

FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Business and Professional Regulation - Residential Performance Method

Project Name: Adams Residence
 Street:
 City, State, Zip: Lake City, FL, 32024
 Owner: Mitchell & Jeanenne Adams
 Design Location: FL, Gainesville

Builder Name: IC Construction, LLC.
 Permit Office: Columbia County
 Permit Number:
 Jurisdiction:
 County: Columbia (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?	No
6. Conditioned floor area above grade (ft ²)	2350
Conditioned floor area below grade (ft ²)	0
7. Windows (385.0 sqft.)	Description Area
a. U-Factor:	Dbl, U=0.36 385.00 ft ²
SHGC:	SHGC=0.25
b. U-Factor:	N/A ft ²
SHGC:	
c. U-Factor:	N/A ft ²
SHGC:	
d. U-Factor:	N/A ft ²
SHGC:	
Area Weighted Average Overhang Depth:	5.573 ft.
Area Weighted Average SHGC:	0.250
8. Floor Types (2350.0 sqft.)	Insulation Area
a. Slab-On-Grade Edge Insulation	R=0.0 1894.00 ft ²
b. Floor over Garage	R=19.0 456.00 ft ²
c. N/A	R= ft ²

9. Wall Types (3222.5 sqft.)	Insulation Area
a. Frame - Wood, Exterior	R=13.0 2790.80 ft ²
b. Frame - Wood, Adjacent	R=13.0 431.67 ft ²
c. N/A	R= ft ²
d. N/A	R= ft ²
10. Ceiling Types (2468.0 sqft.)	Insulation Area
a. Under Attic (Vented)	R=38.0 2468.00 ft ²
b. N/A	R= ft ²
c. N/A	R= ft ²
11. Ducts	R ft ²
a. Sup: Attic, Ret: Attic, AH: Attic	6 587.5
12. Cooling systems	kBtu/hr Efficiency
a. Central Unit	21.8 SEER:14.00
13. Heating systems	kBtu/hr Efficiency
a. Electric Heat Pump	27.5 HSPF:8.20
14. Hot water systems	
a. Propane Tankless	Cap: 1 gallons
	EF: 0.590
b. Conservation features	
None	
15. Credits	CV, Pslat

Glass/Floor Area: 0.164

Total Proposed Modified Loads: 73.48

Total Baseline Loads: 74.73

PASS

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

PREPARED BY: DATE: 9/4/2020

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).

47477

INPUT SUMMARY CHECKLIST REPORT

PROJECT

Title:	Adams Residence	Bedrooms:	4	Address Type:	Lot Information
Building Type:	User	Conditioned Area:	2350	Lot #	5
Owner Name:	Mitchell & Jeanenne Adams	Total Stories:	2	Block/Subdivision:	Brianwood
# of Units:	1	Worst Case:	No	PlatBook:	
Builder Name:	IC Construction, LLC.	Rotate Angle:	0	Street:	
Permit Office:	Columbia County	Cross Ventilation:	Yes	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	Design Temp 97.5 %	2.5 %	Int Design Temp Winter	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	2350	22588

SPACES

Number	Name	Area	Volume	Kitchen	Occupants	Bedrooms	Infil ID	Finished	Cooled	Heated
1	1st Floor	1894	18940	Yes	6	2	1	Yes	Yes	Yes
2	2nd Floor	456	3648	No	4	2	1	Yes	Yes	Yes

FLOORS

✓	#	Floor Type	Space	Perimeter	Perimeter R-Value	Area	Joist R-Value	Tile	Wood	Carpet
_____	1	Slab-On-Grade Edge Insulation	1st Floor	243 ft	0	1894 ft²	_____	0	0	1
_____	2	Floor over Garage	2nd Floor	_____	_____	456 ft²	19	0	0	1

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	Composition shingles	2939 ft²	882 ft²	Medium	Y	0.96	No	0.9	No	0	36.9

ATTIC

✓	#	Type	Ventilation	Vent Ratio (1 in)	Area	RBS	IRCC
_____	1	Partial cathedral ceili	Vented	300	2350 ft²	Y	N

INPUT SUMMARY CHECKLIST REPORT

CEILING

✓	#	Ceiling Type	Space	R-Value	Ins Type	Area	Framing Frac	Truss Type
✓	1	Under Attic (Vented)	1st Floor	38	Double Batt	1989 ft²	0.11	Wood
✓	2	Under Attic (Vented)	2nd Floor	38	Double Batt	479 ft²	0.11	Wood

