FORM 405-10

FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Business and Professional Regulation - Residential Performance Method

Project Name:	Boardman Addition	Builder Name:	Don Reed Construction
Street:	355 SW Sweetbreeze Drive	Permit Office:	Columbia County
City, State, Zip:	Lake City , FL , 32055-	Permit Number:	
Owner:		Jurisdiction:	221000
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	1			
5. Is this a worst case?	No			
6. Conditioned floor area above grade (ft²)	1134			
Conditioned floor area below grade (ft²)	0			
7. Windows (189.4 sqft.)	Description		Area	
a. U-Factor:	Dbl, U=0.55		189.44	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:			2.000	ft.
Area Weighted Average SHGC:			0.500	
8. Floor Types (1134.0 sqft.)		Insulation	Area	
a. Slab-On-Grade Edge Insulation		R=0.0	1134.00	ft²
b. N/A		R=		ft²
c. N/A		R=		ft²

9. Wall Types (1710.0 sqft.)	Insulation	Area	
a. Concrete Block - Int Insul, Exterior	R=5.0	1305.00	ft²
b. Frame - Wood, Exterior	R=13.0	405.00	ft²
c. N/A	R=		ft²
d. N/A	R=		ft²
10. Ceiling Types (1134.0 sqft.)	Insulation	Area	
a. Under Attic (Vented)	R=30.0	1134.00	ft²
b. N/A	R=		ft²
c. N/A	R=		ft²
11. Ducts		R	ft²
a. Sup: Attic, Ret: Attic, AH: Main		6	226.8
12. Cooling systems	kBtu/hr	Efficiency	
a. Central Unit	36.0	SEER:15.00	
13. Heating systems	kBtu/hr	Efficiency	
a. Electric Heat Pump	36.0	HSPF:7.70	
14. Hot water systems			
a. Electric		Cap: 40 gallons	
		EF: 0.920	
b. Conservation features			
None			
15. Credits		CF, Pstat	

Glass/Floor Area: 0.167

Total Proposed Modified Loads: 21.17
Total Standard Reference Loads: 28.19

PASS

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

PREPARED BY: T. A. Adkins
DATE: 3/24/14

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.

GREAT SEAL OF THE STATE OF FLORIDA * IN GOD WE TRUST *

BUILDING OFFICIAL: _____
DATE: _____

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

- **Compliance requires completion of a Florida Air Barrier and Insulation Inspection Checklist.**

PROJECT

Title:	Boardman Addition	Bedrooms:	1	Address Type:	Street Address
Building Type:	User	Conditioned Area:	1134	Lot #	
Owner:		Total Stories:	1	Block/SubDivision:	
# of Units:	1	Worst Case:	No	PlatBook:	
Builder Name:	Don Reed Construction	Rotate Angle:	0	Street:	355 SW Sweetbreeze Dr
Permit Office:	Columbia County	Cross Ventilation:		County:	Columbia
Jurisdiction:	221000	Whole House Fan:		City, State, Zip:	Lake City , 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	1134	10206

SPACES

Number	Name	Area	Volume	Kitchen	Occupants	Bedrooms	Infil ID	Finished	Cooled	Heated
1	Main	1134	10206	Yes	2	1	1	Yes	Yes	Yes

FLOORS

√	#	Floor Type	Space	Perimeter	R-Value	Area		Tile	Wood	Carpet
_____	1	Slab-On-Grade Edge Insulation	Main	194 ft	0	1134 ft²	-----	0.5	0	0.5

ROOF

√	#	Type	Materials	Roof Area	Gable Area	Roof Color	Solar Absor.	SA Tested	Emitt	Emitt Tested	Deck Insul.	Pitch (deg)
_____	1	Hip	Composition shingles	1313 ft²	0 ft²	Medium	0.96	No	0.9	No	0	30.3

ATTIC

√	#	Type	Ventilation	Vent Ratio (1 in)	Area	RBS	IRCC
_____	1	Full attic	Vented	300	1134 ft²	N	N

