

FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Business and Professional Regulation - Residential Performance Method

Project Name: Lot 13 Turkey Creek
 Street:
 City, State, Zip: Lake City, FL, 32055
 Owner:
 Design Location: FL, Gainesville

Builder Name: Don Little Construction & Roofing
 Permit Office: Columbia County
 Permit Number:
 Jurisdiction:
 County: Columbia (Florida Climate Zone 2)

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	3
5. Is this a worst case?	No
6. Conditioned floor area above grade (ft ²)	1810
Conditioned floor area below grade (ft ²)	0
7. Windows (192.7 sqft.)	Description Area
a. U-Factor:	Dbl, U=0.36 192.67 ft ²
SHGC:	SHGC=0.25
b. U-Factor:	N/A ft ²
SHGC:	
c. U-Factor:	N/A ft ²
SHGC:	
d. U-Factor:	N/A ft ²
SHGC:	
Area Weighted Average Overhang Depth:	5.685 ft.
Area Weighted Average SHGC:	0.250
8. Floor Types (1810.0 sqft.)	Insulation Area
a. Slab-On-Grade Edge Insulation	R=0.0 1810.00 ft ²
b. N/A	R= ft ²
c. N/A	R= ft ²

9. Wall Types (1905.0 sqft.)	Insulation Area
a. Frame - Wood, Exterior	R=13.0 1575.00 ft ²
b. Frame - Wood, Adjacent	R=13.0 330.00 ft ²
c. N/A	R= ft ²
d. N/A	R= ft ²
10. Ceiling Types (1900.0 sqft.)	Insulation Area
a. Under Attic (Vented)	R=38.0 1900.00 ft ²
b. N/A	R= ft ²
c. N/A	R= ft ²
11. Ducts	R ft ²
a. Sup: Attic, Ret: Attic, AH: Garage	6 452.5
12. Cooling systems	kBtu/hr Efficiency
a. Central Unit	20.6 SEER:14.00
13. Heating systems	kBtu/hr Efficiency
a. Electric Heat Pump	29.4 HSPF:8.20
14. Hot water systems	
a. Electric	Cap: 50 gallons EF: 0.920
b. Conservation features	None
15. Credits	CV, Pstat

Glass/Floor Area: 0.106

Total Proposed Modified Loads: 47.76

Total Baseline Loads: 49.29

PASS

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

PREPARED BY: [Signature]
 DATE: 6/29/2020

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: _____

- 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 13 Turkey Creek	Bedrooms:	3	Address Type:	Lot Information
Building Type:	User	Conditioned Area:	1810	Lot #	13
Owner Name:		Total Stories:	1	Block/Subdivision:	Turkey Creek
# of Units:	1	Worst Case:	No	PlatBook:	
Builder Name:	Don Little Construction & Roofi	Rotate Angle:	0	Street:	
Permit Office:	Columbia County	Cross Ventilation:	Yes	County:	Columbia
Jurisdiction:		Whole House Fan:	No	City, State, Zip:	Lake City , FL , 32055
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	1810	16290

SPACES

Number	Name	Area	Volume	Kitchen	Occupants	Bedrooms	Infil ID	Finished	Cooled	Heated
1	Main	1810	16290	Yes	6	3	1	Yes	Yes	Yes

FLOORS

✓	#	Floor Type	Space	Perimeter	R-Value	Area		Tile	Wood	Carpet
_____	1	Slab-On-Grade Edge Insulation	Main	216 ft	0	1810 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	Gable or shed	Composition shingles	2024 ft²	454 ft²	Medium	Y	0.96	No	0.9	No	0	26.6

ATTIC

✓	#	Type	Ventilation	Vent Ratio (1 in)	Area	RBS	IRCC
_____	1	Full attic	Vented	300	1810 ft²	Y	N

