FORM R405-2017

FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Business and Professional Regulation - Residential Performance Method

Project Name:	buzzerd res	Builder Name:	amira
Street:		Permit Office:	
City, State, Zip:	, FL ,	Permit Number:	
Owner:		Jurisdiction:	
Design Location:	FL, Gainesville	County:	Alachua (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?	Yes
6. Conditioned floor area above grade (ft²)	3127
Conditioned floor area below grade (ft²)	0

7. Windows(500.7 sqft.)

	Description	Area
a. U-Factor:	Dbl, U=0.21	500.67 ft²
SHGC:	SHGC=0.31	
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: 1.500 ft.
Area Weighted Average SHGC: 0.310

8. Floor Types (3127.0 sqft.)

	Insulation	Area
a. Slab-On-Grade Edge Insulation	R=0.0	3127.00 ft²
b. N/A	R=	ft²
c. N/A	R=	ft²

9. Wall Types (3710.0 sqft.)

	Insulation	Area
a. Frame - Wood, Exterior	R=19.0	3440.00 ft²
b. Frame - Wood, Adjacent	R=19.0	270.00 ft²
c. N/A	R=	ft²
d. N/A	R=	ft²

10. Ceiling Types (3127.0 sqft.)

	Insulation	Area
a. Cathedral/Single Assembly (Unvented)	R=0.0	3127.00 ft²
b. N/A	R=	ft²
c. N/A	R=	ft²

11. Ducts

	R	ft²
a. Sup: Main, Ret: Main, AH: Main	6	456

12. Cooling systems

	kBtu/hr	Efficiency
a. Central Unit	48.0	SEER:16.00

13. Heating systems

	kBtu/hr	Efficiency
a. Electric Heat Pump	48.0	HSPF:9.00

14. Hot water systems

a. Electric	Cap: 50 gallons
	EF: 0.980
b. Conservation features	
None	

15. Credits Pstat

Glass/Floor Area: 0.160

Total Proposed Modified Loads: 78.16
Total Baseline Loads: 89.40

PASS

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

PREPARED BY: _____
DATE: *7-26-20*

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 6.00 ACH50 (R402.4.1.2).

FORM R405-2017

INPUT SUMMARY CHECKLIST REPORT

PROJECT

Title:	buzzerd res	Bedrooms:	4	Address Type:	Street Address
Building Type:	User	Conditioned Area:	3127	Lot #	
Owner Name:		Total Stories:	1	Block/Subdivision:	
# of Units:	1	Worst Case:	Yes	PlatBook:	
Builder Name:	amira	Rotate Angle:	0	Street:	
Permit Office:		Cross Ventilation:		County:	Alachua
Jurisdiction:		Whole House Fan:		City, State, Zip:	, FL ,
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	3127	31270

SPACES

Number	Name	Area	Volume	Kitchen	Occupants	Bedrooms	Infil ID	Finished	Cooled	Heated
1	Main	3127	31270	Yes	1	4	1	Yes	Yes	Yes

FLOORS

√	#	Floor Type	Space	Perimeter	R-Value	Area		Tile	Wood	Carpet
_____	1	Slab-On-Grade Edge Insulatio	Main	323 ft	0	3127 ft²	----	1	0	0

ROOF

√	#	Type	Materials	Roof Area	Gable Area	Roof Color	Rad Barr	Solar Absor.	SA Tested	Emitt	Emitt Tested	Deck Insul.	Pitch (deg)
_____	1	Hip	Composition shingles	3387 ft²	0 ft²	Medium	N	0.85	No	0.9	No	20	22.6

ATTIC

√	#	Type	Ventilation	Vent Ratio (1 in)	Area	RBS	IRCC
_____	1	Full attic	Unvented	0	3127 ft²	N	N

CEILING

√	#	Ceiling Type	Space	R-Value	Ins Type	Area	Framing Frac	Truss Type
_____	1	Cathedral/Single Assembly (Unvented	Main	0	Blown	3127 ft²	0.11	Wood

