FORM 405-10

FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Business and Professional Regulation - Residential Performance Method

Project Name:	Model 1618	Builder Name:	InnovativeHome Builders
Street:	Rose Point PL	Permit Office:	Columbia County
City, State, Zip:	Lake City , FL , 32024-	Permit Number:	
Owner:	N/A	Jurisdiction:	
Design Location:	FL, Gainesville		

1. New construction or existing	New (From Plans)	9 Wall Types (1680 0 sqft.)	Insulation	Area
2. Single family or multiple family	Single-family	a. Frame - Wood, Exterior	R=13 0	1491.00 ft²
3. Number of units, if multiple family	1	b. Frame - Wood, Adjacent	R=13.0	189.00 ft²
4 Number of Bedrooms	4	c. N/A	R=	ft²
5 Is this a worst case?	No	d N/A	R=	ft²
6. Conditioned floor area above grade (ft²)	1618	10. Ceiling Types (1779.8 sqft.)	Insulation	Area
Conditioned floor area below grade (ft²)	0	a Under Attic (Vented)	R=30.0	1779.80 ft²
7 Windows (203.7 sqft.) Description	Area	b. N/A	R=	ft²
a. U-Factor: Dbl, U=0.30	203 67 ft²	c. N/A	R=	ft²
SHGC: SHGC=0 50		11. Ducts		R ft²
b U-Factor: N/A	ft²	a. Sup: Attic, Ret: Attic, AH: Garage		6 404.5
SHGC		12. Cooling systems	kBtu/hr	Efficiency
c. U-Factor: N/A	ft²	a. Central Unit	36.6	SEER:18 00
SHGC:		13. Heating systems	kBtu/hr	Efficiency
d. U-Factor: N/A	ft²	a. Electric Heat Pump	36.6	HSPF:7.70
SHGC		14. Hot water systems		
Area Weighted Average Overhang Depth.	2.158 ft.	a. Electric		Cap: 80 gallons
Area Weighted Average SHGC:	0.500			EF 0.920
8 Floor Types (1618.0 sqft.)	Insulation Area	b. Conservation features		
a Slab-On-Grade Edge Insulation	R=5.0 1618 00 ft²	None		
b. N/A	R= ft²	15 Credits		Pstat
c. N/A	R= ft²			

Glass/Floor Area. 0.126

Total Proposed Modified Loads: 32.47

Total Standard Reference Loads: 40.83

PASS

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

PREPARED BY: _____

DATE: 4/30/14

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 completion of a Florida Air Barrier and Insulation Inspection Checklist**

COLUMBIA COUNTY BUILDING DEPARTMENT
Received for FILE COPY
Code Compliance
PLANS EXAMINER

PROJECT

Title:	Model 1618	Bedrooms.	4	Address Type:	Street Address
Building Type:	FLProp2010	Conditioned Area:	1618	Lot #	
Owner·	N/A	Total Stories	1	Block/SubDivision:	
# of Units·	1	Worst Case·	No	PlatBook:	
Builder Name:	InnovativeHome Builders	Rotate Angle:	0	Street:	Rose Point PL
Permit Office:	Columbia County	Cross Ventilation:	No	County:	Columbia
Jurisdiction		Whole House Fan	No	City, State, Zip·	Lake City , FL , 32024-
Family Type·	Single-family				
New/Existing·	New (From Plans)				
Comment:					

CLIMATE

√	Design Location	TMY Site	IECC Zone	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	2	32	92	70	75	1305.5	51	Medium

BLOCKS

Number	Name	Area	Volume
1	Block1	1618	14562

SPACES

Number	Name	Area	Volume	Kitchen	Occupants	Bedrooms	Infil ID	Finished	Cooled	Heated
1	RoomsInBlock1	1618	14562	Yes	4	4	1	Yes	Yes	Yes

FLOORS

√	#	Floor Type	Space	Perimeter	R-Value	Area		Tile	Wood	Carpet
_____	1	Slab-On-Grade Edge Insulation	RoomsInBlock1	192 ft	5	1618 ft²	----	0	0	1

