

FORM R405-2020

FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Business and Professional Regulation - Residential Performance Method

Project Name: Hilary & Sean Todd Street: City, State, Zip: Lake City, FL Owner: Sean & Hilary Todd Design Location: FL, Tallahassee	Builder Name: Chris Mills Homes of Florida Permit Office: Permit Number: Jurisdiction: County: Columbia (Florida Climate Zone 2)
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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) 2310 Conditioned floor area below grade (ft²) 0 7. Windows (232.3 sqft.) Description Area a. U-Factor: Dbl, U=0.38 232.33 ft² SHGC: SHGC=0.46 b. U-Factor: N/A ft² SHGC: N/A c. U-Factor: N/A ft² SHGC: Area Weighted Average Overhang Depth: 0.000 ft. Area Weighted Average SHGC: 0.460 8. Skylights Area c. U-Factor:(AVG) N/A ft² SHGC(AVG): N/A 9. Floor Types (2310.0 sqft.) Insulation Area a. Slab-On-Grade Edge Insulation R=0.0 2310.00 ft² b. N/A R= ft² c. N/A R= ft²	10. Wall Types (2139.8 sqft.) Insulation Area a. Frame - Wood, Exterior R=38.0 1880.30 ft² b. Frame - Wood, Adjacent R=38.0 259.50 ft² c. N/A R= ft² d. N/A R= ft² 11. Ceiling Types (2310.0 sqft.) Insulation Area a. Under Attic (Vented) R=40.0 2310.00 ft² b. N/A R= ft² c. N/A R= ft² 12. Ducts R ft² a. Sup: Attic, Ret: Attic, AH: Attic 8 462 13. Cooling systems kBtu/hr Efficiency a. Central Unit 26.9 SEER:14.00 14. Heating systems kBtu/hr Efficiency a. Electric Heat Pump 31.4 HSPF:9.20 15. Hot water systems Cap: 55 gallons a. Electric EF: 0.920 b. Conservation features None 16. Credits None
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Glass/Floor Area: 0.101	Total Proposed Modified Loads: 55.29	PASS
	Total Baseline Loads: 55.31	

I hereby certify that the plans and specifications covered by this calculation are in compliance with the Florida Energy Code. PREPARED BY: <u>Matt Greens</u> <u>Greens Scales</u> DATE: <u>2/11/21</u> I hereby certify that this building, as designed, is in compliance with the Florida Energy Code. OWNER/AGENT: <u>[Signature]</u> DATE: <u>2/15/21</u>	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: _____
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- 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 5.90 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:	Hilary & Sean Todd	Bedrooms:	4	Address Type:	Street Address								
Building Type:	User	Conditioned Area:	2310	Lot #									
Owner Name:	Sean & Hilary Todd	Total Stories:	1	Block/Subdivision:									
# of Units:	1	Worst Case:	No	PlatBook:									
Builder Name:	ChrisMills Homes of Florida	Rotate Angle:	0	Street:									
Permit Office:		Cross Ventilation:		County:	Columbia								
Jurisdiction:		Whole House Fan:		City, State, Zip:	Lake City, FL								
Family Type:	Detached												
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, Tallahassee	FL_TALLAHASSEE_REGI	28	94	70	75	1545	46	Medium				
BLOCKS													
	Number	Name	Area	Volume									
	1	Block1	2310	20790									
SPACES													
	Number	Name	Area	Volume	Kitchen	Occupants	Bedrooms	Infil ID	Finished	Cooled	Heated		
	1	Main	2310	20790	Yes	6	4	1	Yes	Yes	Yes		
FLOORS													
✓	#	Floor Type	Space	Perimeter	R-Value	Area		Tile	Wood	Carpet			
_____	1	Slab-On-Grade Edge Insulation	Main	199.1 ft	0	2310 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	Gable or shed	Composition shingles	2503 ft²	482 ft²	Light	N	0.96	No	0.9	No	0	22.62
ATTIC													
✓	#	Type	Ventilation	Vent Ratio (1 in)	Area	RBS	IRCC						
_____	1	Full attic	Vented	300	2310 ft²	N	N						
CEILING													
✓	#	Ceiling Type	Space	R-Value	Ins Type	Area	Framing Frac	Truss Type					
_____	1	Under Attic (Vented)	Main	40	Blown	2310 ft²	0.11	Wood					

