FORM R405-2020

FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Business and Professional Regulation - Residential Performance Method

Project Name:	Brinkley	Builder Name:	Fierce Construction
Street:		Permit Office:	
City, State, Zip:	, FL ,	Permit Number:	
Owner:		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	Detached
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)	4800
Conditioned floor area below grade (ft²)	0

7. Windows(306.2 sqft.)	Description	Area
a. U-Factor:	Dbl, U=0.60	306.22 ft²
SHGC:	SHGC=0.27	
b. U-Factor:	N/A	ft²
SHGC:		
c. U-Factor:	N/A	ft²
SHGC:		
Area Weighted Average Overhang Depth:		1.500 ft.
Area Weighted Average SHGC:		0.270

8. Skylights		Area
c. U-Factor:(AVG)	N/A	ft²
SHGC(AVG):	N/A	

9. Floor Types (4800.0 sqft.)	Insulation	Area
a. Slab-On-Grade Edge Insulation	R=0.0	2400.00 ft²
b. Floor Over Other Space	R=0.0	2400.00 ft²
c. N/A	R=	ft²

10. Wall Types (4000.0 sqft.)	Insulation	Area
a. Frame - Steel, Exterior	R=19.0	4000.00 ft²
b. N/A	R=	ft²
c. N/A	R=	ft²
d. N/A	R=	ft²

11. Ceiling Types (4800.0 sqft.)	Insulation	Area
a. Cathedral/Single Assembly (Unvented)	R=30.0	4800.00 ft²
b. N/A	R=	ft²
c. N/A	R=	ft²

12. Ducts	R	ft²
a. Sup: 2nd Floor, Ret: 2nd Floor, AH: 1st Floor	6	960

13. Cooling systems	kBtu/hr	Efficiency
a. Central Unit	60.0	SEER:15.00

14. Heating systems	kBtu/hr	Efficiency
a. Electric Heat Pump	60.0	HSPF:8.50

15. Hot water systems	
a. Electric	Cap: 50 gallons
	EF: 0.920
b. Conservation features	
None	
16. Credits	CF, Pstat

Glass/Floor Area: 0.064

Total Proposed Modified Loads: 111.05

Total Baseline Loads: 115.97

PASS

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

PREPARED BY: _____

DATE: 4-19-21

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).

- Compliance with a proposed duct leakage Qn requires a Duct Leakage Test Report confirming duct leakage to outdoors, tested in accordance with ANSI/RESNET/ICC 380, is not greater than 0.030 Qn for whole house.

INPUT SUMMARY CHECKLIST REPORT

PROJECT

Title:	Brinkley	Bedrooms:	4	Address Type:	Street Address
Building Type:	User	Conditioned Area:	4773	Lot #	
Owner Name:		Total Stories:	2	Block/Subdivision:	
# of Units:	1	Worst Case:	No	PlatBook:	
Builder Name:	Fierce Construction	Rotate Angle:	0	Street:	
Permit Office:		Cross Ventilation:		County:	Columbia
Jurisdiction:		Whole House Fan:		City, State, Zip:	,
Family Type:	Detached				FL ,
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	4800	48000

SPACES

Number	Name	Area	Volume	Kitchen	Occupants	Bedrooms	Infil ID	Finished	Cooled	Heated
1	1st Floor	2400	24000	Yes	2	1	1	Yes	Yes	Yes
2	2nd Floor	2400	24000	No	6	3	1	Yes	Yes	Yes

FLOORS

√	#	Floor Type	Space	Perimeter	Perimeter R-Value	Area	Joist R-Value	Tile	Wood	Carpet
_____	1	Slab-On-Grade Edge Insulatio	1st Floor	200 ft	0	2400 ft²	----	0.33	0.33	0.34
_____	2	Floor Over Other Space	2nd Floor	----	----	2400 ft²	0	0.33	0.33	0.34

ROOF

√	#	Type	Materials	Roof Area	Gable Area	Roof Color	Rad Barr	Solar Absor.	SA Tested	Emitt	Emitt Tested	Deck Insul.	Pitch (deg)
_____	1	Gable or shed	Metal	2474 ft²	300 ft²	Light	N	0.6	No	0.9	No	0	14.04

ATTIC

√	#	Type	Ventilation	Vent Ratio (1 in)	Area	RBS	IRCC
_____	1	No attic	Unvented	0	2400 ft²	N	N

INPUT SUMMARY CHECKLIST REPORT

CEILING

√	#	Ceiling Type	Space	R-Value	Ins Type	Area	Framing Frac	Truss Type
_____	1	Cathedral/Single Assembly (Unvented	1st Floor	30	Blown	2400 ft²	0.11	Wood
_____	2	Cathedral/Single Assembly (Unvented	2nd Floor	30	Blown	2400 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	Frame - Steel	1st Floor	19	60		10		600.0 ft²		0.23	0.75	0
____	2	E	Exterior	Frame - Steel	1st Floor	19	40		10		400.0 ft²		0.23	0.75	0
____	3	S	Exterior	Frame - Steel	1st Floor	19	60		10		600.0 ft²		0.23	0.75	0
____	4	W	Exterior	Frame - Steel	1st Floor	19	40		10		400.0 ft²		0.23	0.75	0
____	5	N	Exterior	Frame - Steel	2nd Floor	19	60		10		600.0 ft²		0.23	0.75	0
____	6	E	Exterior	Frame - Steel	2nd Floor	19	40		10		400.0 ft²		0.23	0.75	0
____	7	S	Exterior	Frame - Steel	2nd Floor	19	60		10		600.0 ft²		0.23	0.75	0
____	8	W	Exterior	Frame - Steel	2nd Floor	19	40		10		400.0 ft²		0.23	0.75	0