FORM R405-2017

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	NE	Garage	Frame - Wood	Main	19	27		10		270.0 ft²		0.23	0.75	0
____	2	N	Exterior	Frame - Wood	Main	19	62		10		620.0 ft²		0.23	0.75	0
____	3	S	Exterior	Frame - Wood	Main	19	135		10		1350.0 ft²		0.23	0.75	0
____	4	E	Exterior	Frame - Wood	Main	19	113		10		1130.0 ft²		0.23	0.75	0
____	5	W	Exterior	Frame - Wood	Main	19	34		10		340.0 ft²		0.23	0.75	0

DOORS

√	#	Ornt	Door Type	Space	Storms	U-Value	Width Ft	Width In	Height Ft	Height In	Area
_____	1	NE	Insulated	Main	None	.46	3		8		24 ft²
_____	2	N	Insulated	Main	None	.46	3		8		24 ft²
_____	3	S	Insulated	Main	None	.46	2	8	8		21.3 ft²
_____	4	E	Insulated	Main	None	.46	2	8	8		21.3 ft²

WINDOWS

Orientation shown is the entered orientation (=>) changed to Worst Case.

√	#	Ornt	Wall ID	Frame	Panes	NFRC	U-Factor	SHGC	Imp	Area	Overhang Depth	Overhang Separation	Int Shade	Screening
_____	1	N	2	Vinyl	Low-E Double	Yes	0.21	0.31	N	144.0 ft²	1 ft 6 in	2 ft 0 in	Drapes/blinds	Exterior 5
_____	2	N	2	Vinyl	Low-E Double	Yes	0.21	0.31	N	18.7 ft²	1 ft 6 in	2 ft 0 in	Drapes/blinds	Exterior 5
_____	3	S	3	Vinyl	Low-E Double	Yes	0.21	0.31	N	18.0 ft²	1 ft 6 in	2 ft 0 in	Drapes/blinds	Exterior 5
_____	4	E	4	Vinyl	Low-E Double	Yes	0.21	0.31	N	108.0 ft²	1 ft 6 in	2 ft 0 in	Drapes/blinds	Exterior 5
_____	5	E	4	Vinyl	Low-E Double	Yes	0.21	0.31	N	16.0 ft²	1 ft 6 in	2 ft 0 in	Drapes/blinds	Exterior 5
_____	6	E	4	Vinyl	Low-E Double	Yes	0.21	0.31	N	20.0 ft²	1 ft 6 in	2 ft 0 in	Drapes/blinds	Exterior 5
_____	7	E	4	Vinyl	Low-E Double	Yes	0.21	0.31	N	150.0 ft²	1 ft 6 in	2 ft 0 in	Drapes/blinds	Exterior 5
_____	8	W	5	Vinyl	Low-E Double	Yes	0.21	0.31	N	6.0 ft²	1 ft 6 in	2 ft 0 in	Drapes/blinds	Exterior 5
_____	9	W	5	Vinyl	Low-E Double	Yes	0.21	0.31	N	20.0 ft²	1 ft 6 in	2 ft 0 in	Drapes/blinds	Exterior 5

GARAGE

√	#	Floor Area	Ceiling Area	Exposed Wall Perimeter	Avg. Wall Height	Exposed Wall Insulation
_____	1	382.8 ft²	382.8 ft²	64 ft	8 ft	1

INFILTRATION

#	Scope	Method	SLA	CFM 50	ELA	EqLA	ACH	ACH 50
1	Wholehouse	Proposed ACH(50)	.000381	3127	171.67	322.85	.1568	6

FORM R405-2017

INPUT SUMMARY CHECKLIST REPORT

HEATING SYSTEM

√	#	System Type	Subtype	Speed	Efficiency	Capacity	Block	Ducts
_____	1	Electric Heat Pump/	Split	Singl	HSPF:9	48 kBtu/hr	1	sys#1

COOLING SYSTEM

√	#	System Type	Subtype	Subtype	Efficiency	Capacity	Air Flow	SHR	Block	Ducts
_____	1	Central Unit/	Split	Singl	SEER: 16	48 kBtu/hr	1440 cfm	0.75	1	sys#1

HOT WATER SYSTEM

√	#	System Type	SubType	Location	EF	Cap	Use	SetPnt	Conservation
_____	1	Electric	None	Garage	0.98	50 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	Cool
_____	1	Main	6	456 ft²	Main	156.35	Default Leakage	Main	(Default)	(Default)			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

