

# FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

## Florida Department of Business and Professional Regulation - Residential Performance Method

Project Name: Lot 4 Crosswinds Street: SW City, State, Zip: Lake City, FL, 32055 Owner: TBD Design Location: FL, Gainesville	Builder Name: Trent Giebeig Permit Office: Columbia County Permit Number: Jurisdiction: County: Columbia(Florida Climate Zone 2)
--	--

<table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:30%;">1. New construction or existing</td> <td style="width:30%;">New (From Plans)</td> <td style="width:40%;"></td> </tr> <tr> <td>2. Single family or multiple family</td> <td>Detached</td> <td></td> </tr> <tr> <td>3. Number of units, if multiple family</td> <td>1</td> <td></td> </tr> <tr> <td>4. Number of Bedrooms</td> <td>3</td> <td></td> </tr> <tr> <td>5. Is this a worst case?</td> <td>No</td> <td></td> </tr> <tr> <td>6. Conditioned floor area above grade (ft²)</td> <td>1660</td> <td></td> </tr> <tr> <td>Conditioned floor area below grade (ft²)</td> <td>0</td> <td></td> </tr> <tr> <td>7. Windows(131.0 sqft.)</td> <td>Description</td> <td>Area</td> </tr> <tr> <td>a. U-Factor:</td> <td>Dbl, U=0.55</td> <td>125.00 ft²</td> </tr> <tr> <td>SHGC:</td> <td>SHGC=0.45</td> <td></td> </tr> <tr> <td>b. U-Factor:</td> <td>Dbl, U=0.40</td> <td>6.00 ft²</td> </tr> <tr> <td>SHGC:</td> <td>SHGC=0.25</td> <td></td> </tr> <tr> <td>c. U-Factor:</td> <td>N/A</td> <td>ft²</td> </tr> <tr> <td>SHGC:</td> <td></td> <td></td> </tr> <tr> <td>Area Weighted Average Overhang Depth:</td> <td>1.500 ft</td> <td></td> </tr> <tr> <td>Area Weighted Average SHGC:</td> <td>0.441</td> <td></td> </tr> <tr> <td>8. Skylights</td> <td>Description</td> <td>Area</td> </tr> <tr> <td>U-Factor:(AVG)</td> <td>N/A</td> <td>N/A ft²</td> </tr> <tr> <td>SHGC(AVG):</td> <td>N/A</td> <td></td> </tr> <tr> <td>9. Floor Types</td> <td>Insulation</td> <td>Area</td> </tr> <tr> <td>a. Slab-On-Grade Edge Insulation</td> <td>R= 0.0</td> <td>1660.00 ft²</td> </tr> <tr> <td>b. N/A</td> <td>R=</td> <td>ft²</td> </tr> <tr> <td>c. N/A</td> <td>R=</td> <td>ft²</td> </tr> </table>	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	3		5. Is this a worst case?	No		6. Conditioned floor area above grade (ft²)	1660		Conditioned floor area below grade (ft²)	0		7. Windows(131.0 sqft.)	Description	Area	a. U-Factor:	Dbl, U=0.55	125.00 ft²	SHGC:	SHGC=0.45		b. U-Factor:	Dbl, U=0.40	6.00 ft²	SHGC:	SHGC=0.25		c. U-Factor:	N/A	ft²	SHGC:			Area Weighted Average Overhang Depth:	1.500 ft		Area Weighted Average SHGC:	0.441		8. Skylights	Description	Area	U-Factor:(AVG)	N/A	N/A ft²	SHGC(AVG):	N/A		9. Floor Types	Insulation	Area	a. Slab-On-Grade Edge Insulation	R= 0.0	1660.00 ft²	b. N/A	R=	ft²	c. N/A	R=	ft²	<table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:30%;">10. Wall Types(1638.7 sqft.)</td> <td style="width:30%;">Insulation</td> <td style="width:40%;">Area</td> </tr> <tr> <td>a. Face Brick - Wood, Exterior</td> <td>R=13.0</td> <td>1458.70 ft²</td> </tr> <tr> <td>b. Frame - Wood, Adjacent</td> <td>R=13.0</td> <td>180.00 ft²</td> </tr> <tr> <td>c. N/A</td> <td></td> <td></td> </tr> <tr> <td>d. N/A</td> <td></td> <td></td> </tr> <tr> <td>11. Ceiling Types(1660.0 sqft.)</td> <td>Insulation</td> <td>Area</td> </tr> <tr> <td>a. Flat ceiling under att (Vented)</td> <td>R=30.0</td> <td>1660.00 ft²</td> </tr> <tr> <td>b. N/A</td> <td></td> <td></td> </tr> <tr> <td>c. N/A</td> <td></td> <td></td> </tr> <tr> <td>12. Roof(Comp. Shingles, Vented)</td> <td>Deck R=0.0</td> <td>1856 ft²</td> </tr> <tr> <td>13. Ducts, location &amp; insulation level</td> <td>R</td> <td>ft²</td> </tr> <tr> <td>a. Sup: Attic, Ret: Attic, AH: Main</td> <td>6</td> <td>400</td> </tr> <tr> <td>b.</td> <td></td> <td></td> </tr> <tr> <td>c.</td> <td></td> <td></td> </tr> <tr> <td>14. Cooling Systems</td> <td>kBtu/hr</td> <td>Efficiency</td> </tr> <tr> <td>a. Central Unit</td> <td>15.7</td> <td>SEER2:14.30</td> </tr> <tr> <td>15. Heating Systems</td> <td>kBtu/hr</td> <td>Efficiency</td> </tr> <tr> <td>a. Electric Heat Pump</td> <td>25.7</td> <td>HSPF2:8.40</td> </tr> <tr> <td>16. Hot Water Systems</td> <td></td> <td></td> </tr> <tr> <td>a. Electric</td> <td></td> <td>Cap: 50 gallons</td> </tr> <tr> <td></td> <td></td> <td>EF: 0.950</td> </tr> <tr> <td>b. Conservation features</td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td>None</td> </tr> <tr> <td>17. Credits</td> <td></td> <td>CF, Pstat</td> </tr> </table>	10. Wall Types(1638.7 sqft.)	Insulation	Area	a. Face Brick - Wood, Exterior	R=13.0	1458.70 ft²	b. Frame - Wood, Adjacent	R=13.0	180.00 ft²	c. N/A			d. N/A			11. Ceiling Types(1660.0 sqft.)	Insulation	Area	a. Flat ceiling under att (Vented)	R=30.0	1660.00 ft²	b. N/A			c. N/A			12. Roof(Comp. Shingles, Vented)	Deck R=0.0	1856 ft²	13. Ducts, location & insulation level	R	ft²	a. Sup: Attic, Ret: Attic, AH: Main	6	400	b.			c.			14. Cooling Systems	kBtu/hr	Efficiency	a. Central Unit	15.7	SEER2:14.30	15. Heating Systems	kBtu/hr	Efficiency	a. Electric Heat Pump	25.7	HSPF2:8.40	16. Hot Water Systems			a. Electric		Cap: 50 gallons			EF: 0.950	b. Conservation features					None	17. Credits		CF, Pstat
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	3																																																																																																																																													
5. Is this a worst case?	No																																																																																																																																													
6. Conditioned floor area above grade (ft²)	1660																																																																																																																																													
Conditioned floor area below grade (ft²)	0																																																																																																																																													
7. Windows(131.0 sqft.)	Description	Area																																																																																																																																												
a. U-Factor:	Dbl, U=0.55	125.00 ft²																																																																																																																																												