DOORS

√	#	Ornt	Door Type	Space	Storms	U-Value	Width Ft	Width In	Height Ft	Height In	Area
_____	1	N	Insulated	1st Floor	None	.21	6	4	6	8	42.2 ft²
_____	2	E	Insulated	1st Floor	None	.21	6		6	8	40 ft²
_____	3	S	Insulated	1st Floor	None	.21	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	0.6	0.27	N	35.6 ft²	1 ft 6 in	2 ft 4 in	None	None
_____	2	N	1	Vinyl	Low-E Double	Yes	0.6	0.27	N	5.4 ft²	1 ft 6 in	2 ft 4 in	None	None
_____	3	E	2	Vinyl	Low-E Double	Yes	0.6	0.27	N	35.6 ft²	1 ft 6 in	2 ft 4 in	None	None
_____	4	S	3	Vinyl	Low-E Double	Yes	0.6	0.27	N	17.8 ft²	1 ft 6 in	2 ft 4 in	None	None
_____	5	S	3	Vinyl	Low-E Double	Yes	0.6	0.27	N	5.4 ft²	1 ft 6 in	2 ft 4 in	None	None
_____	6	S	3	Vinyl	Low-E Double	Yes	0.6	0.27	N	35.6 ft²	1 ft 6 in	2 ft 4 in	None	None
_____	7	W	4	Vinyl	Low-E Double	Yes	0.6	0.27	N	17.8 ft²	1 ft 6 in	2 ft 4 in	None	None
_____	8	N	5	Vinyl	Low-E Double	Yes	0.6	0.27	N	35.6 ft²	1 ft 6 in	2 ft 4 in	None	None
_____	9	N	5	Vinyl	Low-E Double	Yes	0.6	0.27	N	5.4 ft²	1 ft 6 in	2 ft 4 in	None	None
_____	10	E	6	Vinyl	Low-E Double	Yes	0.6	0.27	N	35.6 ft²	1 ft 6 in	2 ft 4 in	None	None
_____	11	S	7	Vinyl	Low-E Double	Yes	0.6	0.27	N	5.4 ft²	1 ft 6 in	2 ft 4 in	None	None
_____	12	S	7	Vinyl	Low-E Double	Yes	0.6	0.27	N	17.8 ft²	1 ft 6 in	2 ft 4 in	None	None
_____	13	W	8	Vinyl	Low-E Double	Yes	0.6	0.27	N	53.3 ft²	1 ft 6 in	2 ft 4 in	None	None

FORM R405-2020

INPUT SUMMARY CHECKLIST REPORT

INFILTRATION

#	Scope	Method	SLA	CFM 50	ELA	EqLA	ACH	ACH 50
1	Wholehouse	Proposed ACH(50)	.000317	4000	219.45	412	.1413	5

HEATING SYSTEM

√	#	System Type	Subtype	Speed	Efficiency	Capacity	Block	Ducts
_____	1	Electric Heat Pump/	None	Singl	HSPF:8.5	60 kBtu/hr	1	sys#1

COOLING SYSTEM

√	#	System Type	Subtype	Subtype	Efficiency	Capacity	Air Flow	SHR	Block	Ducts
_____	1	Central Unit/	None	Singl	SEER: 15	60 kBtu/hr	1800 cfm	0.85	1	sys#1

HOT WATER SYSTEM

√	#	System Type	SubType	Location	EF	Cap	Use	SetPnt	Conservation
_____	1	Electric	None	1st Floor	0.92	50 gal	70 gal	140 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	2nd Floor	6	960 ft²	2nd Floor	240 ft²	Prop. Leak Free	1st Floor	--- cfm	144.0 cfm	0.03	0.50	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]	[ ]

INPUT SUMMARY CHECKLIST REPORT

Thermostat Schedule: HERS 2006 Reference		Hours											
Schedule Type		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	80	80	78	78	78	78	78	78	78	78
Cooling (WEH)	AM	78	78	78	78	78	78	78	78	80	80	80	80
	PM	80	80	80	80	78	78	78	78	78	78	78	78
Heating (WD)	AM	65	65	65	65	65	65	65	68	68	68	68	68
	PM	68	68	68	68	68	68	68	68	68	68	68	68
Heating (WEH)	AM	65	65	65	65	65	65	65	68	68	68	68	68
	PM	68	68	68	68	68	68	68	68	68	68	68	68

MASS

Mass Type	Area	Thickness	Furniture Fraction	Space
Default(8 lbs/sq.ft.	0 ft²	0 ft	0.3	1st Floor
Default(8 lbs/sq.ft.	0 ft²	0 ft	0.3	2nd Floor