CEILING

✓	#	Ceiling Type	Space	R-Value	Ins Type	Area	Framing Frac	Truss Type
_____	1	Under Attic (Vented)	Main	38	Double Batt	1900 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	22	4	9		201.0 ft²		0.23	0.75	0
___ 2	S	Exterior	Frame - Wood	Main	13	12	4	9		111.0 ft²		0.23	0.75	0
___ 3	E	Exterior	Frame - Wood	Main	13	38		9		342.0 ft²		0.23	0.75	0
___ 4	N	Exterior	Frame - Wood	Main	13	12	8	9		114.0 ft²		0.23	0.75	0
___ 5	W	Exterior	Frame - Wood	Main	13	8		9		72.0 ft²		0.23	0.75	0
___ 6	N	Exterior	Frame - Wood	Main	13	22		9		198.0 ft²		0.23	0.75	0
___ 7	E	Exterior	Frame - Wood	Main	13	10		9		90.0 ft²		0.23	0.75	0
___ 8	N	Exterior	Frame - Wood	Main	13	22		9		198.0 ft²		0.23	0.75	0
___ 9	W	Exterior	Frame - Wood	Main	13	27	8	9		249.0 ft²		0.23	0.75	0
___ 10	S	Garage	Frame - Wood	Main	13	22		9		198.0 ft²		0.23	0.75	0
___ 11	W	Garage	Frame - Wood	Main	13	14	8	9		132.0 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	5	4	8		42.7 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	1	Vinyl	Low-E Double	Yes	0.36	0.25	N	45.0 ft²	7 ft 6 in	0 ft 6 in	None	None
___ 2	S	2	Vinyl	Low-E Double	Yes	0.36	0.25	N	15.0 ft²	1 ft 6 in	1 ft 0 in	None	None
___ 3	E	3	Vinyl	Low-E Double	Yes	0.36	0.25	N	2.0 ft²	1 ft 6 in	1 ft 0 in	None	None
___ 4	N	4	Vinyl	Low-E Double	Yes	0.36	0.25	N	15.0 ft²	1 ft 6 in	1 ft 0 in	None	None
___ 5	N	6	Vinyl	Low-E Double	Yes	0.36	0.25	N	42.7 ft²	9 ft 6 in	0 ft 4 in	None	None
___ 6	N	6	Vinyl	Low-E Double	Yes	0.36	0.25	N	20.0 ft²	9 ft 6 in	0 ft 4 in	None	None
___ 7	E	7	Vinyl	Low-E Double	Yes	0.36	0.25	N	15.0 ft²	4 ft 6 in	1 ft 0 in	None	None
___ 8	N	8	Vinyl	Low-E Double	Yes	0.36	0.25	N	20.0 ft²	1 ft 0 in	4 ft 0 in	None	None
___ 9	W	9	Vinyl	Low-E Double	Yes	0.36	0.25	N	10.0 ft²	1 ft 6 in	1 ft 0 in	None	None
___ 10	W	9	Vinyl	Low-E Double	Yes	0.36	0.25	N	8.0 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	557.26 ft²	557.26 ft²	58 ft	9 ft	1

INPUT SUMMARY CHECKLIST REPORT

INFILTRATION												
#	Scope	Method	SLA	CFM 50	ELA	EqLA	ACH	ACH 50				
1	Wholehouse	Proposed ACH(50)	.000286	1357.5	74.52	140.16	.1128	5				

HEATING SYSTEM									
☒	#	System Type	Subtype	Speed	Efficiency	Capacity	Block		Ducts
☒	1	Electric Heat Pump/	None	Single	HSPF:8.2	29.4 kBtu/hr	1		sys#1

COOLING SYSTEM										
☒	#	System Type	Subtype	Subtype	Efficiency	Capacity	Air Flow	SHR	Block	Ducts
☒	1	Central Unit/	None	Single	SEER: 14	20.62 kBtu/hr	630 cfm	0.7	1	sys#1

HOT WATER SYSTEM									
☒	#	System Type	SubType	Location	EF	Cap	Use	SetPnt	Conservation
☒	1	Electric	None	Garage	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			ft ²		