SHGC:	SHGC=0.45																																																																																																																																													
b. U-Factor:	Dbl, U=0.40	6.00 ft²																																																																																																																																												
SHGC:	SHGC=0.25																																																																																																																																													
c. U-Factor:	N/A	ft²																																																																																																																																												
SHGC:																																																																																																																																														
Area Weighted Average Overhang Depth:	1.500 ft																																																																																																																																													
Area Weighted Average SHGC:	0.441																																																																																																																																													
8. Skylights	Description	Area																																																																																																																																												
U-Factor:(AVG)	N/A	N/A ft²																																																																																																																																												
SHGC(AVG):	N/A																																																																																																																																													
9. Floor Types	Insulation	Area																																																																																																																																												
a. Slab-On-Grade Edge Insulation	R= 0.0	1660.00 ft²																																																																																																																																												
b. N/A	R=	ft²																																																																																																																																												
c. N/A	R=	ft²																																																																																																																																												
10. Wall Types(1638.7 sqft.)	Insulation	Area																																																																																																																																												
a. Face Brick - Wood, Exterior	R=13.0	1458.70 ft²																																																																																																																																												
b. Frame - Wood, Adjacent	R=13.0	180.00 ft²																																																																																																																																												
c. N/A																																																																																																																																														
d. N/A																																																																																																																																														
11. Ceiling Types(1660.0 sqft.)	Insulation	Area																																																																																																																																												
a. Flat ceiling under att (Vented)	R=30.0	1660.00 ft²																																																																																																																																												
b. N/A																																																																																																																																														
c. N/A																																																																																																																																														
12. Roof(Comp. Shingles, Vented)	Deck R=0.0	1856 ft²																																																																																																																																												
13. Ducts, location & insulation level	R	ft²																																																																																																																																												
a. Sup: Attic, Ret: Attic, AH: Main	6	400																																																																																																																																												
b.																																																																																																																																														
c.																																																																																																																																														
14. Cooling Systems	kBtu/hr	Efficiency																																																																																																																																												
a. Central Unit	15.7	SEER2:14.30																																																																																																																																												
15. Heating Systems	kBtu/hr	Efficiency																																																																																																																																												
a. Electric Heat Pump	25.7	HSPF2:8.40																																																																																																																																												
16. Hot Water Systems																																																																																																																																														
a. Electric		Cap: 50 gallons																																																																																																																																												
		EF: 0.950																																																																																																																																												
b. Conservation features																																																																																																																																														
		None																																																																																																																																												
17. Credits		CF, Pstat																																																																																																																																												

