SHGC	Imp	Area	Overhang Depth	Separation	Int Shade	Screening
1	S	4	Vinyl	Low-E Double	Yes	0.36	0.25	N	16.0 ft²	1 ft 0 in	1 ft 0 in	None	None
2	S	2	Vinyl	Low-E Double	Yes	0.36	0.25	N	13.3 ft²	7 ft 6 in	1 ft 6 in	None	None
3	S	2	Vinyl	Low-E Double	Yes	0.36	0.25	N	5.0 ft²	7 ft 6 in	0 ft 6 in	None	None
4	S	1	Vinyl	Low-E Double	Yes	0.36	0.25	N	36.0 ft²	1 ft 6 in	1 ft 0 in	None	None
5	E	5	Vinyl	Low-E Double	Yes	0.36	0.25	N	20.0 ft²	1 ft 6 in	1 ft 0 in	None	None
6	E	5	Vinyl	Low-E Double	Yes	0.36	0.25	N	6.0 ft²	1 ft 6 in	1 ft 0 in	None	None
7	N	6	Vinyl	Low-E Double	Yes	0.36	0.25	N	45.0 ft²	1 ft 6 in	1 ft 0 in	None	None
8	N	6	Vinyl	Low-E Double	Yes	0.36	0.25	N	25.0 ft²	1 ft 6 in	0 ft 6 in	None	None
9	N	6	Vinyl	Low-E Double	Yes	0.36	0.25	N	45.0 ft²	1 ft 6 in	0 ft 6 in	None	None
10	N	6	Vinyl	Low-E Double	Yes	0.36	0.25	N	15.0 ft²	1 ft 6 in	0 ft 6 in	None	None
11	W	7	Vinyl	Low-E Double	Yes	0.36	0.25	N	20.0 ft²	5 ft 6 in	0 ft 6 in	None	None
12	E	8	Vinyl	Low-E Double	Yes	0.36	0.25	N	20.0 ft²	7 ft 6 in	0 ft 6 in	None	None
13	N	9	Vinyl	Low-E Double	Yes	0.36	0.25	N	72.0 ft²	9 ft 6 in	0 ft 6 in	None	None
14	W	11	Vinyl	Low-E Double	Yes	0.36	0.25	N	15.0 ft²	1 ft 6 in	0 ft 6 in	None	None

INPUT SUMMARY CHECKLIST REPORT

GARAGE										
✓	#	Floor Area	Ceiling Area	Exposed Wall Perimeter	Avg. Wall Height	Exposed Wall Insulation				
✓	1	502.159 ft²	502.159 ft²	60.833 ft	9 ft	1				

INFILTRATION								
#	Scope	Method	SLA	CFM 50	ELA	EqLA	ACH	ACH 50
1	Wholehouse	Proposed ACH(50)	.000286	1328.3	72.92	137.14	.1128	5

HEATING SYSTEM									
✓	#	System Type	Subtype	Speed	Efficiency	Capacity	Block	Ducts	
✓	1	Electric Heat Pump/	None	Single	HSPF:8.2	30.3 kBtu/hr	1	sys#1	

COOLING SYSTEM										
✓	#	System Type	Subtype	Subtype	Efficiency	Capacity	Air Flow	SHR	Block	Ducts
✓	1	Central Unit/	None	Single	SEER: 15	21.16 kBtu/hr	630 cfm	0.85	1	sys#1

HOT WATER SYSTEM									
✓	#	System Type	SubType	Location	EF	Cap	Use	SetPnt	Conservation
✓	1	Electric	None	Garage	0.92	40 gal	40 gal	120 deg	None

SOLAR HOT WATER SYSTEM							
✓	FSEC	Company Name	System Model#	Collector Model#	Collector Area	Storage Volume	FEF
✓	None	None			ft²		

DUCTS														
✓	#	--- Supply ---			--- Return ---			Leakage Type	Air Handler	CFM 25 TOT	CFM25 OUT	QN	RLF	HVAC # Heat Cool
✓	1	Attic	6	440.75 f	Attic	88.15 ft²	Default Leakage	Garage	(Default) c	(Default) c				1 1

INPUT SUMMARY CHECKLIST REPORT

TEMPERATURES

Programable Thermostat: Y

Ceiling Fans:

Cooling	☐ Jan	☐ Feb	☐ Mar	☐ Apr	☐ May	☒ Jun	☒ Jul	☒ Aug	☒ Sep	☐ Oct	☐ Nov	☐ Dec
Heating	☒ Jan	☒ Feb	☒ Mar	☐ Apr	☐ May	☐ Jun	☐ Jul	☐ Aug	☐ Sep	☒ Oct	☒ Nov	☒ Dec
Venting	☐ Jan	☐ Feb	☒ Mar	☒ Apr	☐ May	☐ Jun	☐ Jul	☐ Aug	☐ Sep	☒ Oct	☒ Nov	☒ Dec

Thermostat Schedule: HERS 2006 Reference

Hours

Schedule Type		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 ft ²	0 ft	0.3	Main

ENERGY PERFORMANCE LEVEL (EPL) DISPLAY CARD

ESTIMATED ENERGY PERFORMANCE INDEX* = 96

The lower the Energy Performance Index, the more efficient the home.

1. New home or, addition	1. <u>New (From Plans)</u>	12. Ducts, location & insulation level
2. Single-family or multiple-family	2. <u>Single-family</u>	a) Supply ducts R <u>6.0</u>
3. No. of units (if multiple-family)	3. <u>1</u>	b) Return ducts R <u>6.0</u>
4. Number of bedrooms	4. <u>4</u>	c) AHU location <u>Garage</u>
5. Is this a worst case? (yes/no)	5. <u>No</u>	13. Cooling system: Capacity <u>21.2</u>
6. Conditioned floor area (sq. ft.)	6. <u>1771</u>	a) Split system SEER <u> </u>
7. Windows, type and area		b) Single package SEER <u> </u>
a) U-factor:(weighted average)	7a. <u>0.360</u>	c) Ground/water source SEER/COP <u> </u>
b) Solar Heat Gain Coefficient (SHGC)	7b. <u>0.250</u>	d) Room unit/PTAC EER <u> </u>
c) Area	7c. <u>353.3</u>	e) Other <u>15.0</u>
8. Skylights		14. Heating system: Capacity <u>30.3</u>
a) U-factor:(weighted average)	8a. <u>NA</u>	a) Split system heat pump HSPF <u> </u>
b) Solar Heat Gain Coefficient (SHGC)	8b. <u>NA</u>	b) Single package heat pump HSPF <u> </u>
9. Floor type, insulation level:		c) Electric resistance COP <u> </u>
a) Slab-on-grade (R-value)	9a. <u>0.0</u>	d) Gas furnace, natural gas AFUE <u> </u>
b) Wood, raised (R-value)	9b. <u> </u>	e) Gas furnace, LPG AFUE <u> </u>
c) Concrete, raised (R-value)	9c. <u> </u>	f) Other <u>8.20</u>
10. Wall type and insulation:		15. Water heating system
A. Exterior:		a) Electric resistance EF <u>0.92</u>
1. Wood frame (Insulation R-value)	10A1. <u>13.0</u>	b) Gas fired, natural gas EF <u> </u>
2. Masonry (Insulation R-value)	10A2. <u> </u>	c) Gas fired, LPG EF <u> </u>
B. Adjacent:		d) Solar system with tank EF <u> </u>
1. Wood frame (Insulation R-value)	10B1. <u>13.0</u>	e) Dedicated heat pump with tank EF <u> </u>
2. Masonry (Insulation R-value)	10B2. <u> </u>	f) Heat recovery unit HeatRec% <u> </u>
11. Ceiling type and insulation level		g) Other <u> </u>
a) Under attic	11a. <u>38.0</u>	16. HVAC credits claimed (Performance Method)
b) Single assembly	11b. <u> </u>	a) Ceiling fans <u>Yes</u>
c) Knee walls/skylight walls	11c. <u> </u>	b) Cross ventilation <u>Yes</u>
d) Radiant barrier installed	11d. <u>Yes</u>	c) Whole house fan <u>No</u>
		d) Multizone cooling credit <u> </u>
		e) Multizone heating credit <u> </u>
		f) Programmable thermostat <u>Yes</u>

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

I certify that this home has complied with the Florida Building Code, Energy Conservation, 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: _____ Date: _____

Address of New Home: _____ City/FL Zip: Lake City, FL 32024

Envelope Leakage Test Report (Blower Door Test)
Residential Prescriptive, Performance or ERI Method Compliance
2017 Florida Building Code, Energy Conservation, 6th Edition

Jurisdiction:

Permit #:

Job Information

Builder: Gibraltar Contracting, Inc.

Community:

Lot: 88

Address:

City: Lake City

State: FL

Zip: 32024

Air Leakage Test Results *Passing results must meet either the Performance, Prescriptive, or ERI Method*

☐ **PRESCRIPTIVE METHOD**-The building or dwelling unit shall be tested and verified as having an air leakage rate of not exceeding 7 air changes per hour at a pressure of 0.2 inch w.g. (50 Pascals) in Climate Zones 1 and 2.

☐ **PERFORMANCE or ERI METHOD**-The building or dwelling unit shall be tested and verified as having an air leakage rate of not exceeding the selected ACH(50) value, as shown on Form R405-2017 (Performance) or R406-2017 (ERI), section labeled as infiltration, sub-section ACH50.
ACH(50) specified on Form R405-2017-Energy Calc (Performance) or R406-2017 (ERI): 5.000

$$\frac{\text{CFM}(50)}{\text{Building Volume}} \times 60 \div \frac{15939}{\text{ACH}(50)} = \text{ACH}(50)$$

☐ **PASS**

☐ When ACH(50) is less than 3, Mechanical Ventilation installation must be verified by building department.

Method for calculating building volume:

☐ Retrieved from architectural plans

☒ Code software calculated

☐ Field measured and calculated

R402.4.1.2 Testing. 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) of the Florida Statutes 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 code official. Testing shall be performed at any time after creation of all penetrations of the building thermal envelope.

During testing:

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, back draft 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.

Testing Company

Company Name: _____ Phone: _____

I hereby verify that the above Air Leakage results are in accordance with the 2017 6th Edition Florida Building Code Energy Conservation requirements according to the compliance method selected above.

Signature of Tester: _____ Date of Test: _____

Printed Name of Tester: _____

License/Certification #: _____ Issuing Authority: _____