FORM R405-2017

FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Business and Professional Regulation - Residential Performance Method

Project Name:	Carolina	Builder Name:	Aaron Simque Homes
Street:		Permit Office:	Columbia County
City, State, Zip:	Lake City , FL , 32024	Permit Number:	
Owner:	Spec House	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	4
5. Is this a worst case?	No
6. Conditioned floor area above grade (ft²)	2000
Conditioned floor area below grade (ft²)	0

7. Windows(408.3 sqft.)	Description	Area
a. U-Factor:	Dbl, U=0.33	408.33 ft²
SHGC:	SHGC=0.22	
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:		4.968 ft.
Area Weighted Average SHGC:		0.220

8. Floor Types (2000.0 sqft.)	Insulation	Area
a. Slab-On-Grade Edge Insulation	R=0.0	2000.00 ft²
b. N/A	R=	ft²
c. N/A	R=	ft²

9. Wall Types(2028.0 sqft.)	Insulation	Area
a. Frame - Wood, Exterior	R=13.0	1749.00 ft²
b. Frame - Wood, Adjacent	R=13.0	279.00 ft²
c. N/A	R=	ft²
d. N/A	R=	ft²

10. Ceiling Types (2175.0 sqft.)	Insulation	Area
a. Under Attic (Vented)	R=30.0	2175.00 ft²
b. N/A	R=	ft²
c. N/A	R=	ft²

11. Ducts	R	ft²
a. Sup: Attic, Ret: Attic, AH: Garage	8	435

12. Cooling systems	kBtu/hr	Efficiency
a. Central Unit	48.0	SEER:15.00

13. Heating systems	kBtu/hr	Efficiency
a. Electric Heat Pump	48.0	HSPF:8.50

14. Hot water systems	
a. Electric	Cap: 40 gallons
	EF: 0.920
b. Conservation features	
None	
15. Credits	CF, Pstat

Glass/Floor Area: 0.204

Total Proposed Modified Loads: 57.91

Total Baseline Loads: 59.57

PASS

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

PREPARED BY:

DATE: 1-22-18

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).

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PROJECT

Title:	Carolina	Bedrooms:	4	Address Type:	Lot Information
Building Type:	User	Conditioned Area:	2000	Lot #	
Owner Name:	Spec House	Total Stories:	1	Block/Subdivision:	Preserves
# of Units:	1	Worst Case:	No	PlatBook:	
Builder Name:	Aaron Simque Homes	Rotate Angle:	0	Street:	
Permit Office:	Columbia County	Cross Ventilation:		County:	Columbia
Jurisdiction:		Whole House Fan:		City, State, Zip:	Lake City , FL , 32024
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	2000	18000

SPACES

Number	Name	Area	Volume	Kitchen	Occupants	Bedrooms	Infil ID	Finished	Cooled	Heated
1	Main	2000	18000	Yes	6	4	1	Yes	Yes	Yes

FLOORS

√	#	Floor Type	Space	Perimeter	R-Value	Area		Tile	Wood	Carpet
_____	1	Slab-On-Grade Edge Insulatio	Main	280 ft	0	2000 ft²	----	0.33	0.33	0.34

ROOF

√	#	Type	Materials	Roof Area	Gable Area	Roof Color	Solar Absor.	SA Tested	Emitt	Emitt Tested	Deck Insul.	Pitch (deg)
_____	1	Hip	Composition shingles	2316 ft²	0 ft²	Medium	0.85	No	0.9	No	0	30.3

ATTIC

√	#	Type	Ventilation	Vent Ratio (1 in)	Area	RBS	IRCC
_____	1	Full attic	Vented	300	2000 ft²	N	N

CEILING

√	#	Ceiling Type	Space	R-Value	Ins Type	Area	Framing Frac	Truss Type
_____	1	Under Attic (Vented)	Main	30	Blown	2175 ft²	0.11	Wood