ROOF

√	#	Type	Materials	Roof Area	Gable Area	Roof Color	Solar Absor	SA Tested	Emitt	Emitt Tested	Deck Insul.	Pitch (deg)
_____	1	Hip	Composition shingles	1945 ft²	0 ft²	Medium	0.96	No	0.9	No	0	33.7

ATTIC

√	#	Type	Ventilation	Vent Ratio (1 in)	Area	RBS	IRCC
_____	1	Partial cathedral ceili	Vented	303	1618 ft²	N	N

CEILING

√	#	Ceiling Type	Space	R-Value	Area	Framing Frac	Truss Type
_____	1	Under Attic (Vented)	RoomsInBlock1	30	1779.8 ft²	0.11	Wood

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	E	Exterior	Frame - Wood	RoomsInBlock	13	32	2	9		289.5 ft²		0.23	0.75	0
	2	N	Exterior	Frame - Wood	RoomsInBlock	13	41	0	9		369 ft²		0.23	0.75	0
	3	W	Exterior	Frame - Wood	RoomsInBlock	13	53	2	9		478.5 ft²		0.23	0.75	0
	4	S	Exterior	Frame - Wood	RoomsInBlock	13	39	4	9		354 ft²		0.23	0.75	0
	5	E	Garage	Frame - Wood	RoomsInBlock	13	21		9		189 ft²		0.23	0.01	0

DOORS

√	#	Ornt	Door Type	Space	Storms	U-Value	Width Ft	Width In	Height Ft	Height In	Area
	1	E	Insulated	RoomsInBlock	None	0.460000	3		6	8	20 ft²
	2	E	Insulated	RoomsInBlock	None	0.460000	3		6	8	20 ft²

WINDOWS

Orientation shown is the entered, Proposed orientation.

√	#	Ornt	Wall ID	Frame	Panes	NFRC	U-Factor	SHGC	Storms	Area	Overhang Depth	Overhang Separation	Int Shade	Screening
	1	E	1	Vinyl	Low-E Double	Yes	0.3	0.5	N	30 ft²	1 ft 6 in	1 ft 0 in	HERS 2006	None
	2	E	1	Vinyl	Low-E Double	Yes	0.3	0.5	N	16 ft²	5 ft 6 in	1 ft 0 in	HERS 2006	None
	3	W	3	Vinyl	Low-E Double	Yes	0.3	0.5	N	120 ft²	1 ft 6 in	1 ft 0 in	HERS 2006	None
	4	W	3	Metal	Low-E Double	Yes	0.3	0.5	N	20 ft²	5 ft 0 in	1 ft 0 in	HERS 2006	None
	5	S	4	Vinyl	Low-E Double	Yes	0.3	0.5	N	2.666666	1 ft 6 in	1 ft 0 in	HERS 2006	None
	6	S	4	Vinyl	Low-E Double	Yes	0.3	0.5	N	15 ft²	1 ft 6 in	1 ft 0 in	HERS 2006	None

GARAGE

√	#	Floor Area	Ceiling Area	Exposed Wall Perimeter	Avg. Wall Height	Exposed Wall Insulation
	1	462 ft²	462 ft²	64.67 ft	9 ft	1

INFILTRATION

#	Scope	Method	SLA	CFM 50	ELA	EqLA	ACH	ACH 50
1	BySpaces	Proposed SLA	0.000360	1527.85	83.8771	157.743	0.27719	6.29523

HEATING SYSTEM

√	#	System Type	Subtype	Efficiency	Capacity	Block	Ducts
	1	Electric Heat Pump	None	HSPF 7.7	36.6 kBtu/hr	1	sys#1

COOLING SYSTEM

√	#	System Type	Subtype	Efficiency	Capacity	Air Flow	SHR	Block	Ducts
	1	Central Unit	None	SEER 18	36.6 kBtu/hr	1098 cfm	0.75	1	sys#1

HOT WATER SYSTEM

√	#	System Type	SubType	Location	EF	Cap	Use	SetPnt	Conservation
_____	1	Electric	None	RoomsInBlock1	0.92	80 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	Percent Leakage	QN	RLF	HVAC # Heat	Cool
_____	1	Attic	6	404.5 ft²	Attic	80.9 ft²	DSE=0.88	Garage	0.0 cfm	0.00 %	0.00	0.60	1	1

TEMPERATURES

Programable Thermostat: Y

Ceiling Fans.