Glass/Floor Area: 0.079      Total Proposed Modified Loads: 40.23  
 Total Baseline Loads: 46.30

**PASS**

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

PREPARED BY: William H. Freeman

DATE: 8/22/23

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: \_\_\_\_\_

- 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 with a proposed duct leakage Qn requires a PERFORMANCE Duct Leakage Test Report confirming duct leakage to outdoors, tested in accordance with ANSI/RESNET/ICC 380, is not greater than 0.040 Qn for whole house.
- Compliance requires a roof absorptance test and a roof emittance test in accordance with R405.7.2
- Compliance requires an Air Barrier and Insulation Inspection Checklist in accordance with R402.4.1.1 and this project requires a PERFORMANCE envelope leakage test report with envelope leakage no greater than 7.00 ACH50 (R402.4.1.2).

**INPUT SUMMARY CHECKLIST REPORT****PROJECT**

Title:	Lot 4 Crosswinds	Bedrooms:	3	Address type:	Lot
Building Type:	User	Conditioned Area:	1660	Lot #:	29
Owner:	TBD	Total Stories:	1	Block/SubDivision:	Crosswinds
Builder Home ID:		Worst Case:	No	PlatBook:	
Builder Name:	Trent Giebeig	Rotate Angle:	0	Street:	SW
Permit Office:	Columbia County	Cross Ventilation:	No	County:	Columbia
Jurisdiction:		Whole House Fan:	No	City, State, Zip:	Lake City, FL, 32055
Family Type:	Detached	Terrain:	Suburban		
New/Existing:	New (From Plans)	Shielding:	Suburban		
Year Construct:	2022				
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_REGIONA	32 92	70 75	1305.5	51	Medium

**BLOCKS**

✓ Number	Name	Area	Volume
___ 1	Block1	1660	14940 cu ft

**SPACES**

✓ Number	Name	Area	Volume	Kitchen	Occupants	Bedrooms	Finished	Cooled	Heated
___ 1	Main	1660	14940	Yes	3	3	Yes	Yes	Yes

**FLOORS**

(Total Exposed Area = 1660 sq.ft.)