DUCTS														
☒	#	---- Supply ----			---- Return ----			Leakage Type	Air Handler	CFM 25 TOT	CFM25 OUT	QN	RLF	HVAC # Heat Cool
☒	1	Attic	6	452.5 ft ²	Attic	90.5 ft ²	Default Leakage	Garage	(Default)	c(Default)	c			1 1

TEMPERATURES														
Programable Thermostat: Y							Ceiling Fans:							
Cooling	☐ Jan	☐ Feb	☐ Mar	☐ Apr	☐ May	☒ Jun	☒ Jul	☒ Aug	☒ Sep	☐ Oct	☐ Nov	☐ Dec	Heating	☒ Jan
Heating	☒ Jan	☒ Feb	☒ Mar	☒ Apr	☐ May	☐ Jun	☐ Jul	☐ Aug	☐ Sep	☒ Oct	☒ Nov	☒ Dec	Venting	☐ Jan

INPUT SUMMARY CHECKLIST REPORT

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 ft²		0 ft		0.3		Main					

ENERGY PERFORMANCE LEVEL (EPL) DISPLAY CARD**ESTIMATED ENERGY PERFORMANCE INDEX* =97****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>3</u>	c) AHU location <u>Garage</u>
5. Is this a worst case? (yes/no)	5. <u>No</u>	13. Cooling system: Capacity <u>20.6</u>
6. Conditioned floor area (sq. ft.)	6. <u>1810</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>192.7</u>	e) Other <u>14.0</u>
8. Skylights		14. Heating system: Capacity <u>29.4</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> </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 32055

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: Don Little Construction & Roofing Community:

Lot: 13

Address:

City: Lake City

State: FL

Zip: 32055

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

$$\frac{\text{CFM}(50)}{\text{Building Volume}} \times 60 \div \frac{16290}{\text{ACH}(50)} = \text{PASS}$$

☐ **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) *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: _____

Residential System Sizing Calculation

Summary

Project Title:
Lot 13 Turkey Creek

Lake City, FL 32055

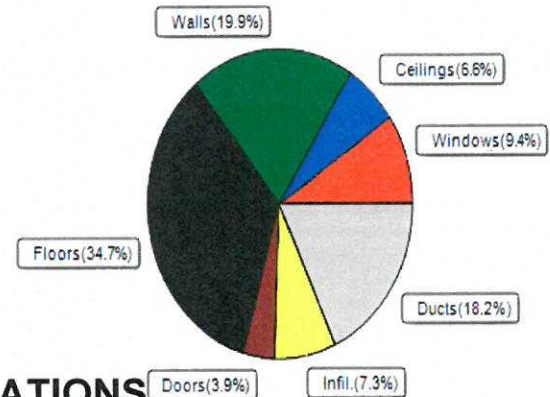
7/1/2020

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	29398	Btuh	Total cooling load calculation	20618	Btuh
Submitted heating capacity	% of calc	Btuh	Submitted cooling capacity	% of calc	Btuh
Total (Electric Heat Pump)	100.0	29398	Sensible (SHR = 0.70)	85.8	14433
Heat Pump + Auxiliary(0.0kW)	100.0	29398	Latent	162.5	6185
			Total (Electric Heat Pump)	100.0	20618

WINTER CALCULATIONS

Winter Heating Load (for 1810 sqft)