MASS

Mass Type	Area	Thickness	Furniture Fraction	Space
Default(8 lbs/sq.ft.	0 ft²	0 ft	0.3	Main

2017 - AIR BARRIER AND INSULATION INSPECTION COMPONENT CRITERIA

TABLE 402.4.1.1
AIR BARRIER AND INSULATION INSPECTION COMPONENT CRITERIA

Project Name:	buzzerd res	Builder Name: amira	CHECK
Street:		Permit Office:	
City, State, Zip:	, FL ,	Permit Number:	
Owner:		Jurisdiction:	
Design Location:	FL, Gainesville		

COMPONENT	AIR BARRIER CRITERIA	INSULATION INSTALLATION CRITERIA	
General requirements	A continuous air barrier shall be installed in the building envelope. The exterior thermal envelope contains a continuous air barrier. Breaks or joints in the air barrier shall be sealed.	Air-permeable insulation shall not be used as a sealing material.	
Ceiling/attic	The air barrier in any dropped ceiling/soffit shall be aligned with the insulation and any gaps in the air barrier shall be sealed. Access openings, drop down stairs or knee wall doors to unconditioned attic spaces shall be sealed.	The insulation in any dropped ceiling/soffit shall be aligned with the air barrier.	
Walls	The junction of the foundation and sill plate shall be sealed. The junction of the top plate and the top of exterior walls shall be sealed. Knee walls shall be sealed.	Cavities within corners and headers of frame walls shall be insulated by completely filling the cavity with a material having a thermal resistance of R-3 per inch minimum. Exterior thermal envelope insulation for framed walls shall be installed in substantial contact and continuous alignment with the air barrier.	
Windows, skylights and doors	The space between window/door jambs and framing, and skylights and framing shall be sealed.		
Rim joists	Rim joists shall include the air barrier.	Rim joists shall be insulated.	
Floors (including above-garage and cantilevered floors)	The air barrier shall be installed at any exposed edge of insulation.	Floor framing cavity insulation shall be installed to maintain permanent contact with the underside of subfloor decking, or floor framing cavity insulation shall be permitted to be in contact with the top side of sheathing, or continuous insulation installed on the underside of floor framing and extends from the bottom to the top of all perimeter floor framing members.	
Crawl space walls	Exposed earth in unvented crawl spaces shall be covered with a Class I vapor retarder with overlapping joints taped.	Where provided instead of floor insulation, insulation shall be permanently attached to the crawlspace	
Shafts, penetrations	Duct shafts, utility penetrations, and flue shafts opening to exterior or unconditioned space shall be sealed.		
Narrow cavities		Batts in narrow cavities shall be cut to fit, or narrow cavities shall be filled by insulation that on installation readily conforms to the available cavity spaces.	
Garage separation	Air sealing shall be provided between the garage and conditioned spaces.		
Recessed lighting	Recessed light fixtures installed in the building thermal envelope shall be sealed to the drywall.	Recessed light fixtures installed in the building thermal envelope shall be air tight and IC rated.	
Plumbing and wiring		Batt insulation shall be cut neatly to fit around wiring and plumbing in exterior walls, or insulation that on installation readily conforms to available space shall extend behind piping and wiring.	
Shower/tub on exterior wall	The air barrier installed at exterior walls adjacent to showers and tubs shall separate them from the showers and tubs.	Exterior walls adjacent to showers and tubs shall be insulated.	
Electrical/phone box on exterior walls	The air barrier shall be installed behind electrical or communication boxes or air-sealed boxes shall be installed.		
HVAC register boots	HVAC register boots that penetrate building thermal envelope shall be sealed to the sub-floor or drywall.		
Concealed sprinklers	When required to be sealed, concealed fire sprinklers shall only be sealed in a manner that is recommended by the manufacturer. Caulking or other adhesive sealants shall not be used to fill voids between fire sprinkler cover plates and walls or ceilings.		

a. In addition, inspection of log walls shall be in accordance with the provisions of ICC-400.

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: amira Community: Lot: NA

Address:

City: State: FL Zip:

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): 6.000

_____ x 60 ÷ 31270 = _____
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: _____