FORM R405-2017

FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Business and Professional Regulation - Residential Performance Method

Project Name:	Lot 5 Turkey Creek	Builder Name:	Don Little Construction & Roofing
Street:		Permit Office:	Columbia County
City, State, Zip:	Lake City , FL , 32055	Permit Number:	
Owner:		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	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 (ft²)	1810
Conditioned floor area below grade (ft²)	0

7. Windows (192.7 sqft.)	Description	Area
a. U-Factor:	Dbl, U=0.36	192.67 ft²
SHGC:	SHGC=0.25	
b. U-Factor:	N/A	ft²
SHGC:		
c. U-Factor:	N/A	ft²
SHGC:		
d. U-Factor:	N/A	ft²
SHGC:		
Area Weighted Average Overhang Depth:		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 ft²
b. N/A	R=	ft²
c. N/A	R=	ft²

9. Wall Types (1905.0 sqft.)	Insulation	Area
a. Frame - Wood, Exterior	R=13.0	1575.00 ft²
b. Frame - Wood, Adjacent	R=13.0	330.00 ft²
c. N/A	R=	ft²
d. N/A	R=	ft²

10. Ceiling Types (1900.0 sqft.)	Insulation	Area
a. Under Attic (Vented)	R=38.0	1900.00 ft²
b. N/A	R=	ft²
c. N/A	R=	ft²

11. Ducts	R	ft²
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: _____

DATE: 6/24/2020

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).**

FORM R405-2017

INPUT SUMMARY CHECKLIST REPORT

PROJECT

Title:	Lot 5 Turkey Creek	Bedrooms:	3	Address Type:	Lot Information
Building Type:	User	Conditioned Area:	1810	Lot #	5
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 %	Design Temp 2.5 %	Int Design Temp Winter	Int Design Temp 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	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	Width In	Height Ft	Height 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	Width In	Height Ft	Height 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	Overhang 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

FORM R405-2017

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			ft²		

DUCTS

√	#	---- Supply ---- Location	R-Value	Area	---- Return ---- Location	Area	Leakage Type	Air Handler	CFM 25 TOT	CFM25 OUT	QN	RLF	HVAC # Heat	Cool
_____	1	Attic	6	452.5 ft²	Attic	90.5 ft²	Default Leakage	Garage	(Default) c	(Default) c			1	1

TEMPERATURES

Programable Thermostat: Y

Ceiling Fans:

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

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. New (From Plans)
2. Single-family or multiple-family	2. Single-family
3. No. of units (if multiple-family)	3. 1
4. Number of bedrooms	4. 3
5. Is this a worst case? (yes/no)	5. No
6. Conditioned floor area (sq. ft.)	6. 1810
7. Windows, type and area	
a) U-factor:(weighted average)	7a. 0.360
b) Solar Heat Gain Coefficient (SHGC)	7b. 0.250
c) Area	7c. 192.7
8. Skylights	
a) U-factor:(weighted average)	8a. NA
b) Solar Heat Gain Coefficient (SHGC)	8b. NA
9. Floor type, insulation level:	
a) Slab-on-grade (R-value)	9a. 0.0
b) Wood, raised (R-value)	9b.
c) Concrete, raised (R-value)	9c.
10. Wall type and insulation:	
A. Exterior:	
1. Wood frame (Insulation R-value)	10A1. 13.0
2. Masonry (Insulation R-value)	10A2.
B. Adjacent:	
1. Wood frame (Insulation R-value)	10B1. 13.0
2. Masonry (Insulation R-value)	10B2.
11. Ceiling type and insulation level	
a) Under attic	11a. 38.0
b) Single assembly	11b.
c) Knee walls/skylight walls	11c.
d) Radiant barrier installed	11d. Yes

12. Ducts, location & insulation level	
a) Supply ducts	R 6.0
b) Return ducts	R 6.0
c) AHU location	Garage
13. Cooling system:	Capacity 20.6
a) Split system	SEER
b) Single package	SEER
c) Ground/water source	SEER/COP
d) Room unit/PTAC	EER
e) Other	14.0
14. Heating system:	Capacity 29.4
a) Split system heat pump	HSPF
b) Single package heat pump	HSPF
c) Electric resistance	COP
d) Gas furnace, natural gas	AFUE
e) Gas furnace, LPG	AFUE
f) Other	8.20
15. Water heating system	
a) Electric resistance	EF 0.92
b) Gas fired, natural gas	EF
c) Gas fired, LPG	EF
d) Solar system with tank	EF
e) Dedicated heat pump with tank	EF
f) Heat recovery unit	HeatRec%
g) Other	
16. HVAC credits claimed (Performance Method)	
a) Ceiling fans	
b) Cross ventilation	Yes
c) Whole house fan	No
d) Multizone cooling credit	
e) Multizone heating credit	
f) Programmable thermostat	Yes

