

Project Name: Lot 19 Russwood		Builder Name:	
Street:		Permit Office: Columbia County	
City, State, Zip: Lake City, FL, 32024		Permit Number:	
Owner: Peter & Anna Lev		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)		2530	
Conditioned floor area below grade (ft²)		0	
7. Windows(231.3 sqft.)		Description Area	
a. U-Factor:		Dbl, U=0.36 231.33 ft²	
SHGC:		SHGC=0.25	
b. U-Factor:		N/A ft²	
SHGC:			
c. U-Factor:		N/A ft²	
SHGC:			
Area Weighted Average Overhang Depth:		4.586 ft	
Area Weighted Average SHGC:		0.250	
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 2530.00 ft²	
b. N/A		R= ft²	
c. N/A		R= ft²	
10. Wall Types(1974.0 sqft.)		Insulation Area	
a. Frame - Wood, Exterior		R=13.0 1630.50 ft²	
b. Frame - Wood, Adjacent		R=13.0 343.50 ft²	
c. N/A			
d. N/A			
11. Ceiling Types(2783.0 sqft.)		Insulation Area	
a. Flat ceiling under att (Vented)		R=38.0 2783.00 ft²	
b. N/A			
c. N/A			
12. Roof(Comp. Shingles, Vented)		Deck R=0.0 3041 ft²	
13. Ducts, location & insulation level		R ft²	
a. Sup: Attic, Ret: Attic, AH: 1st Floor		6 633	
b.			
c.			
14. Cooling Systems		kBtu/hr Efficiency	
a. Central Unit		29.7 SEER2:16.00	
15. Heating Systems		kBtu/hr Efficiency	
a. Electric Heat Pump		34.6 HSPF2:8.80	
16. Hot Water Systems			
a. Electric		Cap: 50 gallons	
		EF: 0.920	
b. Conservation features			
		None	
17. Credits		CV, Pstat	

Glass/Floor Area:0.091	Total Proposed Modified Loads: 54.72
	Total Baseline Loads: 57.73

NOTE: Proposed residence must have annual total normalized Modified Loads that are less than or equal to 95 percent of the annual total loads of the standard reference design in order to comply.

I hereby certify that the plans and specifications covered by this calculation are in compliance with the Florida Energy Code.	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.
PREPARED BY:	
DATE: 01 / 15 / 2024	
I hereby certify that this building, as designed, is in compliance with the Florida Energy Code.	
OWNER/AGENT: _____	BUILDING OFFICIAL: _____
DATE: _____	DATE: _____

- 1/15/2024 3:04:44 PM EnergyGauge® USA 8.0.00 - FlaRes2023 FBC 8th Edition (2023) Compliant Software Page 1

INPUT SUMMARY CHECKLIST REPORT

PROJECT													
Title:	Lot 19 Russwood			Bedrooms:	4	Address type:	Lot						
Building Type:	User			Conditioned Area:	2530	Lot #:	19						
Owner:	Peter & Anna Lev			Total Stories:	1	Block/SubDivision:	Russwood						
Builder Home ID:				Worst Case:	No	PlatBook:							
Builder Name:				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:	Detached			Terrain:	Suburban								
New/Existing:	New (From Plans)			Shielding:	Suburban								
Year Construct:	2024												
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	2530	22770 cu ft										
SPACES													
✓ Number	Name	Area	Volume	Kitchen	Occupants	Bedrooms	Finished	Cooled	Heated				
___ 1	1st Floor	2530	22770	Yes	8	4	Yes	Yes	Yes				
FLOORS (Total Exposed Area = 2530 sq.ft.)													
✓ #	Floor Type	Space	Exposed Perim(ft)	Area	R-Value Perim.	U-Factor Joist	Slab Insul. Vert/Horiz	Tile	Wood	Carpet			
___ 1	Slab-On-Grade Edge Ins	1st Floor	219.3	2530 sqft	0	---	0.304	2 (ft)/0 (ft)	0.00	0.00	1.00		
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	3041 ft²	0 ft²	Medium	Y	0.96	No	0.9	No	0	33.69	
ATTIC													
✓ #	Type	Ventilation	Vent Ratio (1 in)	Area	RBS	IRCC							
___ 1	Full attic	Vented	300	2530 ft²	Y	N							
CEILING (Total Exposed Area = 2783 sq.ft.)													
✓ #	Ceiling Type	Space	R-Value	Ins. Type	Area	U-Factor	Framing Frac.	Truss Type					
___ 1	Flat ceiling under attic(Vented)	1st Floor	38.0	Double Batt	2783.0ft²	0.024	0.11	Wood					

