FORM 405-10

FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Business and Professional Regulation - Residential Performance Method

Project Name:	Doroshenko Hanger Living Quarters	Builder Name:	
Street:	252 SW Voyager Ct	Permit Office:	Columbia County
City, State, Zip:	Lake City , FL , 3205 -	Permit Number:	
Owner:		Jurisdiction:	121000
Design Location:	FL, Gainesville		

1. New construction or existing	New (From Plans)	9. Wall Types (1018.7 sqft.)	Insulation	Area
2. Single family or multiple family	Single-family	a. Frame - Wood, Exterior	R=13.0	1018.70 ft²
3. Number of units, if multiple family	1	b. N/A	R=	ft²
4. Number of Bedrooms	1	c. N/A	R=	ft²
5. Is this a worst case?	No	d. N/A	R=	ft²
6. Conditioned floor area above grade (ft²)	681	10. Ceiling Types (681.0 sqft.)	Insulation	Area
Conditioned floor area below grade (ft²)	0	a. Cathedral/Single Assembly (Unvented)	R=30.0	681.00 ft²
7. Windows (58.6 sqft.)	Description	Area	b. N/A	R=	ft²
a. U-Factor:	Dbl, U=0.55	58.56 ft²	c. N/A	R=	ft²
SHGC:	SHGC=0.50		11. Ducts	R	ft²
b. U-Factor:	N/A	ft²			
SHGC:					
c. U-Factor:	N/A	ft²	12. Cooling systems	kBtu/hr	Efficiency
SHGC:			a. Central Unit	35.0	SEER:14.00
d. U-Factor:	N/A	ft²			
SHGC:			13. Heating systems	kBtu/hr	Efficiency
Area Weighted Average Overhang Depth:		1.000 ft.	a. Electric Heat Pump	35.0	HSPF:7.70
Area Weighted Average SHGC:		0.500			
8. Floor Types (681.0 sqft.)	Insulation	Area	14. Hot water systems		
a. Slab-On-Grade Edge Insulation	R=0.0	681.00 ft²	a. Propane Tankless		Cap: 1 gallons
b. N/A	R=	ft²			EF: 0.590
c. N/A	R=	ft²	b. Conservation features		
			None		
			15. Credits		CF, Pstat

Glass/Floor Area: 0.086

Total Proposed Modified Loads: 13.43

Total Standard Reference Loads: 20.88

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. Dellinger

DATE: 2/10/14

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.

BUILDING OFFICIAL: _____

DATE: _____

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

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

PROJECT

Title:	Doroshenko Hanger Living Qua	Bedrooms:	1	Address Type.	Street Address
Building Type:	User	Conditioned Area:	681	Lot #	
Owner:		Total Stories:	1	Block/SubDivision:	
# of Units:	1	Worst Case:	No	PlatBook:	
Builder Name:		Rotate Angle:	0	Street:	252 SW Voyager Ct
Permit Office:	Columbia County	Cross Ventilation:		County:	Columbia
Jurisdiction:	121000	Whole House Fan:		City, State, Zip:	Lake City , FL , 3205 -
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	681	5448

SPACES

Number	Name	Area	Volume	Kitchen	Occupants	Bedrooms	Infil ID	Finished	Cooled	Heated
1	Main	681	5448	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	127 ft	0	681 ft²	----	0.3	0	0.7

ROOF

√	#	Type	Materials	Roof Area	Gable Area	Roof Color	Solar Absor.	SA Tested	Emitt	Emitt Tested	Deck Insul.	Pitch (deg)
_____	1	Flat	Composition shingles	683 ft²	28 ft²	Medium	0.96	No	0.9	No	0.7	4.8

ATTIC

√	#	Type	Ventilation	Vent Ratio (1 in)	Area	RBS	IRCC
_____	1	No attic	Unvented	0	681 ft²	N	N

CEILING

√	#	Ceiling Type	Space	R-Value	Area	Framing Frac	Truss Type
_____	1	Cathedral/Single Assembly (Unvented)	Main	30	681 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 - Wood	Main	13	13	4	8	0	106.7 ft²	0.63	0.23	0.75	0
____	2	E	Exterior	Frame - Wood	Main	13	50	4	8	0	402.7 ft²	0.63	0.23	0.75	0
____	3	S	Exterior	Frame - Wood	Main	13	13	4	8	0	106.7 ft²	0.63	0.23	0.75	0
____	4	W	Exterior	Frame - Wood	Main	13	50	4	8	0	402.7 ft²	0.63	0.23	0.75	0

DOORS

√	#	Ornt	Door Type	Space	Storms	U-Value	Width Ft	Width In	Height Ft	Height In	Area
_____	1	E	Insulated	Main	Metal	.28	3		6	8	20 ft²
_____	2	S	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	W	4	Vinyl	Low-E Double	Yes	0.55	0.5	49.8 ft²	1 ft 0 in	6 ft 0 in	Drapes/blinds	None
_____	2	W	4	Vinyl	Low-E Double	Yes	0.55	0.5	7.1 ft²	1 ft 0 in	6 ft 0 in	Drapes/blinds	None
_____	3	W	4	Vinyl	Low-E Double	Yes	0.55	0.5	1.7 ft²	1 ft 0 in	6 ft 0 in	Drapes/blinds	None

INFILTRATION

#	Scope	Method	SLA	CFM 50	ELA	EqLA	ACH	ACH 50
1	Wholehouse	Best Guess	.0005	893.1	49.03	92.21	.385	9.8363

HEATING SYSTEM

√	#	System Type	Subtype	Efficiency	Capacity	Block	Ducts
_____	1	Electric Heat Pump	None	HSPF: 7.7	35 kBtu/hr	1	Ductless

COOLING SYSTEM

√	#	System Type	Subtype	Efficiency	Capacity	Air Flow	SHR	Block	Ducts
_____	1	Central Unit	None	SEER: 14	35 kBtu/hr	1050 cfm	0.75	1	Ductless

HOT WATER SYSTEM

√	#	System Type	SubType	Location	EF	Cap	Use	SetPnt	Conservation
_____	1	Propane	Tankless	Main	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		

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: 252 SW Voyager Ct Lake City, FL, 3205 -	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.	✓