CEILING

√	#	Ceiling Type	Space	R-Value	Area	Framing Frac	Truss Type
_____	1	Under Attic (Vented)	Main	30	1134 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	N	Exterior	Concrete Block - Int Insul	Main	5	28		9		252.0 ft²	1.1	0	0.75	0
	2	E	Exterior	Concrete Block - Int Insul	Main	5	24		9		216.0 ft²	1.1	0	0.75	0
	3	S	Exterior	Concrete Block - Int Insul	Main	5	28		9		252.0 ft²	1.1	0	0.75	0
	4	W	Exterior	Frame - Wood	Main	13	24		9		216.0 ft²	0.6	0.23	0.75	0
	5	N	Exterior	Concrete Block - Int Insul	Main	5	21		9		189.0 ft²	1.1	0	0.75	0
	6	W	Exterior	Concrete Block - Int Insul	Main	5	22		9		198.0 ft²	1.1	0	0.75	0
	7	N	Exterior	Frame - Wood	Main	13	21		9		189.0 ft²	0.6	0.23	0.75	0
	8	N	Exterior	Concrete Block - Int Insul	Main	5	22		9		198.0 ft²	1.1	0	0.75	0

DOORS

√	#	Ornt	Door Type	Space	Storms	U-Value	Width Ft	Width In	Height Ft	Height In	Area
	1	W	Insulated	Main	Metal	.28	3		6	8	20 ft²
	2	N	Insulated	Main	Metal	.46	3		6	8	20 ft²

WINDOWS

Orientation shown is the entered, Proposed orientation.

√	#	Ornt	Wall ID	Frame	Panes	NFRC	U-Factor	SHGC	Area	Overhang Depth	Overhang Separation	Int Shade	Screening
	1	N	1	Vinyl	Low-E Double	Yes	0.55	0.5	41.6 ft²	2 ft 0 in	0 ft 4 in	Drapes/blinds	None
	2	N	1	Vinyl	Low-E Double	Yes	0.55	0.5	32.1 ft²	2 ft 0 in	0 ft 4 in	Drapes/blinds	None
	3	E	2	Vinyl	Low-E Double	Yes	0.55	0.5	32.1 ft²	2 ft 0 in	0 ft 4 in	Drapes/blinds	None
	4	S	3	Vinyl	Low-E Double	Yes	0.55	0.5	17.1 ft²	2 ft 0 in	0 ft 4 in	Drapes/blinds	None
	5	N	5	Vinyl	Low-E Double	Yes	0.55	0.5	25.0 ft²	2 ft 0 in	0 ft 4 in	Drapes/blinds	None
	6	W	6	Vinyl	Low-E Double	Yes	0.55	0.5	41.6 ft²	2 ft 0 in	0 ft 4 in	Drapes/blinds	None

INFILTRATION

#	Scope	Method	SLA	CFM 50	ELA	EqLA	ACH	ACH 50
1	Wholehouse	Best Guess	.0005	1487.3	81.65	153.55	.385	8.7434

HEATING SYSTEM

√	#	System Type	Subtype	Efficiency	Capacity	Block	Ducts
	1	Electric Heat Pump	None	HSPF: 7.7	36 kBtu/hr	1	sys#1

COOLING SYSTEM

√	#	System Type	Subtype	Efficiency	Capacity	Air Flow	SHR	Block	Ducts
	1	Central Unit	Split	SEER: 15	36 kBtu/hr	1080 cfm	0.75	1	sys#1

HOT WATER SYSTEM

✓	#	System Type	SubType	Location	EF	Cap	Use	SetPnt	Conservation
_____	1	Electric	None	Main	0.92	40 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	HVAC # Cool
_____	1	Attic	6	226.8 ft²	Attic	56.7 ft²	Default Leakage	Main	(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]	[ ]

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: 355 SW Sweetbreeze Drive Lake City, FL, 32055-	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.	N/A
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.	✓