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

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

FORM 405-10

Florida Code Compliance Checklist

Florida Department of Business and Professional Regulations
Residential Whole Building Performance Method

ADDRESS: Rose Point PL Lake City, FL, 32024-	PERMIT #:

MANDATORY REQUIREMENTS SUMMARY - See individual code sections for full details.

COMPONENT	SECTION	SUMMARY OF REQUIREMENT(S)	CHECK
Air leakage	402.4	To be caulked, gasketed, weatherstripped or otherwise sealed. Recessed lighting IC-rated as meeting ASTM E 283. Windows and doors = 0.30 cfm/sq.ft. Testing or visual inspection required. Fireplaces: gasketed doors & outdoor combustion air. Must complete envelope leakage report or visually verify Table 402.4.2.	
Thermostat & controls	403.1	At least one thermostat shall be provided for each separate heating and cooling system. Where forced-air furnace is primary system, programmable thermostat is required. Heat pumps with supplemental electric heat must prevent supplemental heat when compressor can meet the load.	
Ducts	403.2.2 403.3.3	All ducts, air handlers, filter boxes and building cavities which form the primary air containment passageways for air distribution systems shall be considered ducts or plenum chambers, shall be constructed and sealed in accordance with Section 503.2.7.2 of this code. Building framing cavities shall not be used as supply ducts.	
Water heaters	403.4	Heat trap required for vertical pipe risers. Comply with efficiencies in Table 403.4.3.2. Provide switch or clearly marked circuit breaker (electric) or shutoff (gas). Circulating system pipes insulated to = R-2 + accessible manual OFF switch.	
Mechanical ventilation	403.5	Homes designed to operate at positive pressure or with mechanical ventilation systems shall not exceed the minimum ASHRAE 62 level. No make-up air from attics, crawlspaces, garages or outdoors adjacent to pools or spas.	
Swimming Pools & Spas	403.9	Pool pumps and pool pump motors with a total horsepower (HP) of = 1 HP shall have the capability of operating at two or more speeds. Spas and heated pools must have vapor-retardant covers or a liquid cover or other means proven to reduce heat loss except if 70% of heat from site-recovered energy. Off/timer switch required. Gas heaters minimum thermal efficiency=78% (82% after 4/16/13). Heat pump pool heaters minimum COP= 4.0.	
Cooling/heating equipment	403.6	Sizing calculation performed & attached. Minimum efficiencies per Tables 503.2.3. Equipment efficiency verification required. Special occasion cooling or heating capacity requires separate system or variable capacity system. Electric heat >10kW must be divided into two or more stages.	
Ceilings/knee walls	405.2.1	R-19 space permitting.	

ENERGY PERFORMANCE LEVEL (EPL) DISPLAY CARD

ESTIMATED ENERGY PERFORMANCE INDEX* = 80

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

Rose Point PL, Lake City, FL, 32024-

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 (ft²)		1618

7. Windows**	Description	Area
a. U-Factor:	Dbl, U=0.30	203.67 ft²
SHGC.	SHGC=0.50	
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:		2.158 ft.
Area Weighted Average SHGC		0.500

8. Floor Types	Insulation	Area
a. Slab-On-Grade Edge Insulation	R=5.0	1618.00 ft²
b. N/A	R=	ft²
c. N/A	R=	ft²

9. Wall Types	Insulation	Area
a. Frame - Wood, Exterior	R=13.0	1491.00 ft²
b. Frame - Wood, Adjacent	R=13.0	189.00 ft²
c. N/A	R=	ft²
d. N/A	R=	ft²

10. Ceiling Types	Insulation	Area
a. Under Attic (Vented)	R=30.0	1779.80 ft²
b. N/A	R=	ft²
c. N/A	R=	ft²

11. Ducts	R	ft²
a. Sup: Attic, Ret: Attic, AH. Garage	6	404.5

12. Cooling systems	kBtu/hr	Efficiency
a. Central Unit	36.6	SEER 18.00

13. Heating systems	kBtu/hr	Efficiency
a. Electric Heat Pump	36.6	HSPF 7.70

14. Hot water systems	
a. Electric	Cap: 80 gallons EF: 0.92
b. Conservationfeatures	
None	
15. Credits	Pstat

I certify that this home has complied with the Florida Energy Efficiency Code for Building Construction through the above energy saving features which will be installed (or exceeded) in this home before final inspection. Otherwise, a new EPL Display Card will be completed based on installed Code compliant features.