WALLS

✓	#	Ornt	Adjacent To	Wall Type	Space	Cavity R-Value	Width Ft	In	Height Ft	In	Area	Sheathing R-Value	Framing Fraction	Solar Absor	Below Grade%
✓	1	S	Exterior	Frame - Wood	1st Floor	13	24		10		240.0 ft²		0.23	0.75	0
✓	2	W	Exterior	Frame - Wood	1st Floor	13	10		10		100.0 ft²		0.23	0.75	0
✓	3	S	Exterior	Frame - Wood	1st Floor	13	15	10	10		158.3 ft²		0.23	0.75	0
✓	4	E	Exterior	Frame - Wood	1st Floor	13	35	9	10		357.5 ft²		0.23	0.75	0
✓	5	N	Exterior	Frame - Wood	1st Floor	13	39	10	10		398.3 ft²		0.23	0.75	0
✓	6	E	Exterior	Frame - Wood	1st Floor	13	10		10		100.0 ft²		0.23	0.75	0
✓	7	E	Exterior	Frame - Wood	1st Floor	13	10		10		100.0 ft²		0.23	0.75	0
✓	8	N	Exterior	Frame - Wood	1st Floor	13	26		10		260.0 ft²		0.23	0.75	0
✓	9	W	Exterior	Frame - Wood	1st Floor	13	29		10		290.0 ft²		0.23	0.75	0
✓	10	S	Garage	Frame - Wood	1st Floor	13	26		10		260.0 ft²		0.23	0.75	0
✓	11	W	Garage	Frame - Wood	1st Floor	13	17	2	10		171.7 ft²		0.23	0.75	0
✓	12	S	Exterior	Frame - Wood	2nd Floor	13	19	8	8		157.3 ft²		0.23	0.75	0
✓	13	N	Exterior	Frame - Wood	2nd Floor	13	19	8	8		157.3 ft²		0.23	0.75	0
✓	14	E	Exterior	Frame - Wood	2nd Floor	13	29	6	8		236.0 ft²		0.23	0.75	0
✓	15	W	Exterior	Frame - Wood	2nd Floor	13	29	6	8		236.0 ft²		0.23	0.75	0

DOORS

✓	#	Ornt	Door Type	Space	Storms	U-Value	Width Ft	In	Height Ft	In	Area
✓	1	S	Insulated	1st Floor	None	.46	3		8		24 ft²
✓	2	S	Insulated	1st Floor	None	.46	3		8		24 ft²

WINDOWS

Orientation shown is the entered, Proposed orientation.

✓	#	Ornt	Wall ID	Frame	Panes	NFRC	U-Factor	SHGC	Imp	Area	Overhang Depth	Separation	Int Shade	Screening
✓	1	S	1	Vinyl	Low-E Double	Yes	0.36	0.25	N	40.0 ft²	7 ft 6 in	1 ft 0 in	None	None
✓	2	S	3	Vinyl	Low-E Double	Yes	0.36	0.25	N	20.0 ft²	1 ft 0 in	4 ft 0 in	None	None
✓	3	E	4	Vinyl	Low-E Double	Yes	0.36	0.25	N	50.0 ft²	1 ft 0 in	4 ft 0 in	None	None
✓	4	N	5	TIM	Low-E Double	Yes	0.36	0.25	N	100.0 ft²	11 ft 6 in	1 ft 0 in	None	None
✓	5	N	5	Vinyl	Low-E Double	Yes	0.36	0.25	N	24.0 ft²	11 ft 6 in	1 ft 0 in	None	None
✓	6	E	6	TIM	Low-E Double	Yes	0.36	0.25	N	20.0 ft²	10 ft 0 in	1 ft 0 in	None	None
✓	7	E	7	Vinyl	Low-E Double	Yes	0.36	0.25	N	15.0 ft²	1 ft 6 in	1 ft 0 in	None	None
✓	8	N	8	Vinyl	Low-E Double	Yes	0.36	0.25	N	30.0 ft²	1 ft 0 in	4 ft 0 in	None	None
✓	9	W	9	Vinyl	Low-E Double	Yes	0.36	0.25	N	16.0 ft²	1 ft 6 in	1 ft 0 in	None	None
✓	10	W	9	Vinyl	Low-E Double	Yes	0.36	0.25	N	6.0 ft²	1 ft 6 in	1 ft 0 in	None	None
✓	11	S	12	Vinyl	Low-E Double	Yes	0.36	0.25	N	32.0 ft²	1 ft 0 in	2 ft 0 in	None	None
✓	12	W	15	Vinyl	Low-E Double	Yes	0.36	0.25	N	32.0 ft²	1 ft 0 in	0 ft 6 in	None	None

INPUT SUMMARY CHECKLIST REPORT

GARAGE														
✓	#	Floor Area	Ceiling Area	Exposed Wall Perimeter	Avg. Wall Height	Exposed Wall Insulation								
	1	676 ft²	676 ft²	61 ft	9 ft	1								
INFILTRATION														
#	Scope	Method	SLA	CFM 50	ELA	EqLA	ACH	ACH 50						
1	Wholehouse	Proposed ACH(50)	.000305	1882.3	103.34	194.34	.1631	5						
HEATING SYSTEM														
✓	#	System Type	Subtype	Speed	Efficiency	Capacity	Block			Ducts				
	1	Electric Heat Pump/	None	Single	HSPF:8.2	27.55 kBtu/hr	1			sys#1				
COOLING SYSTEM														
✓	#	System Type	Subtype	Subtype	Efficiency	Capacity	Air Flow	SHR	Block	Ducts				
	1	Central Unit/	None	Single	SEER: 14	21.83 kBtu/hr	660 cfm	0.7	1	sys#1				
HOT WATER SYSTEM														
✓	#	System Type	SubType	Location	EF	Cap	Use	SetPnt	Conservation					
	1	Propane	Tankless	Exterior	0.59	1 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 ---			--- Return ---		Leakage Type	Air Handler	CFM 25 TOT	CFM25 OUT	QN	RLF	HVAC # Heat Cool	
	1	Attic	6	587.5 ft²	Attic	117.5 ft²	Default Leakage	Attic	(Default) c	(Default) c			1	1