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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	N	Exterior	Frame - Wood	Main	13	26	8	9		240.0 ft²	0.625	0.23	0.75	0
____	2	E	Exterior	Frame - Wood	Main	13	11	8	9		105.0 ft²	0.625	0.23	0.75	0
____	3	N	Exterior	Frame - Wood	Main	13	16	4	9		147.0 ft²	0.625	0.23	0.75	0
____	4	N	Exterior	Frame - Wood	Main	13	16	2	9		145.5 ft²	0.625	0.23	0.75	0
____	5	E	Exterior	Frame - Wood	Main	13	35	4	9		318.0 ft²	0.625	0.23	0.75	0
____	6	S	Exterior	Frame - Wood	Main	13	4		9		36.0 ft²	0.625	0.23	0.75	0
____	7	E	Exterior	Frame - Wood	Main	13	1	4	9		12.0 ft²	0.625	0.23	0.75	0
____	8	S	Exterior	Frame - Wood	Main	13	7	4	9		66.0 ft²	0.625	0.23	0.75	0
____	9	W	Exterior	Frame - Wood	Main	13	1	4	9		12.0 ft²	0.625	0.23	0.75	0
____	10	S	Exterior	Frame - Wood	Main	13	5	2	9		46.5 ft²	0.625	0.23	0.75	0
____	11	W	Exterior	Frame - Wood	Main	13	4		9		36.0 ft²	0.625	0.23	0.75	0
____	12	S	Exterior	Frame - Wood	Main	13	8	2	9		73.5 ft²	0.625	0.23	0.75	0
____	13	E	Exterior	Frame - Wood	Main	13	4		9		36.0 ft²	0.625	0.23	0.75	0
____	14	S	Exterior	Frame - Wood	Main	13	12	6	9		112.5 ft²	0.625	0.23	0.75	0
____	15	S	Garage	Frame - Wood	Main	13	31		9		279.0 ft²	0.625	0.23	0.75	0
____	16	W	Exterior	Frame - Wood	Main	13	40	4	9		363.0 ft²	0.625	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	.4	3		6	8	20 ft²
____	2	S	Insulated	Main	None	.4	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	N	1	Vinyl	Low-E Double	Yes	0.33	0.22	N	72.0 ft²	1 ft 6 in	1 ft 4 in	IECC 2012	None
____	2	E	2	Vinyl	Low-E Double	Yes	0.33	0.22	N	64.0 ft²	1 ft 6 in	1 ft 4 in	IECC 2012	None
____	3	N	3	Vinyl	Low-E Double	Yes	0.33	0.22	N	96.0 ft²	13 ft 6 in	1 ft 4 in	IECC 2012	None
____	4	N	4	Vinyl	Low-E Double	Yes	0.33	0.22	N	36.0 ft²	1 ft 6 in	1 ft 4 in	IECC 2012	None
____	5	E	5	Vinyl	Low-E Double	Yes	0.33	0.22	N	36.0 ft²	1 ft 6 in	1 ft 4 in	IECC 2012	None
____	6	E	5	Vinyl	Low-E Double	Yes	0.33	0.22	N	4.5 ft²	1 ft 6 in	1 ft 4 in	IECC 2012	None
____	7	E	5	Vinyl	Low-E Double	Yes	0.33	0.22	N	6.0 ft²	1 ft 6 in	1 ft 4 in	IECC 2012	None
____	8	E	5	Vinyl	Low-E Double	Yes	0.33	0.22	N	4.5 ft²	1 ft 6 in	1 ft 4 in	IECC 2012	None
____	9	S	8	Vinyl	Low-E Double	Yes	0.33	0.22	N	16.0 ft²	1 ft 6 in	1 ft 4 in	IECC 2012	None
____	10	S	12	Vinyl	Low-E Double	Yes	0.33	0.22	N	13.3 ft²	10 ft 6 in	1 ft 4 in	IECC 2012	None
____	11	S	14	Vinyl	Low-E Double	Yes	0.33	0.22	N	24.0 ft²	7 ft 6 in	1 ft 4 in	IECC 2012	None
____	12	W	16	Vinyl	Low-E Double	Yes	0.33	0.22	N	36.0 ft²	1 ft 6 in	1 ft 4 in	IECC 2012	None

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GARAGE

√	#	Floor Area	Ceiling Area	Exposed Wall Perimeter	Avg. Wall Height	Exposed Wall Insulation
_____	1	506 ft²	506 ft²	64 ft	8 ft	1