Builder Signature: _____ Date: _____

Address of New Home: _____ City/FL Zip: _____

*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 EnergyGauge Rating. Contact the EnergyGauge Hotline at (321) 638-1492 or see the EnergyGauge web site at energygauge.com for information and a list of certified Raters. For information about the Florida Building Code, Energy Conservation, contact the Florida Building Commission's support staff.

**Label required by Section 303.1.3 of the Florida Building Code, Energy Conservation, if not DEFAULT.

Residential System Sizing Calculation

Summary

N/A
Rose Point PL
Lake City, FL 32024-

Project Title:
Model 1618

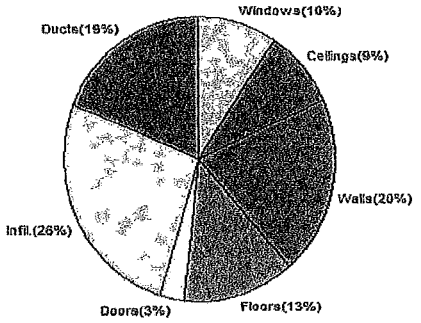
5/1/2014

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(54gr.)					
Winter design temperature(MJ8 99%)	33	F	Summer design temperature(MJ8 99%)	92	F
Winter setpoint	70	F	Summer setpoint	75	F
Winter temperature difference	37	F	Summer temperature difference	17	F
Total heating load calculation	**23419**	**Btuh**	**Total cooling load calculation**	**33317**	**Btuh**
Submitted heating capacity	% of calc	Btuh	Submitted cooling capacity	% of calc	Btuh
Total (Electric Heat Pump)	156.3	36600	Sensible (SHR = 0.75)	103.5	27450
Heat Pump + Auxiliary(0.0kW)	156.3	36600	Latent	134.4	9150
			Total (Electric Heat Pump)	109.9	36600

WINTER CALCULATIONS

Winter Heating Load (for 1618 sqft)

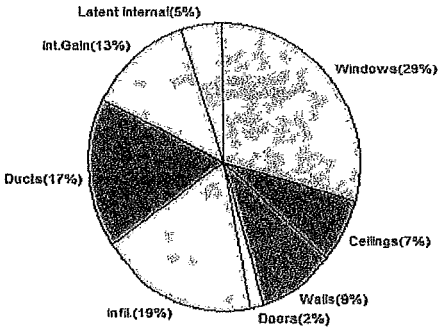
Load component			Load	
Window total	204	sqft	2261	Btuh
Wall total	1436	sqft	4717	Btuh
Door total	40	sqft	681	Btuh
Ceiling total	1780	sqft	2097	Btuh
Floor total	1618	sqft	3140	Btuh
Infiltration	150	cfm	6056	Btuh
Duct loss			4467	Btuh
Subtotal			**23419**	**Btuh**
Ventilation	0	cfm	0	Btuh
TOTAL HEAT LOSS			**23419**	**Btuh**



SUMMER CALCULATIONS

Summer Cooling Load (for 1618 sqft)

Load component			Load	
Window total	204	sqft	9768	Btuh
Wall total	1436	sqft	2898	Btuh
Door total	40	sqft	515	Btuh
Ceiling total	1780	sqft	2381	Btuh
Floor total			0	Btuh
Infiltration	112	cfm	2087	Btuh
Internal gain			4240	Btuh
Duct gain			4620	Btuh
Sens. Ventilation	0	cfm	0	Btuh
Blower Load			0	Btuh
Total sensible gain			**26510**	**Btuh**
Latent gain(ducts)			1109	Btuh
Latent gain(infiltration)			4098	Btuh
Latent gain(ventilation)			0	Btuh
Latent gain(internal/occupants/other)			1600	Btuh
Total latent gain			**6807**	**Btuh**
TOTAL HEAT GAIN			**33317**	**Btuh**



