FORM R405-2017

FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Business and Professional Regulation - Residential Performance Method

Project Name:	CP-CC-FWS-6 RV	Builder Name:	Chemerys Construction
Street:	SW Round House Circle	Permit Office:	
City, State, Zip:	Fort White , FL , 32038	Permit Number:	
Owner:	Chemerys Construction	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	Single-family
3. Number of units, if multiple family	1
4. Number of Bedrooms	3
5. Is this a worst case?	No
6. Conditioned floor area above grade (ft²)	1440.14001464
Conditioned floor area below grade (ft²)	0

7. Windows(195.0 sqft.)	Description	Area
a. U-Factor:	Dbl, U=0.34	195.00 ft²
SHGC:	SHGC=0.23	
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:		2.554 ft.
Area Weighted Average SHGC:		0.230

8. Floor Types (1440.0 sqft.)	Insulation	Area
a. Slab-On-Grade Edge Insulation	R=0.0	1440.00 ft²
b. N/A	R=	ft²
c. N/A	R=	ft²

9. Wall Types (1924.1 sqft.)	Insulation	Area
a. Frame - Wood, Exterior	R=19.0	1600.50 ft²
b. Frame - Wood, Adjacent	R=19.0	323.64 ft²
c. N/A	R=	ft²
d. N/A	R=	ft²

10. Ceiling Types (1440.0 sqft.)	Insulation	Area
a. Roof Deck (Unvented)	R=20.0	1440.00 ft²
b. N/A	R=	ft²
c. N/A	R=	ft²

11. Ducts	R	ft²
a. Sup: Attic, Ret: Attic, AH: Garage	6	288.02

12. Cooling systems	kBtu/hr	Efficiency
a. Central Unit	22.2	SEER:14.00

13. Heating systems	kBtu/hr	Efficiency
a. Electric Heat Pump	22.2	HSPF:8.20

14. Hot water systems	
a. Electric	Cap: 50 gallons
	EF: 0.950
b. Conservation features	
None	
15. Credits	Pstat

Glass/Floor Area: 0.135

Total Proposed Modified Loads: 45.36

Total Baseline Loads: 47.09

PASS

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

PREPARED BY: Ken Fonorow

DATE: 12/4/2020

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 7.00 ACH50 (R402.4.1.2).

INPUT SUMMARY CHECKLIST REPORT

PROJECT

Title:	CP-CC-FWS-6 RV	Bedrooms:	3	Address Type:	Street Address
Building Type:	User	Conditioned Area:	1440	Lot #	
Owner Name:	Chemerys Construction	Total Stories:	1	Block/Subdivision:	
# of Units:	1	Worst Case:	No	PlatBook:	
Builder Name:	Chemerys Construction	Rotate Angle:	0	Street:	SW Round House Circl
Permit Office:		Cross Ventilation:		County:	Columbia
Jurisdiction:		Whole House Fan:		City, State, Zip:	Fort White , FL , 32038
Family Type:	Single-family				
New/Existing:	New (From Plans)				
Comment:	Custom home				

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	1440.140	12992.5

SPACES

Number	Name	Area	Volume	Kitchen	Occupants	Bedrooms	Infil ID	Finished	Cooled	Heated
1	Whole House	1440.14	12992.5	Yes	4	3	1	Yes	Yes	Yes

FLOORS

√	#	Floor Type	Space	Perimeter	R-Value	Area		Tile	Wood	Carpet
_____	1	Slab-On-Grade Edge Insulatio	Whole House	214 ft	0	1440 ft²	----	0.5	0	0.5

ROOF

√	#	Type	Materials	Roof Area	Gable Area	Roof Color	Rad Barr	Solar Absor.	SA Tested	Emitt	Emitt Tested	Deck Insul.	Pitch (deg)
_____	1	Hip	Composition shingles	1610 ft²	0 ft²	Medium	N	0.85	No	0.9	No	20	26.6

ATTIC

√	#	Type	Ventilation	Vent Ratio (1 in)	Area	RBS	IRCC
_____	1	Full attic	Unvented	0	1440 ft²	N	N

CEILING

√	#	Ceiling Type	Space	R-Value	Ins Type	Area	Framing Frac	Truss Type
_____	1	Under Attic (Unvented)	Whole House	0	Blown	1440 ft²	0.11	Wood