*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 Co Community: Lot: 5

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

_____ x 60 ÷ 16290 = _____
CFM(50) Building Volume ACH(50)

☐ **PASS**

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

Method for calculating building volume:

◯ Retrieved from architectural plans

● Code software calculated

◯ Field measured and calculated

R402.4.1.2 Testing. Testing shall be conducted in accordance with ANSI/RESNET/ICC 380 and reported at a pressure of 0.2 inch w.g. (50 Pascals). Testing shall be conducted by either individuals as defined in Section 553.993(5) or (7), *Florida Statues*, 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 5 Turkey Creek

Lake City, FL 32055

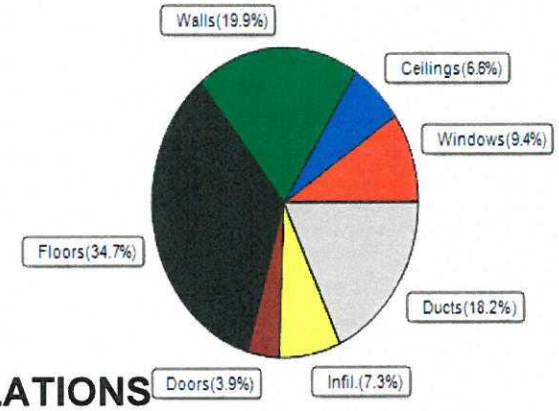
7/1/2020

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)

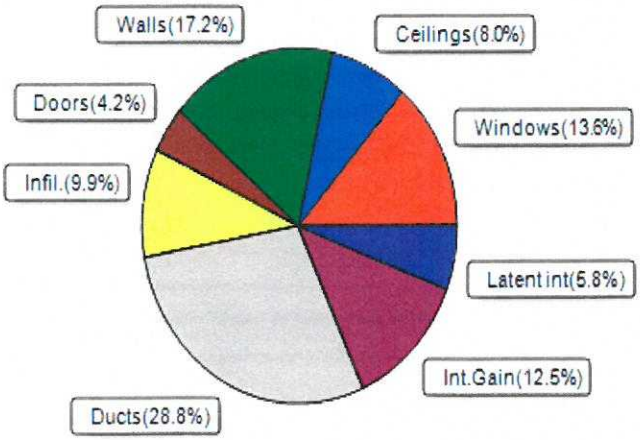
Load component			Load	
Window total	193	sqft	2774	Btuh
Wall total	1650	sqft	5857	Btuh
Door total	63	sqft	1153	Btuh
Ceiling total	1900	sqft	1929	Btuh
Floor total	1810	sqft	10195	Btuh
Infiltration	49	cfm	2145	Btuh
Duct loss			5344	Btuh
Subtotal			**29398**	**Btuh**
Ventilation	0	cfm	0	Btuh
TOTAL HEAT LOSS			**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: _____ 6/29/2020
DATE: _____

System Sizing Calculations - Winter

Residential Load - Whole House Component Details

Project Title:
Lot 5 Turkey Creek
Lake City, FL 32055 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=	
	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)

Project Title:
Lot 5 Turkey Creek
Lake City, FL 32055 Building Type: User

7/1/2020

All Zones	**Sensible Subtotal All Zones**	**29398 Btuh**

WHOLE HOUSE TOTALS

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

EQUIPMENT

1. Electric Heat Pump	#	29398 Btuh

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 5 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* Panes	SHGC	U	InSh	IS	Ornt	Overhang Len	Hgt	Window Area(sqft) Gross	Shaded	Unshaded	HTM Shaded	Unshaded	Load
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 Cav/Sheath	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	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	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 5 Turkey Creek

Lake City, FL 32055

7/1/2020

Infiltration	Type	Average ACH	Volume(cuft)		Wall Ratio		CFM=	Load	
	Natural	0.14	16290		1		36.7	764	Btuh
Internal gain		Occupants	Btuh/occupant				Appliance	Load	
		6	X	230	+		1200	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 5 Turkey Creek

Lake City, FL 32055

7/1/2020

WHOLE HOUSE TOTALS

	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
Whole House	**Total sensible gain**	**16812 Btuh**
Totals for Cooling	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

*Key: Window types (Panes - 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