8th Edition

EnergyGauge® System Sizing
PREPARED BY: [signature]
DATE: 4/30/14

System Sizing Calculations - Winter

Residential Load - Whole House Component Details

N/A
Rose Point PL
Lake City, FL 32024-

Project Title:
Model 1618
Building Type: User

5/1/2014

Reference City: Gainesville, FL (Defaults) Winter Temperature Difference: 37.0 F (MJ8 99%)

Component Loads for Whole House

Window	Panes/Type	Frame	U	Orientation	Area(sqft) X	HTM=	Load
1	2, NFRC 0.50	Vinyl	0.30	E	30.0	11.1	333 Btuh
2	2, NFRC 0.50	Vinyl	0.30	E	16.0	11.1	178 Btuh
3	2, NFRC 0.50	Vinyl	0.30	W	120.0	11.1	1332 Btuh
4	2, NFRC 0.50	Metal	0.30	W	20.0	11.1	222 Btuh
5	2, NFRC 0.50	Vinyl	0.30	S	2.7	11.1	30 Btuh
6	2, NFRC 0.50	Vinyl	0.30	S	15.0	11.1	166 Btuh
	Window Total				203.7(sqft)		2261 Btuh

Walls	Type	Ornt.	Ueff.	R-Value (Cav/Sh)	Area X	HTM=	Load
1	Frame - Wood	- Ext	(0.089)	13.0/0.0	224	3.28	734 Btuh
2	Frame - Wood	- Ext	(0.089)	13.0/0.0	369	3.28	1212 Btuh
3	Frame - Wood	- Ext	(0.089)	13.0/0.0	339	3.28	1112 Btuh
4	Frame - Wood	- Ext	(0.089)	13.0/0.0	336	3.28	1105 Btuh
5	Frame - Wood	- Adj	(0.089)	13.0/0.0	169	3.28	555 Btuh
	Wall Total				1436(sqft)		4717 Btuh

Doors	Type	Storm	Ueff.	Area X	HTM=	Load
1	Insulated - Exterior, n		(0.460)	20	17.0	340 Btuh
2	Insulated - Garage, n		(0.460)	20	17.0	340 Btuh
	Door Total			40(sqft)		681Btuh

Ceilings	Type/Color/Surface	Ueff.	R-Value	Area X	HTM=	Load
1	Vented Attic/L/Shing	(0.032)	30.0/0.0	1780	1.2	2097 Btuh
	Ceiling Total			1780(sqft)		2097Btuh

Floors	Type	Ueff.	R-Value	Size X	HTM=	Load
1	Slab On Grade	(0.442)	5.0	192.0 ft(perim.)	16.4	3140 Btuh
	Floor Total			1618 sqft		3140 Btuh

	Envelope Subtotal:	12896 Btuh

Infiltration	Type	Wholehouse ACH	Volume(cuft)	Wall Ratio	CFM=	
	Natural	0.62	14562	1.00	149.5	6056 Btuh

Duct load	Average sealed, R6.0, Supply(Att), Return(Att) (DLM of 0.236)	4467 Btuh
All Zones	**Sensible Subtotal All Zones**	**23419 Btuh**

Manual J Winter Calculations

Residential Load - Component Details (continued)

N/A
Rose Point PL
Lake City, FL 32024-

Project Title:
Model 1618
Building Type: User

5/1/2014

WHOLE HOUSE TOTALS

Totals for Heating	Subtotal Sensible Heat Loss Ventilation Sensible Heat Loss Total Heat Loss	23419 Btuh 0 Btuh 23419 Btuh

EQUIPMENT

1. Electric Heat Pump	#	36600 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

N/A
Rose Point PL
Lake City, FL 32024-

Project Title:
Model 1618

5/1/2014

Reference City: Gainesville, FL Temperature Difference: 17.0F(MJ8 99%) Humidity difference: 54gr.

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	0.50	0.30	No	No	E	1.5ft.	1.0ft.	30.0	1.5	28.5	16	53	1544 Btuh
2	2 NFRC	0.50	0.30	No	No	E	5.5ft.	1.0ft.	16.0	14.3	1.7	16	53	315 Btuh
3	2 NFRC	0.50	0.30	No	No	W	1.5ft.	1.0ft.	120.0	5.9	114.1	16	53	6175 Btuh
4	2 NFRC	0 50	0.30	No	No	W	5.0ft.	1.0ft.	20.0	9.4	10.6	16	53	710 Btuh
5	2 NFRC	0.50	0.30	No	No	S	1.5ft.	1.0ft.	2.7	2.7	0.0	16	20	42 Btuh
6	2 NFRC	0.50	0.30	No	No	S	1.5ft.	1 0ft.	15.0	15 0	0.0	16	20	234 Btuh
	Excursion													749 Btuh
	Window Total								204 (sqft)					9768 Btuh

Walls	Type	U-Value	R-Value Cav/Sheath	Area(sqft)	HTM	Load
1	Frame - Wood - Ext	0.09	13.0/0.0	223.5	2.1	466 Btuh
2	Frame - Wood - Ext	0.09	13.0/0.0	369.0	2.1	770 Btuh
3	Frame - Wood - Ext	0.09	13.0/0.0	338.5	2.1	706 Btuh
4	Frame - Wood - Ext	0.09	13.0/0.0	336.3	2.1	702 Btuh
5	Frame - Wood - Adj	0.09	13.0/0.0	169.0	1 5	255 Btuh
	Wall Total			1436 (sqft)		2898 Btuh

Doors	Type	Area (sqft)	HTM	Load
1	Insulated - Exterior	20.0	12 9	258 Btuh
2	Insulated - Garage	20.0	12 9	258 Btuh
	Door Total	40 (sqft)		515 Btuh

Ceilings	Type/Color/Surface	U-Value	R-Value	Area(sqft)	HTM	Load
1	Vented Attic/Light/Shingle	0.032	30.0/0.0	1779.8	1.34	2381 Btuh
	Ceiling Total			1780 (sqft)		2381 Btuh

Floors	Type	R-Value	Size	HTM	Load
1	Slab On Grade	5.0	1618 (ft-perimeter)	0.0	0 Btuh
	Floor Total		1618.0 (sqft)		0 Btuh

	Envelope Subtotal:	15563 Btuh

Infiltration	Type	Average ACH	Volume(cuft)	Wall Ratio	CFM=	Load
	Natural	0.46	14562	1	112.1	2087 Btuh

Internal gain	Occupants	Btuh/occupant		Appliance	Load
	8	X 230	+	2400	4240 Btuh

	Sensible Envelope Load:	21890 Btuh
Duct load	Average sealed,Supply(R6.0-Attic), Return(R6.0-Attic) (DGM of 0.211)	4620 Btuh
	Sensible Load All Zones	**26510 Btuh**

Manual J Summer Calculations

Residential Load - Component Details (continued)

N/A
Rose Point PL
Lake City, FL 32024-

Project Title: Model 1618

Climate:FL_GAINESVILLE_REGIONAL_A

5/1/2014

WHOLE HOUSE TOTALS

Whole House Totals for Cooling	**Sensible Envelope Load All Zones**	**21890 Btuh**
	Sensible Duct Load	4620 Btuh
	Total Sensible Zone Loads	**26510 Btuh**
	Sensible ventilation	0 Btuh
	Blower	0 Btuh
	Total sensible gain	**26510 Btuh**
	Latent infiltration gain (for 54 gr. humidity difference)	4098 Btuh
	Latent ventilation gain	0 Btuh
	Latent duct gain	1109 Btuh
	Latent occupant gain (8.0 people @ 200 Btuh per person)	1600 Btuh
	Latent other gain	0 Btuh
	Latent total gain	**6807 Btuh**
	TOTAL GAIN	**33317 Btuh**

EQUIPMENT

1. Central Unit	#	36600 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