INFILTRATION

#	Scope	Method	SLA	CFM 50	ELA	EqLA	ACH	ACH 50
1	Wholehouse	Proposed ACH(50)	.000286	1500	82.35	154.87	.2202	5

HEATING SYSTEM

√	#	System Type	Subtype	Efficiency	Capacity	Block	Ducts
_____	1	Electric Heat Pump/	None	HSPF:8.5	48 kBtu/hr	1	sys#1

COOLING SYSTEM

√	#	System Type	Subtype	Efficiency	Capacity	Air Flow	SHR	Block	Ducts
_____	1	Central Unit/	None	SEER: 15	48 kBtu/hr	1440 cfm	0.8	1	sys#1

HOT WATER SYSTEM

√	#	System Type	SubType	Location	EF	Cap	Use	SetPnt	Conservation
_____	1	Electric	None	Garage	0.92	40 gal	70 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	HVAC # Cool
_____	1	Attic	8	435 ft²	Attic	108.75	Default Leakage	Garage	(Default)	(Default)			1	1

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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]	[ ]

Thermostat Schedule: HERS 2006 Reference

Schedule Type		Hours 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

Residential System Sizing Calculation

Summary

Spec House

Project Title:
Carolina

Lake City, FL 32024

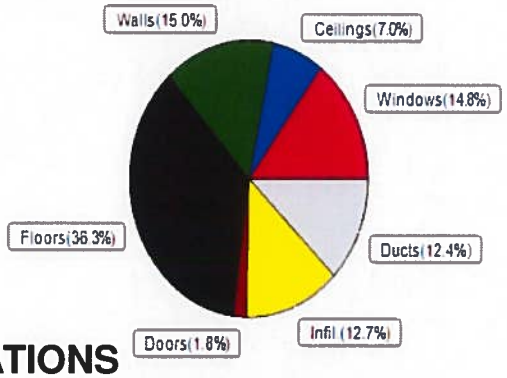
2/20/2017

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	**36367**	**Btuh**	**Total cooling load calculation**	**25019**	**Btuh**
Submitted heating capacity	% of calc	Btuh	Submitted cooling capacity	% of calc	Btuh
Total (Electric Heat Pump)	132.0	48000	Sensible (SHR = 0.80)	194.0	38400
Heat Pump + Auxiliary(0.0kW)	132.0	48000	Latent	183.9	9600
			Total (Electric Heat Pump)	191.9	48000

WINTER CALCULATIONS

Winter Heating Load (for 2000 sqft)

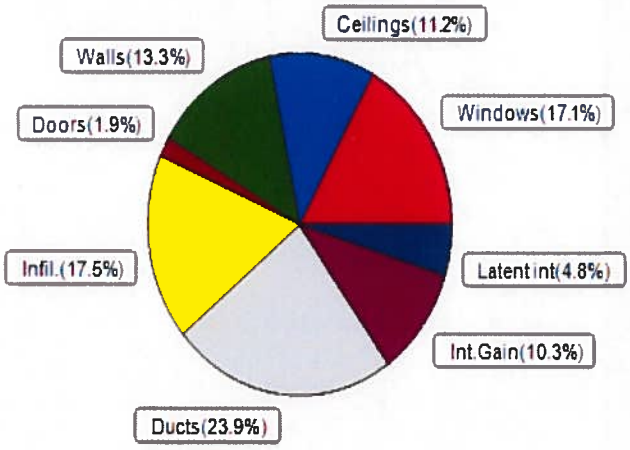
Load component			Load	
Window total	408	sqft	5390	Btuh
Wall total	1580	sqft	5447	Btuh
Door total	40	sqft	640	Btuh
Ceiling total	2000	sqft	2548	Btuh
Floor total	2000	sqft	13216	Btuh
Infiltration	106	cfm	4628	Btuh
Duct loss			4498	Btuh
Subtotal			**36367**	**Btuh**
Ventilation	0	cfm	0	Btuh
TOTAL HEAT LOSS			**36367**	**Btuh**



SUMMER CALCULATIONS

Summer Cooling Load (for 2000 sqft)