INPUT SUMMARY CHECKLIST REPORT

TEMPERATURES

Programable Thermostat: Y

Ceiling Fans:

Cooling	☒	Jan	☐	Feb	☐	Mar	☐	Apr	☐	May	☒	Jun	☒	Jul	☒	Aug	☒	Sep	☐	Oct	☐	Nov	☒	Dec
Heating	☐	Jan	☒	Feb	☒	Mar	☒	Apr	☐	May	☐	Jun	☐	Jul	☐	Aug	☐	Sep	☐	Oct	☒	Nov	☒	Dec
Venting	☐	Jan	☐	Feb	☐	Mar	☒	Apr	☐	May	☐	Jun	☐	Jul	☐	Aug	☐	Sep	☐	Oct	☐	Nov	☒	Dec

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	78	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	68	68
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	68	68

MASS

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

ENERGY PERFORMANCE LEVEL (EPL) DISPLAY CARD

ESTIMATED ENERGY PERFORMANCE INDEX* = 98

The lower the Energy Performance Index, the more efficient the home.

1. New home or, addition	1. <u>New (From Plans)</u>	12. Ducts, location & insulation level
2. Single-family or multiple-family	2. <u>Single-family</u>	a) Supply ducts R <u>6.0</u>
3. No. of units (if multiple-family)	3. <u>1</u>	b) Return ducts R <u>6.0</u>
4. Number of bedrooms	4. <u>4</u>	c) AHU location Attic
5. Is this a worst case? (yes/no)	5. <u>No</u>	13. Cooling system: Capacity <u>21.8</u>
6. Conditioned floor area (sq. ft.)	6. <u>2350</u>	a) Split system SEER <u> </u>
7. Windows, type and area		b) Single package SEER <u> </u>
a) U-factor:(weighted average)	7a. <u>0.360</u>	c) Ground/water source SEER/COP <u> </u>
b) Solar Heat Gain Coefficient (SHGC)	7b. <u>0.250</u>	d) Room unit/PTAC EER <u> </u>
c) Area	7c. <u>385.0</u>	e) Other <u>14.0</u>
8. Skylights		14. Heating system: Capacity <u>27.5</u>
a) U-factor:(weighted average)	8a. <u>NA</u>	a) Split system heat pump HSPF <u> </u>
b) Solar Heat Gain Coefficient (SHGC)	8b. <u>NA</u>	b) Single package heat pump HSPF <u> </u>
9. Floor type, insulation level:		c) Electric resistance COP <u> </u>
a) Slab-on-grade (R-value)	9a. <u>0.0</u>	d) Gas furnace, natural gas AFUE <u> </u>
b) Wood, raised (R-value)	9b. <u>19.0</u>	e) Gas furnace, LPG AFUE <u> </u>
c) Concrete, raised (R-value)	9c. <u> </u>	f) Other <u>8.20</u>
10. Wall type and insulation:		15. Water heating system
A. Exterior:		a) Electric resistance EF <u> </u>
1. Wood frame (Insulation R-value)	10A1. <u>13.0</u>	b) Gas fired, natural gas EF <u> </u>
2. Masonry (Insulation R-value)	10A2. <u> </u>	c) Gas fired, LPG EF <u>0.59</u>
B. Adjacent:		d) Solar system with tank EF <u> </u>
1. Wood frame (Insulation R-value)	10B1. <u>13.0</u>	e) Dedicated heat pump with tank EF <u> </u>
2. Masonry (Insulation R-value)	10B2. <u> </u>	f) Heat recovery unit HeatRec% <u> </u>
11. Ceiling type and insulation level		g) Other <u> </u>
a) Under attic	11a. <u>38.0</u>	16. HVAC credits claimed (Performance Method)
b) Single assembly	11b. <u> </u>	a) Ceiling fans <u> </u>
c) Knee walls/skylight walls	11c. <u> </u>	b) Cross ventilation <u>Yes</u>
d) Radiant barrier installed	11d. <u>Yes</u>	c) Whole house fan <u>No</u>
		d) Multizone cooling credit <u> </u>
		e) Multizone heating credit <u> </u>
		f) Programmable thermostat <u>Yes</u>

*Label required by Section R303.1.3 of the Florida Building Code, Energy Conservation, if not DEFAULT.

I certify that this home has complied with the Florida Building Code, Energy Conservation, 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: Lake City, FL 32024