✓ #	Floor Type	Space	Exposed Perim	Perimeter R-Value	Area	U-Factor	Joist R-Value	Tile	Wood	Carpet
___ 1	Slab-On-Grade Edge Ins	Main	182	0	1660 ft	0.657	---	0.60	0.00	0.40

**ROOF**

✓ #	Type	Materials	Roof Area	Gable Area	Roof Color	Rad Barr	Solar Absor.	SA Tested	Emitt	Emitt Tested	Deck Insul.	Pitch (deg)
___ 1	Hip	Compositionshingles	1856 ft²	0 ft²	Medium	N	0.75	Yes	0.9	Yes	0	26.57

**ATTIC**

✓ #	Type	Ventilation	Vent Ratio (1 in)	Area	RBS	IRCC
___ 1	Full attic	Vented	300	1660 ft²	N	N

**CEILING**

(Total Exposed Area = 1660 sq.ft.)

✓ #	Ceiling Type	Space	R-Value	Ins. Type	Area	U-Factor	Framing Frac.	Truss Type
___ 1	Flat ceiling under attic(Vented)	Main	30.0	Blown	1660.0ft²	0.030	0.11	Wood

# INPUT SUMMARY CHECKLIST REPORT

WALLS															(Total Exposed Area = 1639 sq.ft.)		
✓ #	Ornt	Adjacent To	Wall Type	Space	Cavity R-Value	Width Ft	In	Height Ft	In	Area sq.ft.	U-Factor	Sheath R-Value	Frm. Frac.	Solar Absor.	Below Grade		
___ 1	W	Exterior	Face Brick - Wood	Main	13.0	30.0	1	9.0	0	270.8	0.086	0	0.23	0.01	0 %		
___ 2	N	Exterior	Face Brick - Wood	Main	13.0	56.3	0	9.0	0	507.0	0.086		0.23	0.75	0 %		
___ 3	E	Exterior	Face Brick - Wood	Main	13.0	30.0	1	9.0	0	270.8	0.086		0.23	0.75	0 %		
___ 4	S	Exterior	Face Brick - Wood	Main	13.0	13.0	6	9.0	0	121.5	0.086		0.23	0.75	0 %		
___ 5	W	Exterior	Face Brick - Wood	Main	13.0	4.0	8	9.0	0	42.0	0.086		0.23	0.75	0 %		
___ 6	S	Exterior	Face Brick - Wood	Main	13.0	8.0	4	9.0	0	75.0	0.086		0.23	0.75	0 %		
___ 7	E	Exterior	Face Brick - Wood	Main	13.0	4.0	8	9.0	0	42.0	0.086		0.23	0.75	0 %		
___ 8	S	Exterior	Face Brick - Wood	Main	13.0	14.0	5	9.0	0	129.8	0.086		0.23	0.75	0 %		
___ 9	S	Garage	Frame - Wood	Main	13.0	20.0	0	9.0	0	180.0	0.084		0.23	0.75	0 %		

  

DOORS												(Total Exposed Area = 78 sq.ft.)		
✓ #	Ornt	Adjacent To	Door Type	Space	Storms	U-Value	Width Ft	In	Height Ft	In	Area			
___ 1	N	Exterior	Insulated	Main	None	0.40	6.00	0	6.00	8	40.0ft²			
___ 2	S	Exterior	Wood	Main	None	0.46	3.00	0	6.00	8	20.0ft²			
___ 3	S	Garage	Insulated	Main	None	0.46	2.00	8	6.00	8	17.8ft²			

  

WINDOWS															(Total Exposed Area = 131 sq.ft.)		
✓ #	Ornt	Wall ID	Frame	Panes	NFRC U-Factor	SHGC	Imp	Storm	Total Area (ft²)	Same Units	Width (ft)	Height (ft)	--Overhang-- Depth (ft)	Sep. (ft)	Interior Shade	Screen	
___ 1	W	1	Vinyl	Double (Tinted)	Y	0.40	0.25	N	N	6.0	1	2.00	3.00	1.5	1.0	IECC 2012	None
___ 2	W	1	Vinyl	Double (Tinted)	Y	0.55	0.45	N	N	20.0	2	2.00	5.00	1.5	1.0	Drapes/blinds	None
___ 3	N	2	Vinyl	Double (Tinted)	Y	0.55	0.45	N	N	45.0	3	3.00	5.00	1.5	1.0	Drapes/blinds	None
___ 4	N	2	Vinyl	Double (Tinted)	Y	0.55	0.45	N	N	9.0	1	3.00	3.00	1.5	1.0	Drapes/blinds	None
___ 5	S	4	Vinyl	Double (Tinted)	Y	0.55	0.45	N	N	15.0	1	3.00	5.00	1.5	1.0	Drapes/blinds	None
___ 6	S	8	Vinyl	Double (Tinted)	Y	0.55	0.45	N	N	36.0	1	6.00	6.00	1.5	1.0	Drapes/blinds	None

  

INFILTRATION										
✓ #	Scope	Method	SLA	CFM50	ELA	EqlA	ACH	ACH50	Space(s)	Infiltration Test Volume
___ 1	Wholehouse	Proposed ACH(50)	0.00040	1743	95.63	179.53	0.1438	7.0	All	14940 cu ft

  

GARAGE						
✓ #	Floor Area	Roof Area	Exposed Wall Perimeter	Avg. Wall Height	Exposed Wall Insulation	
___ 1	400 ft²	400 ft²	60 ft	9 ft	13	

  

MASS					
✓ #	Mass Type	Area	Thickness	Furniture Fraction	Space
___ 1	Default(8 lbs/sq.ft.)	0 ft²	0 ft	0.30	Main

  

HEATING SYSTEM										
✓ #	System Type	Subtype/Speed	AHRI #	Efficiency	Capacity kBtu/hr	---Geothermal HeatPump--- Entry Power	Volts	Current	Ducts	Block

# INPUT SUMMARY CHECKLIST REPORT

## HEATING SYSTEM(Continued)

___ 1	Electric Heat Pump	Split/Single	HSPF2: 8.40	25.7	0.00	0.00	0.00	sys#1	1
-------	--------------------	--------------	-------------	------	------	------	------	-------	---

## COOLING SYSTEM

✓ #	System Type	Subtype/Speed	AHRI #	Efficiency	Capacity kBtu/hr	Air Flow cfm	SHR	Duct	Block
___ 1	Central Unit	None/Single		SEER2:14.3	15.7	480	0.75	sys#1	1

## HOT WATER SYSTEM

✓ #	System Type	Subtype	Location	EF(UEF)	Cap	Use	SetPnt	FixtureFlow	Pipe Ins.	Pipe length
___ 1	Electric	None	Garage	0.95 (0.93)	50.00 gal	60 gal	120 deg	Low	None	50
	Recirculation System	Recirc Control Type	Loop length	Branch length	Pump power	DWHR	Facilities Connected	Equal Flow	DWHR Eff	Other Credits
___ 1	No		NA	NA	NA	No	NA	NA	NA	None

## DUCTS

✓ Duct #	Location	Supply R-Value	Supply Area	Return R-Value	Return Area	Leakage Type	Air Handler	CFM 25 TOT	CFM 25 OUT	QN	RLF	HVAC # Heat	HVAC # Cool	
___ 1	Attic	6.0	400 ft²	Attic	6.0	100 ft²	Proposed Qn	Main	---	---	0.04	0.50	1	1

## TEMPERATURES

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

Ceiling Fans: N

✓ Thermostat Schedule: FloridaCode 2014	Schedule Type	1	2	3	4	5	6	7	8	9	10	11	12
___ Cooling (WD)	AM PM	75 75	75 75	75 75	75 75	75 75	75 75	75 75	75 75	75 75	75 75	75 75	75 75
___ Cooling (WEH)	AM PM	75 75	75 75	75 75	75 75	75 75	75 75	75 75	75 75	75 75	75 75	75 75	75 75
___ Heating (WD)	AM PM	72 72	72 72	72 72	72 72	72 72	72 72	72 72	72 72	72 72	72 72	72 72	72 72
___ Heating (WEH)	AM PM	72 72	72 72	72 72	72 72	72 72	72 72	72 72	72 72	72 72	72 72	72 72	72 72