Load component			Load	
Window total	408	sqft	4268	Btuh
Wall total	1580	sqft	3328	Btuh
Door total	40	sqft	480	Btuh
Ceiling total	2000	sqft	2803	Btuh
Floor total			0	Btuh
Infiltration	79	cfm	1649	Btuh
Internal gain			2580	Btuh
Duct gain			4691	Btuh
Sens. Ventilation	0	cfm	0	Btuh
Blower Load			0	Btuh
Total sensible gain			**19798**	**Btuh**
Latent gain(ducts)			1285	Btuh
Latent gain(infiltration)			2736	Btuh
Latent gain(ventilation)			0	Btuh
Latent gain(internal/occupants/other)			1200	Btuh
Total latent gain			**5221**	**Btuh**
TOTAL HEAT GAIN			**25019**	**Btuh**



8th Edition

EnergyGauge® System Sizing
PREPARED BY: _____
DATE: 2-20-17

System Sizing Calculations - Summer

Residential Load - Whole House Component Details

Spec House

Project Title:
Carolina

Lake City, FL 32024

2/20/2017

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	0.22,	0.33	I-A	No	N	1.5ft	1.3ft	72.0	0.0	72.0	8	8	552 Btuh
2	2 NFRC	0.22,	0.33	I-A	No	E	1.5ft	1.3ft	64.0	0.0	64.0	8	15	973 Btuh
3	2 NFRC	0.22,	0.33	I-A	No	N	13.5f	1.3ft	96.0	0.0	96.0	8	8	736 Btuh
4	2 NFRC	0.22,	0.33	I-A	No	N	1.5ft	1.3ft	36.0	0.0	36.0	8	8	276 Btuh
5	2 NFRC	0.22,	0.33	I-A	No	E	1.5ft	1.3ft	36.0	0.0	36.0	8	15	547 Btuh
6	2 NFRC	0.22,	0.33	I-A	No	E	1.5ft	1.3ft	4.5	0.0	4.5	8	15	68 Btuh
7	2 NFRC	0.22,	0.33	I-A	No	E	1.5ft	1.3ft	6.0	0.0	6.0	8	15	91 Btuh
8	2 NFRC	0.22,	0.33	I-A	No	E	1.5ft	1.3ft	4.5	0.0	4.5	8	15	68 Btuh
9	2 NFRC	0.22,	0.33	I-A	No	S	1.5ft	1.3ft	16.0	16.0	0.0	8	9	123 Btuh
10	2 NFRC	0.22,	0.33	I-A	No	S	10.5f	1.3ft	13.3	13.3	0.0	8	9	102 Btuh
11	2 NFRC	0.22,	0.33	I-A	No	S	7.5ft	1.3ft	24.0	24.0	0.0	8	9	184 Btuh
12	2 NFRC	0.22,	0.33	I-A	No	W	1.5ft	1.3ft	36.0	0.0	36.0	8	15	547 Btuh
	Window Total								408 (sqft)					4268 Btuh

Walls	Type	U-Value	R-Value Cav/Sheath	Area(sqft)	HTM	Load
1	Frame - Wood - Ext	0.09	13.0/0.6	168.0	2.2	369 Btuh
2	Frame - Wood - Ext	0.09	13.0/0.6	41.0	2.2	90 Btuh
3	Frame - Wood - Ext	0.09	13.0/0.6	51.0	2.2	112 Btuh
4	Frame - Wood - Ext	0.09	13.0/0.6	109.5	2.2	241 Btuh
5	Frame - Wood - Ext	0.09	13.0/0.6	267.0	2.2	587 Btuh
6	Frame - Wood - Ext	0.09	13.0/0.6	36.0	2.2	79 Btuh
7	Frame - Wood - Ext	0.09	13.0/0.6	12.0	2.2	26 Btuh
8	Frame - Wood - Ext	0.09	13.0/0.6	50.0	2.2	110 Btuh
9	Frame - Wood - Ext	0.09	13.0/0.6	12.0	2.2	26 Btuh
10	Frame - Wood - Ext	0.09	13.0/0.6	46.5	2.2	102 Btuh
11	Frame - Wood - Ext	0.09	13.0/0.6	36.0	2.2	79 Btuh
12	Frame - Wood - Ext	0.09	13.0/0.6	40.2	2.2	88 Btuh
13	Frame - Wood - Ext	0.09	13.0/0.6	36.0	2.2	79 Btuh
14	Frame - Wood - Ext	0.09	13.0/0.6	88.5	2.2	195 Btuh
15	Frame - Wood - Adj	0.09	13.0/0.6	259.0	1.6	424 Btuh
16	Frame - Wood - Ext	0.09	13.0/0.6	327.0	2.2	719 Btuh
	Wall Total			1580 (sqft)		3328 Btuh