INPUT SUMMARY CHECKLIST REPORT

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	W	Exterior	Frame - Wood	Main	38	40	2	9		361.5 ft²		0.23	0.75	0
2	W	Garage	Frame - Wood	Main	38	22	6	8		180.0 ft²		0.23	0.75	0
3	S	Exterior	Frame - Wood	Main	38	67	5	9		606.8 ft²		0.23	0.75	0
4	E	Exterior	Frame - Wood	Main	38	68	2	9		613.5 ft²		0.23	0.75	0
5	N	Exterior	Frame - Wood	Main	38	33	2	9		298.5 ft²		0.23	0.75	0
6	N	Garage	Frame - Wood	Main	38	8	10	9		79.5 ft²		0.23	0.75	0

DOORS

✓ #	Ornt	Door Type	Space	Storms	U-Value	Width Ft	In	Height Ft	In	Area
1	W	Insulated	Main	None	.46	3		6	8	20 ft²
2	W	Insulated	Main	None	.46	3		6	8	20 ft²
3	E	Insulated	Main	None	.46	3		6	8	20 ft²

WINDOWS

Orientation shown is the entered, Proposed orientation.

✓ #	Ornt	Wall ID	Frame	Panels	NFRC	U-Factor	SHGC	Imp	Area	Overhang Depth	Separation	Int Shade	Screening
1	W	1	Vinyl	Double (Clear)	Yes	0.38	0.46	N	6.0 ft²	0 ft 0 in	0 ft 0 in	Drapes/blinds	None
2	W	1	Vinyl	Double (Clear)	Yes	0.38	0.46	N	64.0 ft²	0 ft 0 in	0 ft 0 in	Drapes/blinds	None
3	E	4	Vinyl	Double (Clear)	Yes	0.38	0.46	N	93.0 ft²	0 ft 0 in	0 ft 0 in	Drapes/blinds	None
4	E	4	Vinyl	Double (Clear)	Yes	0.38	0.46	N	53.3 ft²	0 ft 0 in	0 ft 0 in	Drapes/blinds	None
5	N	5	Vinyl	Double (Clear)	Yes	0.38	0.46	N	16.0 ft²	0 ft 0 in	0 ft 0 in	Drapes/blinds	None

GARAGE

✓ #	Floor Area	Ceiling Area	Exposed Wall Perimeter	Avg. Wall Height	Exposed Wall Insulation
1	623.79 ft²	623.79 ft²	64 ft	8 ft	1

INFILTRATION

#	Scope	Method	SLA	CFM 50	ELA	EqLA	ACH	ACH 50
1	Wholehouse	Proposed ACH(50)	.000337	2042.8	112.07	210.41	.1179	5.8955

HEATING SYSTEM

✓ #	System Type	Subtype	Speed	Efficiency	Capacity	Block	Ducts
1	Electric Heat Pump/	Split	Single	HSPF:9.2	31.36 kBtu/hr	1	sys#1

INPUT SUMMARY CHECKLIST REPORT

COOLING SYSTEM										
✓	#	System Type	Subtype	Subtype	Efficiency	Capacity	Air Flow	SHR	Block	Ducts
	1	Central Unit/	Split	Single	SEER: 14	26.87 kBtu/hr	810 cfm	0.75	1	sys#1

HOT WATER SYSTEM									
✓	#	System Type	SubType	Location	EF	Cap	Use	SetPnt	Conservation
	1	Electric	None	Main	0.919999	55 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	Attic	8	462 ft²	Attic	115.5 ft²	Prop. Leak Free	Attic	--- cfm	69.3 cfm	0.03	0.50	1	1			

TEMPERATURES																								
Programable Thermostat: N							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	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											

MECHANICAL VENTILATION							
Type	Supply CFM	Exhaust CFM	Fan Watts	HRV	Heating System	Run Time	Cooling System
Runtime Vent	0	0	0	0	1 - Electric Heat Pump	%	1 - Central Unit

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