

Project Name: 352 SW Buttercup Lane Street: 352 SW Buttercup Lane City, State, Zip: Lake City, FL, 32025 Owner: Design Location: FL, Gainesville	Builder Name: Permit Office: Columbia County Permit Number: Jurisdiction: County: Columbia(Florida Climate Zone 2)
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<table style="width: 100%;"> <tr> <td style="width: 40%;">1. New construction or existing</td> <td style="width: 60%;">New (From Plans)</td> </tr> <tr> <td>2. Single family or multiple family</td> <td>Detached</td> </tr> <tr> <td>3. Number of units, if multiple family</td> <td>1</td> </tr> <tr> <td>4. Number of Bedrooms</td> <td>4</td> </tr> <tr> <td>5. Is this a worst case?</td> <td>No</td> </tr> <tr> <td>6. Conditioned floor area above grade (ft²)</td> <td>1841</td> </tr> <tr> <td>Conditioned floor area below grade (ft²)</td> <td>0</td> </tr> <tr> <td>7. Windows(177.0 sqft.)</td> <td>Description Area</td> </tr> <tr> <td>a. U-Factor:</td> <td>Dbl, U=0.36 177.00 ft²</td> </tr> <tr> <td>SHGC:</td> <td>SHGC=0.25</td> </tr> <tr> <td>b. U-Factor:</td> <td>N/A ft²</td> </tr> <tr> <td>SHGC:</td> <td></td> </tr> <tr> <td>c. U-Factor:</td> <td>N/A ft²</td> </tr> <tr> <td>SHGC:</td> <td></td> </tr> <tr> <td colspan="2">Area Weighted Average Overhang Depth: 4.325 ft</td> </tr> <tr> <td colspan="2">Area Weighted Average SHGC: 0.250</td> </tr> <tr> <td>8. Skylights</td> <td>Description Area</td> </tr> <tr> <td>U-Factor:(AVG)</td> <td>N/A N/A ft²</td> </tr> <tr> <td>SHGC(AVG):</td> <td>N/A</td> </tr> <tr> <td>9. Floor Types</td> <td>Insulation Area</td> </tr> <tr> <td>a. Slab-On-Grade Edge Insulation</td> <td>R= 0.0 1841.00 ft²</td> </tr> <tr> <td>b. N/A</td> <td>R= ft²</td> </tr> <tr> <td>c. N/A</td> <td>R= 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	4	5. Is this a worst case?	No	6. Conditioned floor area above grade (ft ²)	1841	Conditioned floor area below grade (ft ²)	0	7. Windows(177.0 sqft.)	Description Area	a. U-Factor:	Dbl, U=0.36 177.00 ft ²	SHGC:	SHGC=0.25	b. U-Factor:	N/A ft ²	SHGC:		c. U-Factor:	N/A ft ²	SHGC:		Area Weighted Average Overhang Depth: 4.325 ft		Area Weighted Average SHGC: 0.250		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 1841.00 ft ²	b. N/A	R= ft ²	c. N/A	R= ft ²	<table style="width: 100%;"> <tr> <td style="width: 40%;">10. Wall Types(1713.0 sqft.)</td> <td style="width: 10%;">Insulation</td> <td style="width: 50%;">Area</td> </tr> <tr> <td>a. Frame - Wood, Exterior</td> <td>R=13.0</td> <td>1477.50 ft²</td> </tr> <tr> <td>b. Frame - Wood, Adjacent</td> <td>R=13.0</td> <td>235.50 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(1933.0 sqft.)</td> <td>Insulation</td> <td>Area</td> </tr> <tr> <td>a. Flat ceiling under att (Vented)</td> <td>R=38.0</td> <td>1933.00 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>2213 ft²</td> </tr> <tr> <td>13. Ducts, location & insulation level</td> <td>R</td> <td>ft²</td> </tr> <tr> <td>a. Sup: Attic, Ret: Attic, AH: 1st Floor</td> <td>6</td> <td>460</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>21.9</td> <td>SEER2:14.00</td> </tr> <tr> <td>15. Heating Systems</td> <td>kBtu/hr</td> <td>Efficiency</td> </tr> <tr> <td>a. Electric Heat Pump</td> <td>27.3</td> <td>HSPF2:8.20</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: 0.920</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>CV, Pstat</td> </tr> </table>	10. Wall Types(1713.0 sqft.)	Insulation	Area	a. Frame - Wood, Exterior	R=13.0	1477.50 ft ²	b. Frame - Wood, Adjacent	R=13.0	235.50 ft ²	c. N/A			d. N/A			11. Ceiling Types(1933.0 sqft.)	Insulation	Area	a. Flat ceiling under att (Vented)	R=38.0	1933.00 ft ²	b. N/A			c. N/A			12. Roof(Comp. Shingles, Vented)	Deck R=0.0	2213 ft ²	13. Ducts, location & insulation level	R	ft ²	a. Sup: Attic, Ret: Attic, AH: 1st Floor	6	460	b.			c.			14. Cooling Systems	kBtu/hr	Efficiency	a. Central Unit	21.9	SEER2:14.00	15. Heating Systems	kBtu/hr	Efficiency	a. Electric Heat Pump	27.3	HSPF2:8.20	16. Hot Water Systems			a. Electric		Cap: 50 gallons			EF: 0.920	b. Conservation features					None	17. Credits		CV, Pstat
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Glass/Floor Area:0.096	Total Proposed Modified Loads: 43.78	PASS
	Total Baseline Loads: 47.72	

I hereby certify that the plans and specifications covered by this calculation are in compliance with the Florida Energy Code. <div style="text-align: center;"> </div> PREPARED BY: _____ DATE: <u>7 / 26 / 2023</u>	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. <div style="text-align: center;"> </div> BUILDING OFFICIAL: _____ DATE: _____
I hereby certify that this building, as designed, is in compliance with the Florida Energy Code. OWNER/AGENT: _____ DATE: _____	

- 7/25/2023 5:07:54 PM EnergyGauge® USA 7.0.00 - FlaRes2020 FBC 7th Edition (2020) Compliant Software Page 1

INPUT SUMMARY CHECKLIST REPORT

PROJECT																								
Title:	352 SW Buttercup Lane			Bedrooms:	4			Address type:	Street Address															
Building Type:	User			Conditioned Area:	1841			Lot #:	---															
Owner:				Total Stories:	1			Block/SubDivision:	---															
Builder Home ID:				Worst Case:	No			PlatBook:	---															
Builder Name:				Rotate Angle:	0			Street:	352 SW Buttercup Lane															
Permit Office:	Columbia County			Cross Ventilation:	Yes			County:	Columbia															
Jurisdiction:				Whole House Fan:	No			City, State, Zip:	Lake City, FL, 32025															
Family Type:	Detached			Terrain:	Suburban																			
New/Existing:	New (From Plans)			Shielding:	Suburban																			
Year Construct:	2023																							
Comment:																								
CLIMATE																								
✓ Design Location	Tmy Site			Design Temp		97.5% 2.5%		Int Design Temp		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		1841		16569 cu ft																			
SPACES																								
✓ Number	Name		Area		Volume		Kitchen		Occupants		Bedrooms		Finished		Cooled		Heated							
___ 1	1st Floor		1841		16569		Yes		8		4		Yes		Yes		Yes							
FLOORS														(Total Exposed Area = 1841 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		1st Floor		198		0		1841 ft		0.304		---		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		2213 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		1841 ft²		Y		N													
CEILING														(Total Exposed Area = 1933 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		1933.0ft²		0.024		0.11		Wood									

INPUT SUMMARY CHECKLIST REPORT

WALLS (Total Exposed Area = 1713 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	32.0	2	9.0	0	289.5	0.084		0.23	0.75	0 %	
___ 2	N	Garage	Frame - Wood	1st Floor	13.0	26.0	2	9.0	0	235.5	0.084		0.23	0.75	0 %	
___ 3	W	Exterior	Frame - Wood	1st Floor	13.0	18.0	4	9.0	0	165.0	0.084		0.23	0.75	0 %	
___ 4	S	Exterior	Frame - Wood	1st Floor	13.0	3.0	6	9.0	0	31.5	0.084		0.23	0.75	0 %	
___ 5	W	Exterior	Frame - Wood	1st Floor	13.0	18.0	0	9.0	0	162.0	0.084		0.23	0.75	0 %	
___ 6	S	Exterior	Frame - Wood	1st Floor	13.0	25.0	8	9.0	0	231.0	0.084		0.23	0.75	0 %	
___ 7	E	Exterior	Frame - Wood	1st Floor	13.0	8.0	0	9.0	0	72.0	0.084		0.23	0.75	0 %	
___ 8	S	Exterior	Frame - Wood	1st Floor	13.0	16.0	6	9.0	0	148.5	0.084		0.23	0.75	0 %	
___ 9	S	Exterior	Frame - Wood	1st Floor	13.0	12.0	8	9.0	0	114.0	0.084		0.23	0.75	0 %	
___ 10	E	Exterior	Frame - Wood	1st Floor	13.0	29.0	4	9.0	0	264.0	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	N	Garage	Insulated	1st Floor	None	0.46	3.00	0	6.00	8	20.0ft²	

WINDOWS (Total Exposed Area = 177 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	60.0	4	3.00	5.00	4.5	1.0	None	None
___ 2	W	3	Vinyl	Low-E Double	Y	0.36	0.25	N	N	16.0	1	4.00	4.00	1.5	1.0	None	None
___ 3	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
___ 4	S	6	Vinyl	Low-E Double	Y	0.36	0.25	N	N	12.0	1	4.00	3.00	1.5	1.0	None	None
___ 5	S	8	TIM	Low-E Double	Y	0.36	0.25	N	N	40.0	2	3.00	6.67	9.5	1.0	None	None
___ 6	S	9	Vinyl	Low-E Double	Y	0.36	0.25	N	N	15.0	1	3.00	5.00	1.5	1.0	None	None
___ 7	E	10	Vinyl	Low-E Double	Y	0.36	0.25	N	N	4.0	1	4.00	1.00	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)	0.00029	1381	75.75	142.22	0.1027	5.0	All	16569 cu ft

GARAGE					
✓ #	Floor Area	Roof Area	Exposed Wall Perimeter	Avg. Wall Height	Exposed Wall Insulation
___ 1	539 ft²	539 ft²	66 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	Volts	Current	Ducts	Block
___ 1	Electric Heat Pump	None/Single		HSPF2: 8.20	27.3		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		SEER2:14.0	21.9	660	0.70	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 #	Location	-----Supply----- R-Value Area	-----Return----- R-Value Area	Leakage Type	Air Handler	CFM 25 TOT	CFM 25 OUT	QN	RLF	HVAC # Heat Cool
___ 1	Attic	6.0 460 ft²	Attic 6.0 92 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	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* = 92

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

352 SW Buttercup Lane,Lake City,FL,32025

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9. Floor Types	Insulation	a. Electric		Cap: 50 gallons
a. Slab-On-Grade Edge Insulation	R= 0.0			EF: 0.920
b. N/A	R=	b. Conservation features		
c. N/A	R=	17. Credits		None
				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: 352 SW Buttercup Lane

City/FL Zip: Lake City,FL,32025



*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
2020 Florida Building Code, Energy Conservation, 7th Edition

Jurisdiction:	Permit #:	
Job Information		
Builder:	Community:	Lot: NA
Address: 352 SW Buttercup Lane		
City: Lake City	State: FL	Zip: 32025
Air Leakage Test Results <i>Passing results must meet either the Performance, Prescriptive, or ERI Method</i>		
<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"><input type="radio"/> 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.</div> <div style="border: 1px solid black; padding: 5px;"><input checked="" type="radio"/> 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 R405-2020 (Performance) or R406-2020 (ERI), section labeled as infiltration, sub-section ACH50. ACH(50) specified on Form R405-2020-Energy Calc (Performance) or R406-2020 (ERI): 5.000</div>		
<div style="display: flex; justify-content: space-between; align-items: flex-start;"><div style="width: 60%;">$\frac{\text{CFM}(50)}{\text{Building Volume}} \times 60 \div \frac{16569}{\text{ACH}(50)} =$<div style="border: 1px solid black; width: 40px; height: 40px; display: flex; align-items: center; justify-content: center; margin: 10px auto;">PASS</div><div style="margin-top: 10px;"><input type="checkbox"/> When ACH(50) is less than 3, Mechanical Ventilation installation must be verified by building department.</div></div><div style="width: 35%;"><p>Method for calculating building volume:</p><div style="display: flex; flex-direction: column; gap: 10px;"><div><input type="radio"/> Retrieved from architectural plans</div><div><input checked="" type="radio"/> Code software calculated</div><div><input type="radio"/> Field measured and calculated</div></div></div></div>		
<p>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 <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 <i>code official</i>. Testing shall be performed at any time after creation of all penetrations of the <i>building thermal envelope</i>.</p> <p>During testing:</p> <ol style="list-style-type: none">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		
<p>Company Name: _____ Phone: _____</p> <p>I hereby verify that the above Air Leakage results are in accordance with the 2020 7th Edition Florida Building Code Energy Conservation requirements according to the compliance method selected above.</p> <p>Signature of Tester: _____ Date of Test: _____</p> <p>Printed Name of Tester: _____</p> <p>License/Certification #: _____ Issuing Authority: _____</p>		

Residential System Sizing Calculation

Summary

352 SW Buttercup Lane
Lake City, FL 32025

Project Title:
352 SW Buttercup Lane

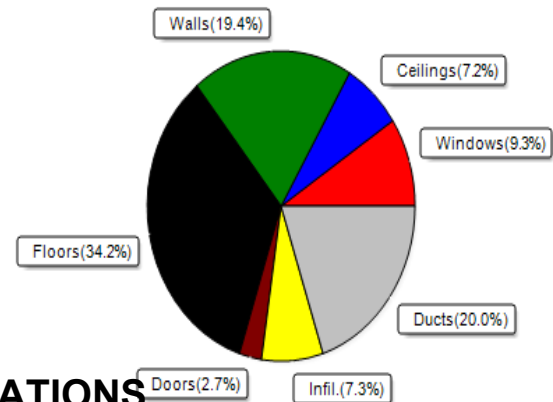
7/25/2023

Location for weather data: Gainesville, FL - Defaults: Latitude(29.7) Altitude(152 ft.) Temp Range(M)			
Humidity data: Interior RH (50%) Outdoor wet bulb (77F) Humidity difference(51gr.)			
Winter design temperature(TMY3 99%)	30 F	Summer design temperature(TMY3 99%)	94 F
Winter setpoint	70 F	Summer setpoint	75 F
Winter temperature difference	40 F	Summer temperature difference	19 F
Total heating load calculation	27350 Btuh	Total cooling load calculation	21936 Btuh
Submitted heating capacity	% of calc Btuh	Submitted cooling capacity	% of calc Btuh
Total (Electric Heat Pump)	100.0 27350	Sensible (SHR = 0.70)	86.6 15355
Heat Pump + Auxiliary(0.0kW)	100.0 27350	Latent	156.6 6581
		Total (Electric Heat Pump)	100.0 21936

WINTER CALCULATIONS

Winter Heating Load (for 1841 sqft)

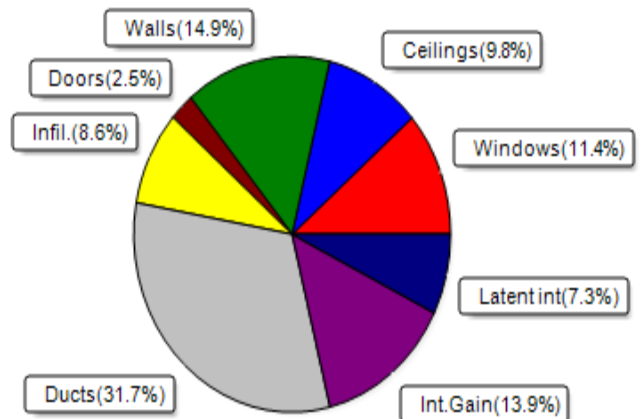
Load component	Load
Window total 177 sqft	2549 Btuh
Wall total 1496 sqft	5311 Btuh
Door total 40 sqft	736 Btuh
Ceiling total 1933 sqft	1962 Btuh
Floor total 1841 sqft	9346 Btuh
Infiltration 45 cfm	1987 Btuh
Duct loss	5458 Btuh
Subtotal	27350 Btuh
Ventilation Ex:0 cfm; Sup:0 cfm	0 Btuh
TOTAL HEAT LOSS	27350 Btuh



SUMMER CALCULATIONS

Summer Cooling Load (for 1841 sqft)

Load component	Load
Window total 177 sqft	2490 Btuh
Wall total 1496 sqft	3262 Btuh
Door total 40 sqft	552 Btuh
Ceiling total 1933 sqft	2159 Btuh
Floor total	0 Btuh
Infiltration 34 cfm	708 Btuh
Internal gain	3040 Btuh
Duct gain	5524 Btuh
Sens.Ventilation Ex:0 cfm; Sup:0 cfm	0 Btuh
Blower Load	0 Btuh
Total sensible gain	17734 Btuh
Latent gain(ducts)	1427 Btuh
Latent gain(infiltration)	1175 Btuh
Latent gain(ventilation)	0 Btuh
Latent gain(internal/occupants/other)	1600 Btuh
Total latent gain	4201 Btuh
TOTAL HEAT GAIN	21936 Btuh



8th Edition

EnergyGauge® System Sizing

PREPARED BY: _____

DATE: 7 / 26 / 2023

System Sizing Calculations - Winter

Residential Load - Whole House Component Details

352 SW Buttercup Lane
Lake City, FL 32025

Project Title:
352 SW Buttercup Lane
Building Type: User

7/25/2023

Reference City: Gainesville, FL (Defaults) Winter Temperature Difference: 40.0 °F (TMY3 99%)
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	60.0		14.4	864 Btuh
2	2, NFRC 0.25	Vinyl	0.36	W	16.0		14.4	230 Btuh
3	2, NFRC 0.25	Vinyl	0.36	S	30.0		14.4	432 Btuh
4	2, NFRC 0.25	Vinyl	0.36	S	12.0		14.4	173 Btuh
5	2, NFRC 0.25	TIM	0.36	S	40.0		14.4	576 Btuh
6	2, NFRC 0.25	Vinyl	0.36	S	15.0		14.4	216 Btuh
7	2, NFRC 0.25	Vinyl	0.36	E	4.0		14.4	58 Btuh
Window Total					177.0(sqft)			2549 Btuh
Walls	Type	Ornt.	Ueff.	R-Value (Cav/Sh)	Area	X	HTM=	Load
1	Frame - Wood	- Ext	(0.089)	13.0/0.0	210		3.55	744 Btuh
2	Frame - Wood	- Adj	(0.089)	13.0/0.0	216		3.55	765 Btuh
3	Frame - Wood	- Ext	(0.089)	13.0/0.0	149		3.55	529 Btuh
4	Frame - Wood	- Ext	(0.089)	13.0/0.0	32		3.55	112 Btuh
5	Frame - Wood	- Ext	(0.089)	13.0/0.0	162		3.55	575 Btuh
6	Frame - Wood	- Ext	(0.089)	13.0/0.0	189		3.55	671 Btuh
7	Frame - Wood	- Ext	(0.089)	13.0/0.0	72		3.55	256 Btuh
8	Frame - Wood	- Ext	(0.089)	13.0/0.0	109		3.55	385 Btuh
9	Frame - Wood	- Ext	(0.089)	13.0/0.0	99		3.55	351 Btuh
10	Frame - Wood	- Ext	(0.089)	13.0/0.0	260		3.55	923 Btuh
Wall Total					1496(sqft)			5311 Btuh
Doors	Type	Storm	Ueff.		Area	X	HTM=	Load
1	Insulated - Exterior, n		(0.460)		20		18.4	368 Btuh
2	Insulated - Garage, n		(0.460)		20		18.4	368 Btuh
Door Total					40(sqft)			736Btuh
Ceilings	Type/Color/Surface		Ueff.	R-Value	Area	X	HTM=	Load
1	Flat ceil/M/Shing		(0.025)	38.0/0.0	1933		1.0	1962 Btuh
Ceiling Total					1933(sqft)			1962Btuh
Floors	Type		Ueff.	R-Value	Size	X	HTM=	Load
1	Slab On Grade		(1.180)	0.0	198.0 ft(perim.)		47.2	9346 Btuh
Floor Total					1841 sqft			9346 Btuh
Envelope Subtotal:								19904 Btuh
Infiltration	Type	Wholehouse	ACH	Volume(cuft)	Wall Ratio	CFM=		Load
	Natural		0.16	16569	1.00	45.4		1987 Btuh
Duct load	Average sealed, R6.0, Supply(Att), Return(Att) (DLM of 0.249)							5458 Btuh

Manual J Winter Calculations

Residential Load - Component Details (continued)

352 SW Buttercup Lane
Lake City, FL 32025

Project Title:
352 SW Buttercup Lane
Building Type: User

7/25/2023

All Zones	Sensible Subtotal All Zones	27350 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	27350 Btuh 0 Btuh 27350 Btuh
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EQUIPMENT

1. Electric Heat Pump	#	27350 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

352 SW Buttercup Lane
Lake City, FL 32025

Project Title:
352 SW Buttercup Lane

7/25/2023

Reference City: Gainesville, FL (Defaults)
Humidity difference: 51gr.

Temperature Difference: 19.0F(TMY3 99%)
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		4.5ft.	1.0ft.	60.0	0.0	60.0	12	12	726	Btuh
2	2 NFRC	0.25, 0.36	No	No	W		1.5ft.	1.0ft.	16.0	1.0	15.0	12	31	477	Btuh
3	2 NFRC	0.25, 0.36	No	No	S		1.5ft.	1.0ft.	30.0	30.0	0.0	12	14	363	Btuh
4	2 NFRC	0.25, 0.36	No	No	S		1.5ft.	1.0ft.	12.0	12.0	0.0	12	14	145	Btuh
5	2 NFRC	0.25, 0.36	No	No	S		9.5ft.	1.0ft.	40.0	40.0	0.0	12	14	484	Btuh
6	2 NFRC	0.25, 0.36	No	No	S		1.5ft.	1.0ft.	15.0	15.0	0.0	12	14	181	Btuh
7	2 NFRC	0.25, 0.36	No	No	E		1.5ft.	1.0ft.	4.0	1.0	3.0	12	31	105	Btuh
	Excursion													9	Btuh
	Window Total								177 (sqft)					2490 Btuh	
Walls	Type					U-Value	R-Value	Area(sqft)			HTM		Load		
							Cav/Sheath								
1	Frame - Wood - Ext					0.09	13.0/0.0	209.5			2.3		474 Btuh		
2	Frame - Wood - Adj					0.09	13.0/0.0	215.5			1.7		363 Btuh		
3	Frame - Wood - Ext					0.09	13.0/0.0	149.0			2.3		337 Btuh		
4	Frame - Wood - Ext					0.09	13.0/0.0	31.5			2.3		71 Btuh		
5	Frame - Wood - Ext					0.09	13.0/0.0	162.0			2.3		367 Btuh		
6	Frame - Wood - Ext					0.09	13.0/0.0	189.0			2.3		428 Btuh		
7	Frame - Wood - Ext					0.09	13.0/0.0	72.0			2.3		163 Btuh		
8	Frame - Wood - Ext					0.09	13.0/0.0	108.5			2.3		246 Btuh		
9	Frame - Wood - Ext					0.09	13.0/0.0	99.0			2.3		224 Btuh		
10	Frame - Wood - Ext					0.09	13.0/0.0	260.0			2.3		588 Btuh		
	Wall Total								1496 (sqft)					3262 Btuh	
Doors	Type							Area (sqft)			HTM		Load		
1	Insulated - Exterior							20.0			13.8		276 Btuh		
2	Insulated - Garage							20.0			13.8		276 Btuh		
	Door Total								40 (sqft)					552 Btuh	
Ceilings	Type/Color/Surface					U-Value	R-Value	Area(sqft)			HTM		Load		
1	Vented Attic/Med/Shingle/RB					0.025	38.0/0.0	1933.0			1.12		2159 Btuh		
	Ceiling Total								1933 (sqft)					2159 Btuh	
Floors	Type						R-Value	Size			HTM		Load		
1	Slab On Grade						0.0	1841 (ft-perimeter)			0.0		0 Btuh		
	Floor Total								1841.0 (sqft)					0 Btuh	
	Envelope Subtotal:													8463 Btuh	
Infiltration	Type					Average ACH		Volume(cuft)		Wall Ratio		CFM=		Load	
	Natural					0.12		16569		1		34.0		708 Btuh	
Internal gain						Occupants		Btuh/occupant		Appliance		Load			
						8		X 230		+		1200		3040 Btuh	
	Sensible Envelope Load:													12211 Btuh	

Manual J Summer Calculations

Residential Load - Component Details (continued)

352 SW Buttercup Lane
Lake City, FL 32025

Project Title: Climate:FL_GAINESVILLE_REGIONAL_A
352 SW Buttercup Lane

7/25/2023

Duct load	Average sealed,Supply(R6.0-Attic), Return(R6.0-Attic) (DGM of 0.452)	5524 Btuh
	Sensible Load All Zones	17734 Btuh

Manual J Summer Calculations

Residential Load - Component Details (continued)

352 SW Buttercup Lane
Lake City, FL 32025

Project Title: Climate:FL_GAINESVILLE_REGIONAL_A
352 SW Buttercup Lane

7/25/2023

WHOLE HOUSE TOTALS

Whole House Totals for Cooling	Sensible Envelope Load All Zones	12211 Btuh
	Sensible Duct Load	5524 Btuh
	Total Sensible Zone Loads	17734 Btuh
	Sensible ventilation (Ex:0 cfm; Sup:0 cfm)	0 Btuh
	Blower	0 Btuh
	Total sensible gain	17734 Btuh
	Latent infiltration gain (for 51 gr. humidity difference)	1175 Btuh
	Latent ventilation gain	0 Btuh
	Latent duct gain	1427 Btuh
	Latent occupant gain (8.0 people @ 200 Btuh per person)	1600 Btuh
	Latent other gain	0 Btuh
	Latent total gain	4201 Btuh
	TOTAL GAIN	21936 Btuh

EQUIPMENT

1. Central Unit	#	21936 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