Doors	Type	Area (sqft)	HTM	Load
1	Insulated - Exterior	20.0	12.0	240 Btuh
2	Insulated - Garage	20.0	12.0	240 Btuh
	Door Total	40 (sqft)		480 Btuh

Ceilings	Type/Color/Surface	U-Value	R-Value	Area(sqft)	HTM	Load
1	Vented Attic/Light/Shingle	0.032	30.0/0.0	2000.0	1.40	2803 Btuh
	Ceiling Total			2000 (sqft)		2803 Btuh

Floors	Type	R-Value	Size	HTM	Load
1	Slab On Grade	0.0	2000 (ft-perimeter)	0.0	0 Btuh
	Floor Total		2000.0 (sqft)		0 Btuh

	Envelope Subtotal:	10879 Btuh

Manual J Summer Calculations

Residential Load - Component Details (continued)

Spec House | Project Title: Carolina | Climate:FL_GAINESVILLE_REGIONAL_A

Lake City, FL 32024

2/20/2017

Infiltration	Type	Average ACH	Volume(cuft)		Wall Ratio		CFM=	Load
	Natural	0.26	18000		1		79.3	1649 Btuh
Internal gain		Occupants	Btuh/occupant				Appliance	Load
		6	X	230	+		1200	2580 Btuh
						Sensible Envelope Load:		15107 Btuh
Duct load	Average sealed, Supply(R8.0-Attic), Return(R8.0-Attic)					(DGM of 0.310)		4691 Btuh
						Sensible Load All Zones		**19798 Btuh**

Manual J Summer Calculations

Residential Load - Component Details (continued)

Spec House | Project Title: Carolina | Climate:FL_GAINESVILLE_REGIONAL_A

Lake City, FL 32024

2/20/2017

WHOLE HOUSE TOTALS

	Sensible Envelope Load All Zones	**15107**	**Btuh**
	Sensible Duct Load	4691	Btuh
	Total Sensible Zone Loads	**19798**	**Btuh**
	Sensible ventilation	0	Btuh
	Blower	0	Btuh
Whole House	**Total sensible gain**	**19798**	**Btuh**
Totals for Cooling	Latent infiltration gain (for 51 gr. humidity difference)	2736	Btuh
	Latent ventilation gain	0	Btuh
	Latent duct gain	1285	Btuh
	Latent occupant gain (6.0 people @ 200 Btuh per person)	1200	Btuh
	Latent other gain	0	Btuh
	Latent total gain	**5221**	**Btuh**
	TOTAL GAIN	**25019**	**Btuh**

EQUIPMENT

1. Central Unit	#	48000 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

System Sizing Calculations - Winter

Residential Load - Whole House Component Details

Spec House
Lake City, FL 32024

Project Title:
Carolina
Building Type: User

2/20/2017

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 0.22	Vinyl	0.33	N	72.0	13.2	950 Btuh
2	2, NFRC 0.22	Vinyl	0.33	E	64.0	13.2	845 Btuh
3	2, NFRC 0.22	Vinyl	0.33	N	96.0	13.2	1267 Btuh
4	2, NFRC 0.22	Vinyl	0.33	N	36.0	13.2	475 Btuh
5	2, NFRC 0.22	Vinyl	0.33	E	36.0	13.2	475 Btuh
6	2, NFRC 0.22	Vinyl	0.33	E	4.5	13.2	59 Btuh
7	2, NFRC 0.22	Vinyl	0.33	E	6.0	13.2	79 Btuh
8	2, NFRC 0.22	Vinyl	0.33	E	4.5	13.2	59 Btuh
9	2, NFRC 0.22	Vinyl	0.33	S	16.0	13.2	211 Btuh
10	2, NFRC 0.22	Vinyl	0.33	S	13.3	13.2	176 Btuh
11	2, NFRC 0.22	Vinyl	0.33	S	24.0	13.2	317 Btuh
12	2, NFRC 0.22	Vinyl	0.33	W	36.0	13.2	475 Btuh
	Window Total				408.3(sqft)		5390 Btuh

Walls	Type	Ornt.	Ueff.	R-Value (Cav/Sh)	Area X	HTM=	Load
1	Frame - Wood	- Ext	(0.086)	13.0/0.6	168	3.45	579 Btuh
2	Frame - Wood	- Ext	(0.086)	13.0/0.6	41	3.45	141 Btuh
3	Frame - Wood	- Ext	(0.086)	13.0/0.6	51	3.45	176 Btuh
4	Frame - Wood	- Ext	(0.086)	13.0/0.6	110	3.45	378 Btuh
5	Frame - Wood	- Ext	(0.086)	13.0/0.6	267	3.45	921 Btuh
6	Frame - Wood	- Ext	(0.086)	13.0/0.6	36	3.45	124 Btuh
7	Frame - Wood	- Ext	(0.086)	13.0/0.6	12	3.45	41 Btuh
8	Frame - Wood	- Ext	(0.086)	13.0/0.6	50	3.45	172 Btuh
9	Frame - Wood	- Ext	(0.086)	13.0/0.6	12	3.45	41 Btuh
10	Frame - Wood	- Ext	(0.086)	13.0/0.6	47	3.45	160 Btuh
11	Frame - Wood	- Ext	(0.086)	13.0/0.6	36	3.45	124 Btuh
12	Frame - Wood	- Ext	(0.086)	13.0/0.6	40	3.45	139 Btuh
13	Frame - Wood	- Ext	(0.086)	13.0/0.6	36	3.45	124 Btuh
14	Frame - Wood	- Ext	(0.086)	13.0/0.6	89	3.45	305 Btuh
15	Frame - Wood	- Adj	(0.086)	13.0/0.6	259	3.45	893 Btuh
16	Frame - Wood	- Ext	(0.086)	13.0/0.6	327	3.45	1128 Btuh
	Wall Total				1580(sqft)		5447 Btuh

Doors	Type	Storm	Ueff.	Area X	HTM=	Load
1	Insulated - Exterior,	n	(0.400)	20	16.0	320 Btuh
2	Insulated - Garage,	n	(0.400)	20	16.0	320 Btuh
	Door Total			40(sqft)		640Btuh

Ceilings	Type/Color/Surface	Ueff.	R-Value	Area X	HTM=	Load
1	Vented Attic/L/Shing	(0.032)	30.0/0.0	2000	1.3	2548 Btuh
	Ceiling Total			2000(sqft)		2548Btuh

Floors	Type	Ueff.	R-Value	Size X	HTM=	Load
1	Slab On Grade	(1.180)	0.0	280.0 ft(perim.)	47.2	13216 Btuh
	Floor Total			2000 sqft		13216 Btuh

Manual J Winter Calculations

Residential Load - Component Details (continued)

Spec House
Lake City, FL 32024

Project Title:
Carolina
Building Type: User

2/20/2017

	Envelope Subtotal:	27241 Btuh
Infiltration	Type: Natural; Wholehouse: ; ACH: 0.35; Volume(cuft): 18000; Wall Ratio: 1.00; CFM=: 105.7	4628 Btuh
Duct load	Average sealed, R8.0, Supply(Att), Return(Att) (DLM of 0.141)	4498 Btuh
All Zones	**Sensible Subtotal All Zones**	**36367 Btuh**

WHOLE HOUSE TOTALS

Totals for Heating	Subtotal Sensible Heat Loss	36367 Btuh
	Ventilation Sensible Heat Loss	0 Btuh
	Total Heat Loss	36367 Btuh

EQUIPMENT

1. Electric Heat Pump	#	48000 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