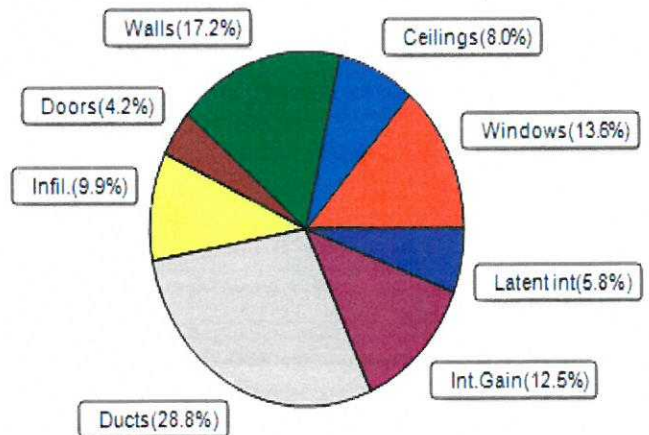
Load component		Load	
Window total	193 sqft	2774	Btuh
Wall total	1650 sqft	5857	Btuh
Door total	63 sqft	1153	Btuh
Ceiling total	1900 sqft	1929	Btuh
Floor total	1810 sqft	10195	Btuh
Infiltration	49 cfm	2145	Btuh
Duct loss		5344	Btuh
Subtotal		29398	Btuh
Ventilation	0 cfm	0	Btuh
TOTAL HEAT LOSS		29398	Btuh



SUMMER CALCULATIONS

Summer Cooling Load (for 1810 sqft)

Load component		Load	
Window total	193 sqft	2799	Btuh
Wall total	1650 sqft	3555	Btuh
Door total	63 sqft	865	Btuh
Ceiling total	1900 sqft	1640	Btuh
Floor total		0	Btuh
Infiltration	37 cfm	764	Btuh
Internal gain		2580	Btuh
Duct gain		4610	Btuh
Sens. Ventilation	0 cfm	0	Btuh
Blower Load		0	Btuh
Total sensible gain		16812	Btuh
Latent gain(ducts)		1338	Btuh
Latent gain(infiltration)		1268	Btuh
Latent gain(ventilation)		0	Btuh
Latent gain(internal/occupants/other)		1200	Btuh
Total latent gain		3806	Btuh
TOTAL HEAT GAIN		20618	Btuh



8th Edition

EnergyGauge® System Sizing

PREPARED BY: _____

DATE: _____

6/29/2020

System Sizing Calculations - Winter

Residential Load - Whole House Component Details

Lake City, FL 32055

Project Title:
Lot 13 Turkey Creek
Building Type: User

7/1/2020

Reference City: Gainesville, FL (Defaults) Winter Temperature Difference: 40.0 F (TMY3 99%)

Component Loads for Whole House

Window	Panes/Type	Frame	U	Orientation	Area(sqft)	X	HTM=	Load
1	2, NFRC 0.25	Vinyl	0.36	S	45.0		14.4	648 Btuh
2	2, NFRC 0.25	Vinyl	0.36	S	15.0		14.4	216 Btuh
3	2, NFRC 0.25	Vinyl	0.36	E	2.0		14.4	29 Btuh
4	2, NFRC 0.25	Vinyl	0.36	N	15.0		14.4	216 Btuh
5	2, NFRC 0.25	Vinyl	0.36	N	42.7		14.4	614 Btuh
6	2, NFRC 0.25	Vinyl	0.36	N	20.0		14.4	288 Btuh