INPUT SUMMARY CHECKLIST REPORT

WALLS															(Total Exposed Area = 1974 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	N	Exterior	Frame - Wood	1st Floor	13.0	28.0	0	9.0	0	252.0	0.084		0.23	0.75	0 %				
___ 2	N	Exterior	Frame - Wood	1st Floor	13.0	16.0	4	9.0	0	147.0	0.084		0.23	0.75	0 %				
___ 3	W	Exterior	Frame - Wood	1st Floor	13.0	43.0	8	9.0	0	393.0	0.084		0.23	0.75	0 %				
___ 4	S	Exterior	Frame - Wood	1st Floor	13.0	16.0	4	9.0	0	147.0	0.084		0.23	0.75	0 %				
___ 5	S	Exterior	Frame - Wood	1st Floor	13.0	19.0	4	9.0	0	174.0	0.084		0.23	0.75	0 %				
___ 6	S	Exterior	Frame - Wood	1st Floor	13.0	30.0	4	9.0	0	273.0	0.084		0.23	0.75	0 %				
___ 7	E	Exterior	Frame - Wood	1st Floor	13.0	27.0	2	9.0	0	244.5	0.084		0.23	0.75	0 %				
___ 8	N	Garage	Frame - Wood	1st Floor	13.0	21.0	4	9.0	0	192.0	0.084		0.23	0.75	0 %				
___ 9	E	Garage	Frame - Wood	1st Floor	13.0	16.0	10	9.0	0	151.5	0.084		0.23	0.75	0 %				

DOORS												(Total Exposed Area = 40 sq.ft.)		
✓ #	Ornt	Adjacent To	Door Type	Space	Storms	U-Value	Width Ft	In	Height Ft	In	Area			
___ 1	N	Exterior	Insulated	1st Floor	None	0.46	3.00	0	6.00	8	20.0ft²			
___ 2	E	Garage	Insulated	1st Floor	None	0.46	3.00	0	6.00	8	20.0ft²			

WINDOWS																	(Total Exposed Area = 231 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	N	1	Vinyl	Low-E Double	Y	0.36	0.25	N	N	9.0	1	3.00	3.00	7.5	1.0	None	None		
___ 2	N	1	Vinyl	Low-E Double	Y	0.36	0.25	N	N	30.0	2	3.00	5.00	7.5	1.0	None	None		
___ 3	N	1	TIM	Low-E Double	Y	0.36	0.25	N	N	13.3	2	1.00	6.67	7.5	1.0	None	None		
___ 4	N	2	Vinyl	Low-E Double	Y	0.36	0.25	N	N	30.0	2	3.00	5.00	1.5	1.0	None	None		
___ 5	W	3	Vinyl	Low-E Double	Y	0.36	0.25	N	N	15.0	1	3.00	5.00	1.5	1.0	None	None		
___ 6	W	3	Vinyl	Low-E Double	Y	0.36	0.25	N	N	4.0	1	4.00	1.00	1.5	1.0	None	None		
___ 7	S	4	Vinyl	Low-E Double	Y	0.36	0.25	N	N	30.0	2	3.00	5.00	1.5	1.0	None	None		
___ 8	S	5	TIM	Low-E Double	Y	0.36	0.25	N	N	40.0	2	3.00	6.67	11.5	1.0	None	None		
___ 9	S	6	Vinyl	Low-E Double	Y	0.36	0.25	N	N	30.0	2	3.00	5.00	1.5	1.0	None	None		
___ 10	E	7	Vinyl	Low-E Double	Y	0.36	0.25	N	N	10.0	1	2.00	5.00	1.5	1.0	None	None		
___ 11	E	7	Vinyl	Low-E Double	Y	0.36	0.25	N	N	20.0	1	5.00	4.00	1.5	1.0	None	None		

INFILTRATION										
✓ #	Scope	Method	SLA	CFM50	ELA	EqLA	ACH	ACH50	Space(s)	Infiltration Test Volume
___ 1	Wholehouse	Proposed ACH(50)	0.00040	2657	145.74	273.62	0.1438	7.0	All	22770 cu ft

GARAGE					
✓ #	Floor Area	Roof Area	Exposed Wall Perimeter	Avg. Wall Height	Exposed Wall Insulation
___ 1	557 ft²	557 ft²	58 ft	9 ft	1

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

INPUT SUMMARY CHECKLIST REPORT

HEATING SYSTEM

✓ #	System Type	Subtype/Speed	AHRI #	Efficiency	Capacity kBtu/hr	----Geothermal Entry	HeatPump---- Power	Ducts Volt	Block Current
___ 1	Electric Heat Pump	None/Single		HSPF2: 8.80	34.6		0.00	0.00	0.00 sys#1

COOLING SYSTEM

✓ #	System Type	Subtype/Speed	AHRI #	Efficiency	Capacity kBtu/hr	Air Flow cfm	SHR	Duct	Block
___ 1	Central Unit	None/Single		SEER2:16.0	29.7	900	0.75	sys#1	1

HOT WATER SYSTEM

✓ #	System Type	Subtype	Location	EF(UEF)	Cap	Use	SetPnt	Fixture Flow	Pipe Ins.	Pipe length
___ 1	Electric	None	Garage	0.92 (0.92)	50.00 gal	40 gal	120 deg	Standard	None	12
	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 #	-----Supply----- Location	R-Value	Area	-----Return----- Location	R-Value	Area	Leakage Type	Air Handler	CFM 25 TOT	CFM 25 OUT	QN OUT	RLF	HVAC # Heat Cool
___ 1	Attic	6.0	633 ft²	Attic	6.0	127 ft²	Default Leakage	1st Floor	(Default)	(Default)			1 1

TEMPERATURES

Programable Thermostat: Y					Ceiling Fans: N									
Cooling	[] Jan	[] Feb	[] Mar	[] Apr	[] May	[X] Jun	[X] Jul	[X] Aug	[X] Sep	[] Oct	[] Nov	[] Dec		
Heating	[X] Jan	[X] Feb	[X] Mar	[] Apr	[] May	[] Jun	[] Jul	[] Aug	[] Sep	[] Oct	[X] Nov	[X] Dec		
Venting	[] Jan	[] Feb	[X] Mar	[X] Apr	[] May	[] Jun	[] Jul	[] Aug	[] Sep	[X] Oct	[X] Nov	[] Dec		
✓ Thermostat Schedule: HERS 2006 Reference	Schedule Type	1	2	3	4	5	6	Hours 7	8	9	10	11	12	
___ Cooling (WD)	AM PM	78 80	78 80	78 78	78 78	78 78	78 78	78 78	78 78	80 78	80 78	80 78	80 78	
___ Cooling (WEH)	AM PM	78 78	78 78	78 78	78 78	78 78	78 78	78 78	78 78	78 78	78 78	78 78	78 78	
___ Heating (WD)	AM PM	66 68	66 68	66 68	66 68	66 68	68 68	68 68	68 68	68 68	68 68	68 66	68 66	
___ Heating (WEH)	AM PM	66 68	66 68	66 68	66 68	66 68	68 68	68 68	68 68	68 68	68 68	68 66	68 66	

ENERGY PERFORMANCE LEVEL (EPL) DISPLAY CARD

ESTIMATED ENERGY PERFORMANCE INDEX* = 95

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

,Lake City,FL,32024

1. New construction or existing	New (From Plans)	10. Wall Types(1974.0 sqft.)	Insulation	Area
2. Single family or multiple family	Detached	a. Frame - Wood, Exterior	R=13.0	1630.50 ft ²
3. Number of units, if multiple family	1	b. Frame - Wood, Adjacent	R=13.0	343.50 ft ²
4. Number of Bedrooms	4	c. N/A		
5. Is this a worst case?	No	d. N/A		
6. Conditioned floor area above grade (ft ²)	2530	11. Ceiling Types(2783.0 sqft.)	Insulation	Area
Conditioned floor area below grade (ft ²)	0	a. Flat ceiling under att (Vented)	R=38.0	2783.00 ft ²
7. Windows**	Description	b. N/A		
a. U-Factor:	Dbl, U=0.36	c. N/A		
SHGC:	SHGC=0.25	12. Roof(Comp. Shingles, Vented) Deck	R=0.0	3041 ft ²
b. U-Factor:	N/A	13. Ducts, location & insulation level	R	ft ²
SHGC:		a. Sup: Attic, Ret: Attic, AH: 1st Floor	6	633
c. U-Factor:	N/A	b.		
SHGC:		c.		
Area Weighted Average Overhang Depth:	4.586 ft	14. Cooling Systems	kBtu/hr	Efficiency
Area Weighted Average SHGC:	0.250	a. Central Unit	29.7	SEER2:16.00
8. Skylights	Description	Area		
U-Factor:(AVG)	N/A	N/A ft ²		
SHGC(AVG):	N/A			
9. Floor Types	Insulation	Area		
a. Slab-On-Grade Edge Insulation	R= 0.0	2530.00 ft ²		
b. N/A	R=	ft ²		
c. N/A	R=	ft ²		
		15. Heating Systems	kBtu/hr	Efficiency
		a. Electric Heat Pump	34.6	HSPF2:8.80
		16. Hot Water Systems		
		a. Electric	Cap: 50 gallons	
			EF: 0.920	
		b. Conservation features		
			None	
		17. Credits	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: _____ Date: _____

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



*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.

Envelope Leakage Test Report (Blower Door Test)
Residential Prescriptive, Performance or ERI Method Compliance
2023 Florida Building Code, Energy Conservation, 8th Edition

Jurisdiction:	Permit #:	
Job Information		
Builder:	Community:	Lot: 19
Address:		
City: Lake City	State: FL	Zip: 32024
Air Leakage Test Results <i>Passing results must meet either the Performance, Prescriptive, or ERI Method</i>		
☐ 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 R405-2023 (Performance) or R406-2023 (ERI), section labeled as infiltration, sub-section ACH50. ACH(50) specified on Form R405-2023-Energy Calc (Performance) or R406-2023 (ERI): 7.000		
$\frac{\text{CFM}(50)}{\text{Building Volume}} \times 60 \div \frac{22770}{\text{ACH}(50)} =$ 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. 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. Dwelling units with an air leakage rate less than three air changes per hour shall be provided with whole-house mechanical ventilation in accordance with Section R403.6.1 of this code and Section M1507.3 if the <i>Florida Building Code, Residential</i>. 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 trade official <i>code official</i>. Testing shall be performed at any time after creation of all penetrations of the building <i>building thermal envelope</i>. 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. 7. If an attic is both 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 the infiltration volume and calculating the air leakage of the home.		
Testing Company		
Company Name: _____ Phone: _____ I hereby verify that the above Air Leakage results are in accordance with the 2023 8th 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: _____		

Residential System Sizing Calculation

Summary

Peter & Anna Lev

Project Title:
Lot 19 Russwood

Lake City, FL 32024

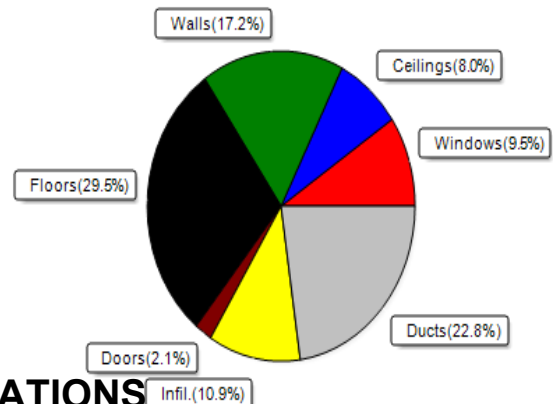
1/15/2024

Location for weather data: Gainesville, FL - Defaults: Latitude(29.7) Altitude(152 ft.) Temp Range(M)					
Humidity data: Interior RH (50%) Outdoor wet bulb (79F) Humidity difference(54gr.)					
Winter design temperature(MJ8 99%/Cu)33 F			Summer design temperature(MJ8 99%/Cu)99 F		
Winter setpoint 70 F			Summer setpoint 75 F		
Winter temperature difference 37 F			Summer temperature difference 24 F		
Total heating load calculation 32471 Btuh			Total cooling load calculation 32500 Btuh		
Submitted heating capacity % of calc Btuh			Submitted cooling capacity % of calc Btuh		
Total (Electric Heat Pump) 106.4 34553			Sensible (SHR = 0.75) 83.9 22261		
Heat Pump + Auxiliary(0.0kW) 106.4 34553			Latent 124.3 7420		
			Total (Electric Heat Pump) 91.3 29682		

WINTER CALCULATIONS

Winter Heating Load (for 2530 sqft)

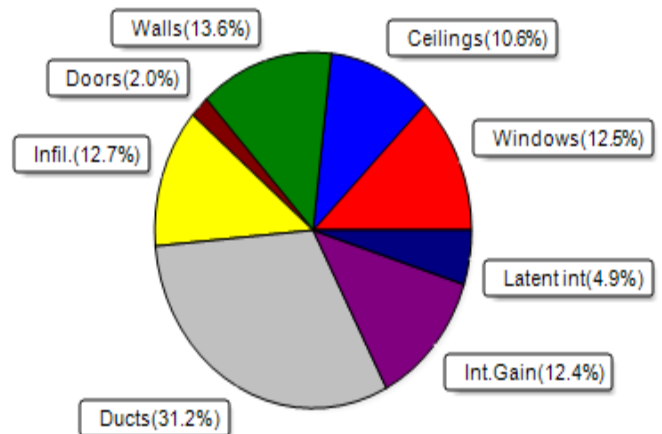
Load component	Load
Window total	231 sqft 3081 Btuh
Wall total	1703 sqft 5592 Btuh
Door total	40 sqft 681 Btuh
Ceiling total	2783 sqft 2613 Btuh
Floor total	2530 sqft 9575 Btuh
Infiltration	87 cfm 3536 Btuh
Duct loss	7393 Btuh
Subtotal	32471 Btuh
Ventilation Ex:0 cfm; Sup:0 cfm	0 Btuh
TOTAL HEAT LOSS	32471 Btuh



SUMMER CALCULATIONS

Summer Cooling Load (for 2530 sqft)

Load component	Load
Window total	231 sqft 4074 Btuh
Wall total	1703 sqft 4423 Btuh
Door total	40 sqft 644 Btuh
Ceiling total	2783 sqft 3461 Btuh
Floor total	0 Btuh
Infiltration	65 cfm 1720 Btuh
Internal gain	4040 Btuh
Duct gain	8169 Btuh
Sens.Ventilation Ex:0 cfm; Sup:0 cfm	0 Btuh
Blower Load	0 Btuh
Total sensible gain	26531 Btuh
Latent gain(ducts)	1976 Btuh
Latent gain(infiltration)	2393 Btuh
Latent gain(ventilation)	0 Btuh
Latent gain(internal/occupants/other)	1600 Btuh
Total latent gain	5969 Btuh
TOTAL HEAT GAIN	32500 Btuh



8th Edition

EnergyGauge® System Sizing

PREPARED BY: _____

DATE: _____ 01 / 15 / 2024

Wendy C. Smith

System Sizing Calculations - Winter

Residential Load - Whole House Component Details

Peter & Anna Lev

Project Title:
Lot 19 Russwood
Building Type: User

Lake City, FL 32024

1/15/2024

Reference City: Gainesville, FL (Defaults) Winter Temperature Difference: 37.0 °F (MJ8 99%/Cu)
Winter Setpoint: 70 °F (Required Manual J default)

Component Loads for Whole House

Window	Panes/Type	Frame	U	Orientation	Area(sqft)	X	HTM=	Load
1	2, NFRC 0.25	Vinyl	0.36	N	9.0		13.3	120 Btuh
2	2, NFRC 0.25	Vinyl	0.36	N	30.0		13.3	400 Btuh
3	2, NFRC 0.25	TIM	0.36	N	13.3		13.3	178 Btuh
4	2, NFRC 0.25	Vinyl	0.36	N	30.0		13.3	400 Btuh
5	2, NFRC 0.25	Vinyl	0.36	W	15.0		13.3	200 Btuh
6	2, NFRC 0.25	Vinyl	0.36	W	4.0		13.3	53 Btuh
7	2, NFRC 0.25	Vinyl	0.36	S	30.0		13.3	400 Btuh
8	2, NFRC 0.25	TIM	0.36	S	40.0		13.3	533 Btuh
9	2, NFRC 0.25	Vinyl	0.36	S	30.0		13.3	400 Btuh
10	2, NFRC 0.25	Vinyl	0.36	E	10.0		13.3	133 Btuh
11	2, NFRC 0.25	Vinyl	0.36	E	20.0		13.3	266 Btuh
Window Total					231.3(sqft)			3081 Btuh
Walls	Type	Ornt.	Ueff.	R-Value (Cav/Sh)	Area	X	HTM=	Load
1	Frame - Wood	- Ext	(0.089)	13.0/0.0	180		3.28	590 Btuh
2	Frame - Wood	- Ext	(0.089)	13.0/0.0	117		3.28	384 Btuh
3	Frame - Wood	- Ext	(0.089)	13.0/0.0	374		3.28	1228 Btuh
4	Frame - Wood	- Ext	(0.089)	13.0/0.0	117		3.28	384 Btuh
5	Frame - Wood	- Ext	(0.089)	13.0/0.0	134		3.28	440 Btuh
6	Frame - Wood	- Ext	(0.089)	13.0/0.0	243		3.28	798 Btuh
7	Frame - Wood	- Ext	(0.089)	13.0/0.0	215		3.28	704 Btuh
8	Frame - Wood	- Adj	(0.089)	13.0/0.0	192		3.28	631 Btuh
9	Frame - Wood	- Adj	(0.089)	13.0/0.0	132		3.28	432 Btuh
Wall Total					1703(sqft)			5592 Btuh
Doors	Type	Storm	Ueff.		Area	X	HTM=	Load
1	Insulated - Exterior, n		(0.460)		20		17.0	340 Btuh
2	Insulated - Garage, n		(0.460)		20		17.0	340 Btuh
Door Total					40(sqft)			681Btuh
Ceilings	Type/Color/Surface		Ueff.	R-Value	Area	X	HTM=	Load
1	Flat ceil/D/Shing		(0.025)	38.0/0.0	2783		0.94	2613 Btuh
Ceiling Total					2783(sqft)			2613Btuh
Floors	Type		Ueff.	R-Value	Size	X	HTM=	Load
1	Slab On Grade		(1.180)	0.0	219.3 ft(perim.)		43.7	9575 Btuh
Floor Total					2530 sqft			9575 Btuh
Envelope Subtotal:								21542 Btuh
Infiltration	Type	Wholehouse	ACH	Volume(cuft)	Wall Ratio	CFM=		Load
	Natural		0.23	22770	1.00	87.3		3536 Btuh
Duct load	Average sealed, R6.0, Supply(Att), Return(Att) (DLM of 0.295)							7393 Btuh

Manual J Winter Calculations

Residential Load - Component Details (continued)

Peter & Anna Lev

Project Title:
Lot 19 Russwood
Building Type: User

Lake City, FL 32024

1/15/2024

All Zones	Sensible Subtotal All Zones	32471 Btuh
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WHOLE HOUSE TOTALS

Totals for Heating	Subtotal Sensible Heat Loss Ventilation Sens. Heat Loss (Ex:0 cfm; Sup:0 cfm) Total Heat Loss	32471 Btuh 0 Btuh 32471 Btuh
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EQUIPMENT

1. Electric Heat Pump	#	34553 Btuh
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Key: Window types - NFRC (Requires U-Factor and Shading coefficient(SHGC) of glass as numerical values)
or - Glass as 'Clear' or 'Tint' (Uses U-Factor and SHGC defaults)

U - (Window U-Factor)

HTM - (ManualJ Heat Transfer Multiplier)



Version 8

System Sizing Calculations - Summer

Residential Load - Whole House Component Details

Peter & Anna Lev

Project Title:
Lot 19 Russwood

Lake City, FL 32024

1/15/2024

Reference City: Gainesville, FL (Defaults)
Humidity difference: 54gr.

Temperature Difference: 24.0F(MJ8 99%/Cu)
Summer Setpoint: 75 °F (Required Manual J default)

Component Loads for Whole House

Window	Type*						Overhang		Window Area(sqft)			HTM		Load	
	Panes	SHGC	U	InSh	IS	Ornt	Len	Hgt	Gross	Shaded	Unshaded	Shaded	Unshaded		
1	2 NFRC	0.25, 0.36	No	No	N		7.5ft.	1.0ft.	9.0	0.0	9.0	14	14	125	Btuh
2	2 NFRC	0.25, 0.36	No	No	N		7.5ft.	1.0ft.	30.0	0.0	30.0	14	14	417	Btuh
3	2 NFRC	0.25, 0.36	No	No	N		7.5ft.	1.0ft.	13.3	0.0	13.3	14	14	185	Btuh
4	2 NFRC	0.25, 0.36	No	No	N		1.5ft.	1.0ft.	30.0	0.0	30.0	14	14	417	Btuh
5	2 NFRC	0.25, 0.36	No	No	W		1.5ft.	1.0ft.	15.0	0.7	14.3	14	33	477	Btuh
6	2 NFRC	0.25, 0.36	No	No	W		1.5ft.	1.0ft.	4.0	1.0	3.0	14	33	113	Btuh
7	2 NFRC	0.25, 0.36	No	No	S		1.5ft.	1.0ft.	30.0	30.0	0.0	14	16	417	Btuh
8	2 NFRC	0.25, 0.36	No	No	S		11.5f	1.0ft.	40.0	40.0	0.0	14	16	556	Btuh
9	2 NFRC	0.25, 0.36	No	No	S		1.5ft.	1.0ft.	30.0	30.0	0.0	14	16	417	Btuh
10	2 NFRC	0.25, 0.36	No	No	E		1.5ft.	1.0ft.	10.0	0.5	9.5	14	33	318	Btuh
11	2 NFRC	0.25, 0.36	No	No	E		1.5ft.	1.0ft.	20.0	1.2	18.8	14	33	632	Btuh
Window Total									231 (sqft)					4074 Btuh	
Walls	Type						U-Value	R-Value	Area(sqft)		HTM		Load		
							Cav/Sheath								
1	Frame - Wood - Ext						0.09	13.0/0.0	179.7		2.7		486 Btuh		
2	Frame - Wood - Ext						0.09	13.0/0.0	117.0		2.7		317 Btuh		
3	Frame - Wood - Ext						0.09	13.0/0.0	374.0		2.7		1012 Btuh		
4	Frame - Wood - Ext						0.09	13.0/0.0	117.0		2.7		317 Btuh		
5	Frame - Wood - Ext						0.09	13.0/0.0	134.0		2.7		363 Btuh		
6	Frame - Wood - Ext						0.09	13.0/0.0	243.0		2.7		658 Btuh		
7	Frame - Wood - Ext						0.09	13.0/0.0	214.5		2.7		581 Btuh		
8	Frame - Wood - Adj						0.09	13.0/0.0	192.0		2.1		409 Btuh		
9	Frame - Wood - Adj						0.09	13.0/0.0	131.5		2.1		280 Btuh		
Wall Total									1703 (sqft)					4423 Btuh	
Doors	Type								Area (sqft)		HTM		Load		
	Insulated - Exterior								20.0		16.1		322 Btuh		
2	Insulated - Garage								20.0		16.1		322 Btuh		
Door Total									40 (sqft)					644 Btuh	
Ceilings	Type/Color/Surface						U-Value	R-Value	Area(sqft)		HTM		Load		
	Vented Attic/DarkShingle/RB						0.025	38.0/0.0	2783.0		1.24		3461 Btuh		
Ceiling Total									2783 (sqft)					3461 Btuh	
Floors	Type						R-Value		Size		HTM		Load		
	Slab On Grade						0.0		2530 (ft-perimeter)		0.0		0 Btuh		
Floor Total									2530.0 (sqft)					0 Btuh	
Envelope Subtotal:													12602 Btuh		