INPUT SUMMARY CHECKLIST REPORT

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	Whole House	19	13.5	0	9	0	121.5 ft²	0	0.23	0.8	0
____	2	E	Exterior	Frame - Wood	Whole House	19	14	0	9	0	126.0 ft²	0	0.23	0.8	0
____	3	E	Exterior	Frame - Wood	Whole House	19	5	0	9	0	45.0 ft²	0	0.23	0.8	0
____	4	E	Exterior	Frame - Wood	Whole House	19	7	0	9	0	63.0 ft²	0	0.23	0.8	0
____	5	S	Garage	Frame - Wood	Whole House	19	10	0	8.99	0	89.9 ft²	0	0.23	0.8	0
____	6	S	Exterior	Frame - Wood	Whole House	19	16	0	9	0	144.0 ft²	0	0.23	0.8	0
____	7	W	Exterior	Frame - Wood	Whole House	19	28	0	9	0	252.0 ft²	0	0.23	0.8	0
____	8	E	Garage	Frame - Wood	Whole House	19	20	0	8.99	0	179.8 ft²	0	0.23	0.8	0
____	9	S	Garage	Frame - Wood	Whole House	19	6	0	8.99	0	53.9 ft²	0	0.23	0.8	0
____	10	E	Exterior	Frame - Wood	Whole House	19	11.33	0	9	0	102.0 ft²	0	0.23	0.8	0
____	11	S	Exterior	Frame - Wood	Whole House	19	16.33	0	9	0	147.0 ft²	0	0.23	0.8	0
____	12	N	Exterior	Frame - Wood	Whole House	19	6.67	0	9	0	60.0 ft²	0	0.23	0.8	0
____	13	S	Exterior	Frame - Wood	Whole House	19	16	0	9	0	144.0 ft²	0	0.23	0.8	0
____	14	W	Exterior	Frame - Wood	Whole House	19	5	0	9	0	45.0 ft²	0	0.23	0.8	0
____	15	N	Exterior	Frame - Wood	Whole House	19	12	0	9	0	108.0 ft²	0	0.23	0.8	0
____	16	W	Exterior	Frame - Wood	Whole House	19	13.5	0	9	0	121.5 ft²	0	0.23	0.8	0
____	17	E	Exterior	Frame - Wood	Whole House	19	13.5	0	9	0	121.5 ft²	0	0.23	0.8	0

DOORS

√	#	Ornt	Door Type	Space	Storms	U-Value	Width Ft	Width In	Height Ft	Height In	Area
_____	1	E	Insulated	Whole House	None	.29	3		8		24 ft²

WINDOWS

Orientation shown is the entered, Proposed orientation.

√	#	Wall 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	0.34	0.23	N	48.0 ft²	2 ft 0 in	2 ft 0 in	Drapes/blinds	None
_____	2	E	2	Vinyl	Low-E Double	Yes	0.34	0.23	N	30.0 ft²	2 ft 0 in	2 ft 0 in	Drapes/blinds	Exterior 5
_____	3	S	6	Vinyl	Low-E Double	Yes	0.34	0.23	N	30.0 ft²	6 ft 0 in	1 ft 0 in	Drapes/blinds	Exterior 5
_____	4	W	7	Vinyl	Low-E Double	Yes	0.34	0.23	N	30.0 ft²	2 ft 0 in	1 ft 0 in	Drapes/blinds	Exterior 5
_____	5	E	10	Vinyl	Low-E Double	Yes	0.34	0.23	N	12.0 ft²	1 ft 0 in	1 ft 0 in	Drapes/blinds	Exterior 5
_____	6	S	13	Vinyl	Low-E Double	Yes	0.34	0.23	N	15.0 ft²	2 ft 0 in	1 ft 0 in	Drapes/blinds	Exterior 5
_____	7	N	15	Vinyl	Low-E Double	Yes	0.34	0.23	N	15.0 ft²	2 ft 0 in	1 ft 0 in	Drapes/blinds	Exterior 5
_____	8	W	16	Vinyl	Low-E Double	Yes	0.34	0.23	N	15.0 ft²	2 ft 0 in	1 ft 0 in	Drapes/blinds	Exterior 5

GARAGE

√	#	Floor Area	Ceiling Area	Exposed Wall Perimeter	Avg. Wall Height	Exposed Wall Insulation
_____	1	393 ft²	393 ft²	40 ft	9 ft	0

FORM R405-2017

INPUT SUMMARY CHECKLIST REPORT

INFILTRATION

#	Scope	Method	SLA	CFM 50	ELA	EqLA	ACH	ACH 50
1	Wholehouse	Proposed ACH(50)	.000401	1515.8	83.21	156.5	.1584	7

HEATING SYSTEM

√	#	System Type	Subtype	Speed	Efficiency	Capacity	Block	Ducts
_____	1	Electric Heat Pump/	None	Singl	HSPF:8.2	22.2 kBtu/hr	1	sys#1

COOLING SYSTEM

√	#	System Type	Subtype	Subtype	Efficiency	Capacity	Air Flow	SHR	Block	Ducts
_____	1	Central Unit/	None	Singl	SEER: 14	22.2 kBtu/hr	666 cfm	0.77	1	sys#1

HOT WATER SYSTEM

√	#	System Type	SubType	Location	EF	Cap	Use	SetPnt	Conservation
_____	1	Electric	None	Garage	0.95	50 gal	60 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	6	288.02	Attic	72.007	Default Leakage	Garage	(Default)	(Default)			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	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

MECHANICAL VENTILATION

Type	Supply CFM	Exhaust CFM	Fan Watts	HRV	Heating System	Run Time	Cooling System
Runtime Vent	35	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	Whole House

ENERGY PERFORMANCE LEVEL (EPL) DISPLAY CARD

ESTIMATED ENERGY PERFORMANCE INDEX* = 96

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

1. New home or, addition	1. New (From Plans)	
2. Single-family or multiple-family	2. Single-family	
3. No. of units (if multiple-family)	3. 1	
4. Number of bedrooms	4. 3	
5. Is this a worst case? (yes/no)	5. No	
6. Conditioned floor area (sq. ft.)	6. 1440	
7. Windows, type and area		
a) U-factor:(weighted average)	7a. 0.340	
b) Solar Heat Gain Coefficient (SHGC)	7b. 0.230	
c) Area	7c. 195.0	
8. Skylights		
a) U-factor:(weighted average)	8a. NA	
b) Solar Heat Gain Coefficient (SHGC)	8b. NA	
9. Floor type, insulation level:		
a) