FORM 405-10

FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Business and Professional Regulation - Residential Performance Method

Project Name	Smith Residence	Builder Name	S & S Construction, LLC
Street.		Permit Office	Columbia County
City, State, Zip	LC , FL , 32055-	Permit Number	
Owner.	Mr & Mrs Smith	Jurisdiction	
Design Location	FL, Gainesville		

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)	2470
	Conditioned floor area below grade (ft²)	0

7. Windows(304 8 sqft)	Description	Area
a U-Factor	Dbl, U=0 30	304 83 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		6 554 ft
Area Weighted Average SHGC		0.500

8 Floor Types (2470 0 sqft.)	Insulation	Area
a Slab-On-Grade Edge Insulation	R=5 0	2470 00 ft²
b N/A	R=	ft²
c N/A	R=	ft²

9 Wall Types(2563 3 sqft)	Insulation	Area
a Frame - Wood, Exterior	R=13 0	2563 30 ft²
b N/A	R=	ft²
c. N/A	R=	ft²
d N/A	R=	ft²

10 Ceiling Types (2717 0 sqft)	Insulation	Area
a Under Attic (Vented)	R=30 0	2717 00 ft²
b N/A	R=	ft²
c. N/A	R=	ft²

11 Ducts	R	ft²
a Sup Attic, Ret. Attic, AH RoomsInBlock1	6	617 5

12 Cooling systems	kBtu/hr	Efficiency
a Central Unit	46 5	SEER 16 00

13 Heating systems	kBtu/hr	Efficiency
a Electric Heat Pump	46 5	HSPF 7 70

14 Hot water systems
a Electric — Cap 80 gallons, EF 0 920
b Conservation features
None

15 Credits — Pstat

Glass/Floor Area 0.123

Total Proposed Modified Loads: 41 20
Total Standard Reference Loads. 51.49

PASS

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

PREPARED BY: _____
DATE. 8/26/13

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	Smith Residence	Bedrooms	3	Address Type	Street Address
Building Type	FLProp2010	Conditioned Area	2470	Lot #	
Owner	Mr & Mrs Smith	Total Stories	1	Block/SubDivision	
# of Units	1	Worst Case	No	PlatBook	
Builder Name	S & S Construction, LLC	Rotate Angle	0	Street	
Permit Office	Columbia County	Cross Ventilation	No	County	Columbia
Jurisdiction		Whole House Fan	No	City, State, Zip	LC , FL , 32055-
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	2470	24700

SPACES

Number	Name	Area	Volume	Kitchen	Occupants	Bedrooms	Infil ID	Finished	Cooled	Heated
1	RoomsInBlock1	2470	24700	Yes	3	3	1	Yes	Yes	Yes

FLOORS

√	#	Floor Type	Space	Perimeter	R-Value	Area		Tile	Wood	Carpet
_____	1	Slab-On-Grade Edge Insulatio	RoomsInBlock1	274 ft	5	2470 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	Gable or shed	Composition shingles	3215 ft²	1028 ft²	Medium	0 96	No	0 9	No	0	39 8

ATTIC

√	#	Type	Ventilation	Vent Ratio (1 in)	Area	RBS	IRCC
_____	1	Full attic	Vented	303	2470 ft²	N	N

CEILING

√	#	Ceiling Type	Space	R-Value	Area	Framing Frac	Truss Type
_____	1	Under Attic (Vented)	RoomsInBlock1	30	2717 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	RoomsInBloc	13	80	4	10		803 3333		0 23	0 75	0
	2	N	Exterior	Frame - Wood	RoomsInBloc	13	47	8	10		476.6666		0.23	0 75	0
	3	W	Exterior	Frame - Wood	RoomsInBloc	13	80	4	10		803.3333		0 23	0.75	0
	4	S	Exterior	Frame - Wood	RoomsInBloc	13	48		10		480 ft²		0.23	0 75	0

DOORS

√	#	Ornt	Door Type	Space	Storms	U-Value	Width Ft	Width In	Height Ft	Height In	Area
	1	E	Insulated	RoomsInBloc	None	0.460000	3		6	8	20 ft²
	2	S	Insulated	RoomsInBloc	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	Metal	Double (Clear)	Yes	0 3	0.5	N	30 ft²	1 ft 6 in	1 ft 6 in	HERS 2006	None
	2	E	1	Metal	Double (Clear)	Yes	0 3	0 5	N	60 ft²	10 ft 0 in	1 ft 6 in	HERS 2006	None
	3	E	1	Metal	Double (Clear)	Yes	0 3	0 5	N	13 33333	10 ft 0 in	3 ft 0 in	HERS 2006	None
	4	E	1	Metal	Double (Clear)	Yes	0 3	0 5	N	6 ft²	1 ft 6 in	1 ft 6 in	HERS 2006	None
	5	N	2	Metal	Double (Clear)	Yes	0 3	0 5	N	30 ft²	1 ft 0 in	8 ft 0 in	HERS 2006	None
	6	W	3	Metal	Double (Clear)	Yes	0 3	0 5	N	30 ft²	1 ft 6 in	1 ft 6 in	HERS 2006	None
	7	W	3	Metal	Double (Clear)	Yes	0 3	0 5	N	45 ft²	9 ft 0 in	1 ft 6 in	HERS 2006	None
	8	W	3	Metal	Double (Clear)	Yes	0 3	0 5	N	80 ft²	9 ft 0 in	1 ft 6 in	HERS 2006	None
	9	S	4	Metal	Double (Clear)	Yes	0 3	0 5	N	4 5 ft²	1 ft 0 in	8 ft 0 in	HERS 2006	None
	10	S	4	Metal	Double (Clear)	Yes	0 3	0 5	N	6 ft²	1 ft 0 in	8 ft 0 in	HERS 2006	None

INFILTRATION

#	Scope	Method	SLA	CFM 50	ELA	EqLA	ACH	ACH 50
1	BySpaces	Proposed SLA	0 000360	2332 3	128 04	240 80	0.2771	5 6657

HEATING SYSTEM

√	#	System Type	Subtype	Efficiency	Capacity	Block	Ducts
	1	Electric Heat Pump	None	HSPF 7 7	46 5 kBtu/hr	1	sys#1

COOLING SYSTEM

√	#	System Type	Subtype	Efficiency	Capacity	Air Flow	SHR	Block	Ducts
	1	Central Unit	None	SEER 16	46 5 kBtu/hr	1395 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	60 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	617 5 ft	Attic	123 5 ft	DSE=0 88	RoomsInBl 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 Schedule Type	HERS 2006 Reference	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:	PERMIT #:
LC, FL, 32055-	

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.

, LC, FL, 32055-

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	Area Weighted Average Overhang Depth		6.554 ft
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	a Central Unit	46 5	SEER 16 00
13	Heating systems	kBtu/hr	Efficiency
	a Electric Heat Pump	46 5	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