7	2, NFRC 0.25	Vinyl	0.36	E	15.0		14.4	216 Btuh
8	2, NFRC 0.25	Vinyl	0.36	N	20.0		14.4	288 Btuh
9	2, NFRC 0.25	Vinyl	0.36	W	10.0		14.4	144 Btuh
10	2, NFRC 0.25	Vinyl	0.36	W	8.0		14.4	115 Btuh
Window Total					192.7(sqft)			2774 Btuh
Walls	Type	Ornt.	Ueff.	R-Value (Cav/Sh)	Area	X	HTM=	Load
1	Frame - Wood	- Ext	(0.089)	13.0/0.0	113		3.55	402 Btuh
2	Frame - Wood	- Ext	(0.089)	13.0/0.0	96		3.55	341 Btuh
3	Frame - Wood	- Ext	(0.089)	13.0/0.0	340		3.55	1207 Btuh
4	Frame - Wood	- Ext	(0.089)	13.0/0.0	99		3.55	351 Btuh
5	Frame - Wood	- Ext	(0.089)	13.0/0.0	72		3.55	256 Btuh
6	Frame - Wood	- Ext	(0.089)	13.0/0.0	135		3.55	480 Btuh
7	Frame - Wood	- Ext	(0.089)	13.0/0.0	75		3.55	266 Btuh
8	Frame - Wood	- Ext	(0.089)	13.0/0.0	178		3.55	632 Btuh
9	Frame - Wood	- Ext	(0.089)	13.0/0.0	231		3.55	820 Btuh
10	Frame - Wood	- Adj	(0.089)	13.0/0.0	178		3.55	632 Btuh
11	Frame - Wood	- Adj	(0.089)	13.0/0.0	132		3.55	469 Btuh
Wall Total					1650(sqft)			5857 Btuh
Doors	Type	Storm	Ueff.		Area	X	HTM=	Load
1	Insulated - Exterior, n		(0.460)		43		18.4	785 Btuh
2	Insulated - Garage, n		(0.460)		20		18.4	368 Btuh
Door Total					63(sqft)			1153Btuh
Ceilings	Type/Color/Surface		Ueff.	R-Value	Area	X	HTM=	Load
1	Vented Attic/L/Shing		(0.025)	38.0/0.0	1900		1.0	1929 Btuh
Ceiling Total					1900(sqft)			1929Btuh
Floors	Type		Ueff.	R-Value	Size	X	HTM=	Load
1	Slab On Grade		(1.180)	0.0	216.0 ft(perim.)		47.2	10195 Btuh
Floor Total					1810 sqft			10195 Btuh
Envelope Subtotal:								21908 Btuh
Infiltration	Type	Wholehouse	ACH	Volume(cuft)	Wall Ratio	CFM=		Load
	Natural		0.18	16290	1.00	49.0		2145 Btuh
Duct load	Average sealed, R6.0, Supply(Att), Return(Att) (DLM of 0.222)							5344 Btuh

