FORM 405-10

FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Business and Professional Regulation - Residential Performance Method

Project Name:	170_Regan	Builder Name:	Adam Construction
Street:	615 NW Lona LP	Permit Office:	
City, State, Zip:	Lake City , FL , 32055-	Permit Number:	
Owner:	Larry and Lorena Regan	Jurisdiction:	
Design Location:	FL, Jacksonville		

1. New construction or existing	Addition			
2. Single family or multiple family	Single-family			
3. Number of units, if multiple family	1			
4. Number of Bedrooms(Bedrms In Addition)	2(2)			
5. Is this a worst case?	No			
6. Conditioned floor area above grade (ft²)	1420			
Conditioned floor area below grade (ft²)	0			
7. Windows(221.0 sqft.)	Description		Area	
a. U-Factor:	Dbl, U=0.34		221.00 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:			6.192 ft.	
Area Weighted Average SHGC:			0.310	
8. Floor Types (1420.0 sqft.)		Insulation	Area	
a. Slab-On-Grade Edge Insulation		R=0.0	1420.00 ft²	
b. N/A		R=	ft²	
c. N/A		R=	ft²	

9. Wall Types (1986.7 sqft.)	Insulation	Area	
a. Face Brick - Wood, Exterior	R=13.0	1686.70 ft²	
b. Frame - Wood, Exterior	R=13.0	300.00 ft²	
c. N/A	R=	ft²	
d. N/A	R=	ft²	
10. Ceiling Types (1420.0 sqft.)	Insulation	Area	
a. Under Attic (Vented)	R=30.0	1420.00 ft²	
b. N/A	R=	ft²	
c. N/A	R=	ft²	
11. Ducts		R	ft²
a. Sup: Attic, Ret: Attic, AH: Main		6	284
12. Cooling systems	kBtu/hr	Efficiency	
a. Central Unit	42.0	SEER:13.00	
13. Heating systems	kBtu/hr	Efficiency	
a. Electric Heat Pump	42.0	HSPF:8.50	
14. Hot water systems - Replacement equipment			
a. Electric		Cap: 40 gallons	
		EF: 0.920	
b. Conservation features			
None			
15. Credits		CF	

Glass/Floor Area: 0.156

Total Proposed Modified Loads: 24.47

Total Standard Reference Loads: 30.41

PASS

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

PREPARED BY: Adam Beamon

DATE: 12-4-13

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: _____

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

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:	170_Regan	Bedrooms:	2	Address Type:	Street Address
Building Type:	User	Conditioned Area:	1420	Lot #	
Owner:	Larry and Lorena Regan	Total Stories:	1	Block/SubDivision:	
# of Units:	1	Worst Case:	No	PlatBook:	
Builder Name:	Adam Construction	Rotate Angle:	0	Street:	615 NW Lona LP
Permit Office:		Cross Ventilation:		County:	Columbia
Jurisdiction:		Whole House Fan:		City, State, Zip:	Lake City , FL , 32055-
Family Type:	Single-family				
New/Existing:	Addition				
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, Jacksonville	FL_JACKSONVILLE_INT	2	32	93	70	75	1281	49	Medium

BLOCKS

Number	Name	Area	Volume
1	Block1	1420	11360

SPACES

Number	Name	Area	Volume	Kitchen	Occupants	Bedrooms	Infil ID	Finished	Cooled	Heated
1	Main	1420	11360	No	2	2	1	Yes	Yes	Yes

FLOORS

✓	#	Floor Type	Space	Perimeter	R-Value	Area		Tile	Wood	Carpet
	1	Slab-On-Grade Edge Insulatio	Main	208 ft	0	1420 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	1645 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	1420 ft²	N	N

CEILING

✓	#	Ceiling Type	Space	R-Value	Area	Framing Frac	Truss Type
	1	Under Attic (Vented)	Main	30	1420 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	Face Brick - Wood	Main	13	35	0	8	0	280 ft²	0	0.23	0.75	0
	2	E	Exterior	Face Brick - Wood	Main	13	20	6	8	0	164 ft²	0	0.23	0.75	0
	3	S	Exterior	Face Brick - Wood	Main	13	35	0	8	0	280 ft²	0	0.23	0.75	0
	4	E	Exterior	Face Brick - Wood	Main	13	20	8	8	0	165.3333	0	0.23	0.75	0
	5	N	Exterior	Face Brick - Wood	Main	13	29	10	8	0	238.6666	0	0.23	0.75	0
	6	E	Exterior	Face Brick - Wood	Main	13	17	0	8	0	136 ft²	0	0.23	0.75	0
	7	E	Exterior	Face Brick - Wood	Main	13	11	6	8	0	92 ft²	0	0.23	0.75	0
	8	S	Exterior	Face Brick - Wood	Main	13	16	0	8	0	128 ft²	0	0.23	0.75	0
	9	W	Exterior	Face Brick - Wood	Main	13	11	6	8	0	92 ft²	0	0.23	0.75	0
	10	S	Exterior	Face Brick - Wood	Main	13	13	10	8	0	110.6666	0	0.23	0.75	0
	11	W	Exterior	Frame - Wood	Main	13	17	0	8	0	136 ft²		0.23	0.75	0
	12	W	Exterior	Frame - Wood	Main	13	20	6	8	0	164 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	Main	None	0.460000	2	8	6	8	17.77777
	2	S	Insulated	Main	None	0.460000	2	8	6	8	20 ft²
	3	S	Insulated	Main	None	0.460000	2	8	6	8	20 ft²
	4	S	Insulated	Main	None	0.460000	2	8	6	8	20 ft²
	5	N	Insulated	Main	None	0.460000	2	8	6	8	20 ft²
	6	E	Insulated	Main	None	0.460000	2	8	6	8	20 ft²
	7	E	Insulated	Main	None	0.460000	2	8	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	Double (Tinted)	Yes	0.34	0.31	45 ft²	1 ft 8 in	1 ft 6 in	Drapes/blinds	None
	2	E	2	Vinyl	Double (Tinted)	Yes	0.34	0.31	60 ft²	1 ft 8 in	1 ft 6 in	Drapes/blinds	None
	3	N	5	Vinyl	Double (Tinted)	Yes	0.34	0.31	40 ft²	20 ft 8 in	1 ft 6 in	Drapes/blinds	None
	4	E	6	Vinyl	Double (Tinted)	Yes	0.34	0.31	30 ft²	9 ft 8 in	1 ft 6 in	Drapes/blinds	None
	5	E	7	Vinyl	Double (Tinted)	Yes	0.34	0.31	15 ft²	1 ft 8 in	1 ft 6 in	Drapes/blinds	None
	6	S	8	Vinyl	Double (Tinted)	Yes	0.34	0.31	16 ft²	1 ft 8 in	1 ft 6 in	Drapes/blinds	None
	7	W	9	Vinyl	Double (Tinted)	Yes	0.34	0.31	15 ft²	1 ft 8 in	1 ft 6 in	Drapes/blinds	None

INFILTRATION

#	Scope	Method	SLA	CFM 50	ELA	EqLA	ACH	ACH 50
1	Wholehouse	Best Guess	0.000500	1862.3	102.24	192.27	0.3850	9.8363

HEATING SYSTEM

✓	#	System Type	Subtype	Efficiency	Capacity	Block	Ducts
	1	Electric Heat Pump	None	HSPF: 8.5	42 kBtu/hr	1	sys#1

COOLING SYSTEM

✓	#	System Type	Subtype	Efficiency	Capacity	Air Flow	SHR	Block	Ducts
	1	Central Unit	None	SEER: 13	42 kBtu/hr	1260 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	50 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	Supply R-Value	Supply Area	Return Location	Return Area	Leakage Type	Air Handler	CFM 25	Percent Leakage	QN	RLF	HVAC # Heat	HVAC # Cool
	1	Attic	6	284 ft²	Attic	71 ft²	Default Leakage	Main	(Default)	(Default) %			1	1

TEMPERATURES

Programable Thermostat: None 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	78	78	78	78
	PM	78	78	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	68	68	68	68	68	68	68	68	68	68	68	68
	PM	68	68	68	68	68	68	68	68	68	68	68	68
Heating (WEH)	AM	68	68	68	68	68	68	68	68	68	68	68	68
	PM	68	68	68	68	68	68	68	68	68	68	68	68

FORM 405-10

Florida Code Compliance Checklist

Florida Department of Business and Professional Regulations
Residential Whole Building Performance Method

ADDRESS: 615 NW Lona LP 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	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.	
	403.3.3	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.

615 NW Lona LP, Lake City, FL, 32055-

1. New construction or existing		Addition
2. Single family or multiple family		Single-family
3. Number of units, if multiple family		1
4. Number of Bedrooms		2(2)
5. Is this a worst case?		No
6. Conditioned floor area (ft²)		1420

7. Windows**	Description	Area
a. U-Factor.	Dbl, U=0.34	221.00 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:		6.192 ft.
Area Weighted Average SHGC:		0.310

8. Floor Types	Insulation	Area
a. Slab-On-Grade Edge Insulation	R=0.0	1420.00 ft²
b. N/A	R=	ft²
c. N/A	R=	ft²

9. Wall Types	Insulation	Area
a. Face Brick - Wood, Exterior	R=13.0	1686.70 ft²
b. Frame - Wood, Exterior	R=13.0	300.00 ft²
c. N/A	R=	ft²
d. N/A	R=	ft²

10. Ceiling Types	Insulation	Area
a. Under Attic (Vented)	R=30.0	1420.00 ft²
b. N/A	R=	ft²
c. N/A	R=	ft²

11. Ducts	R	ft²
a. Sup: Attic, Ret: Attic, AH: Main	6	284

12. Cooling systems	kBtu/hr	Efficiency
a. Central Unit	42.0	SEER:13.00

13. Heating systems	kBtu/hr	Efficiency
a. Electric Heat Pump	42.0	HSPF:8.50

14. Hot water systems - Replacement equipment	
a. Electric	Cap: 40 gallons EF: 0.92
b Conservation features None	
15. Credits	CF

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.

Florida Code Summary Report

Larry and Lorena Regan
615 NW Lona LP
Lake City, FL, 32055-
Registration #:

Title: 170_Regan
FLAsBuilt

TMY City: FL_JACKSONVILLE_
Elec Util: Florida Average
Gas Util: Florida Average
Run Date:

Energy Uses	Reference Home	Proposed Home	e-Ratio
Heating	4.07 MBtu	2.85 MBtu	0.70
Cooling	8.90 MBtu	7.25 MBtu	0.81
Hot Water	3.06 MBtu	3.06 MBtu	1.00
Total	16.02 MBtu	13.15 MBtu	0.82

Building Loads	Reference Home	Proposed Home	e-Ratio
Heating	7.19 MBtu	5.04 MBtu*	0.70
Cooling	20.42 MBtu	16.63 MBtu*	0.81
Hot Water	2.80 MBtu	2.80 MBtu*	1.00
Total	30.41 MBtu	24.47 MBtu	0.80

* normalized modified loads

Glass/Floor Area:	0.156	Total Proposed Modified Loads:	24.47	**PASS**
		Total Reference Loads:	30.41	