Manual J Summer Calculations

Residential Load - Component Details (continued)

Peter & Anna Lev

Project Title:
Lot 19 Russwood

Climate:FL_GAINESVILLE_REGIONAL_A

Lake City, FL 32024

1/15/2024

Infiltration	Type Natural	Average ACH 0.17	Volume(cuft) 22770	Wall Ratio 1	CFM= 65.5	Load 1720 Btuh
Internal gain		Occupants 8	Btuh/occupant X 230	Appliance +	2200	Load 4040 Btuh
	Sensible Envelope Load:					18362 Btuh
Duct load	Average sealed,Supply(R6.0-Attic), Return(R6.0-Attic) (DGM of 0.445)					8169 Btuh
	Sensible Load All Zones					26531 Btuh

Manual J Summer Calculations

Residential Load - Component Details (continued)

Peter & Anna Lev

Project Title:
Lot 19 Russwood

Climate:FL_GAINESVILLE_REGIONAL_A

Lake City, FL 32024

1/15/2024

WHOLE HOUSE TOTALS

Whole House Totals for Cooling	Sensible Envelope Load All Zones	18362 Btuh
	Sensible Duct Load	8169 Btuh
	Total Sensible Zone Loads	26531 Btuh
	Sensible ventilation (Ex:0 cfm; Sup:0 cfm)	0 Btuh
	Blower	0 Btuh
	Total sensible gain	26531 Btuh
	Latent infiltration gain (for 54 gr. humidity difference)	2393 Btuh
	Latent ventilation gain	0 Btuh
	Latent duct gain	1976 Btuh
	Latent occupant gain (8.0 people @ 200 Btuh per person)	1600 Btuh
	Latent other gain	0 Btuh
	Latent total gain	5969 Btuh
	TOTAL GAIN	32500 Btuh

EQUIPMENT

1. Central Unit	#	29682 Btuh
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*Key: Window types (Panels - Number and type of panes of glass)

(SHGC - Shading coefficient of glass as SHGC numerical value)

(U - Window U-Factor)

(InSh - Interior shading device: none(No), Blinds(B), Draperies(D) or Roller Shades(R))

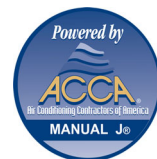
- For Blinds: Assume medium color, half closed

For Draperies: Assume medium weave, half closed

For Roller shades: Assume translucent, half closed

(IS - Insect screen: none(N), Full(F) or Half(½))

(Ornt - compass orientation)



Version 8