Manual J Winter Calculations

Residential Load - Component Details (continued)

Lake City, FL 32055

Project Title:
Lot 13 Turkey Creek
Building Type: User

7/1/2020

All Zones	Sensible Subtotal All Zones	29398 Btuh
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WHOLE HOUSE TOTALS

Totals for Heating	Subtotal Sensible Heat Loss Ventilation Sensible Heat Loss Total Heat Loss	29398 Btuh 0 Btuh 29398 Btuh
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EQUIPMENT

1. Electric Heat Pump	#	29398 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

Project Title:
Lot 13 Turkey Creek

Lake City, FL 32055

7/1/2020

Reference City: Gainesville, FL

Temperature Difference: 19.0F(TMY3 99%) Humidity difference: 51gr.

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	S	7.5ft.	0.5ft.		45.0	45.0	0.0	12	14	544	Btuh
2	2 NFRC	0.25, 0.36	No	No	S	1.5ft.	1.0ft.		15.0	15.0	0.0	12	14	181	Btuh
3	2 NFRC	0.25, 0.36	No	No	E	1.5ft.	1.0ft.		2.0	0.5	1.5	12	31	53	Btuh
4	2 NFRC	0.25, 0.36	No	No	N	1.5ft.	1.0ft.		15.0	0.0	15.0	12	12	181	Btuh
5	2 NFRC	0.25, 0.36	No	No	N	9.5ft.	0.3ft.		42.7	0.0	42.7	12	12	516	Btuh
6	2 NFRC	0.25, 0.36	No	No	N	9.5ft.	0.3ft.		20.0	0.0	20.0	12	12	242	Btuh
7	2 NFRC	0.25, 0.36	No	No	E	4.5ft.	1.0ft.		15.0	8.2	6.8	12	31	310	Btuh
8	2 NFRC	0.25, 0.36	No	No	N	1.0ft.	4.0ft.		20.0	0.0	20.0	12	12	242	Btuh
9	2 NFRC	0.25, 0.36	No	No	W	1.5ft.	1.0ft.		10.0	0.5	9.5	12	31	300	Btuh
10	2 NFRC	0.25, 0.36	No	No	W	1.5ft.	1.0ft.		8.0	1.0	7.0	12	31	229	Btuh
	Window Total								193 (sqft)					2799 Btuh	
Walls	Type	U-Value			R-Value			Area(sqft)			HTM		Load		
1	Frame - Wood - Ext				0.09		13.0/0.0		113.3			2.3		257	Btuh
2	Frame - Wood - Ext				0.09		13.0/0.0		96.0			2.3		217	Btuh
3	Frame - Wood - Ext				0.09		13.0/0.0		340.0			2.3		770	Btuh
4	Frame - Wood - Ext				0.09		13.0/0.0		99.0			2.3		224	Btuh
5	Frame - Wood - Ext				0.09		13.0/0.0		72.0			2.3		163	Btuh
6	Frame - Wood - Ext				0.09		13.0/0.0		135.3			2.3		306	Btuh
7	Frame - Wood - Ext				0.09		13.0/0.0		75.0			2.3		170	Btuh
8	Frame - Wood - Ext				0.09		13.0/0.0		178.0			2.3		403	Btuh
9	Frame - Wood - Ext				0.09		13.0/0.0		231.0			2.3		523	Btuh
10	Frame - Wood - Adj				0.09		13.0/0.0		178.0			1.7		300	Btuh
11	Frame - Wood - Adj				0.09		13.0/0.0		132.0			1.7		223	Btuh
	Wall Total								1650 (sqft)					3555 Btuh	
Doors	Type	U-Value			R-Value			Area (sqft)			HTM		Load		
1	Insulated - Exterior								42.7			13.8		589	Btuh
2	Insulated - Garage								20.0			13.8		276	Btuh
	Door Total								63 (sqft)					865 Btuh	
Ceilings	Type/Color/Surface	U-Value			R-Value			Area(sqft)			HTM		Load		
1	Vented Attic/Light/Shingle/RB				0.025		38.0/0.0		1900.0			0.86		1640	Btuh
	Ceiling Total								1900 (sqft)					1640 Btuh	
Floors	Type	U-Value			R-Value			Size			HTM		Load		
1	Slab On Grade						0.0		1810 (ft-perimeter)			0.0		0	Btuh
	Floor Total								1810.0 (sqft)					0 Btuh	
	Envelope Subtotal:													8858 Btuh	

Manual J Summer Calculations

Residential Load - Component Details (continued)

Project Title: Climate:FL_GAINESVILLE_REGIONAL_A
 Lot 13 Turkey Creek

Lake City, FL 32055

7/1/2020

Infiltration	Type Natural	Average ACH 0.14	Volume(cuft) 16290	Wall Ratio 1	CFM= 36.7	Load 764 Btuh
Internal gain		Occupants 6	Btuh/occupant X 230	Appliance +	1200	Load 2580 Btuh
	Sensible Envelope Load:					12202 Btuh
Duct load	Average sealed,Supply(R6.0-Attic), Return(R6.0-Attic) (DGM of 0.378)					4610 Btuh
	Sensible Load All Zones					16812 Btuh

Manual J Summer Calculations

Residential Load - Component Details (continued)

Project Title: Climate:FL_GAINESVILLE_REGIONAL_A
Lot 13 Turkey Creek

Lake City, FL 32055

7/1/2020

WHOLE HOUSE TOTALS

Whole House Totals for Cooling	Sensible Envelope Load All Zones	12202 Btuh
	Sensible Duct Load	4610 Btuh
	Total Sensible Zone Loads	16812 Btuh
	Sensible ventilation	0 Btuh
	Blower	0 Btuh
	Total sensible gain	16812 Btuh
	Latent infiltration gain (for 51 gr. humidity difference)	1268 Btuh
	Latent ventilation gain	0 Btuh
	Latent duct gain	1338 Btuh
	Latent occupant gain (6.0 people @ 200 Btuh per person)	1200 Btuh
	Latent other gain	0 Btuh
	Latent total gain	3806 Btuh
	TOTAL GAIN	20618 Btuh

EQUIPMENT

1. Central Unit	#	20618 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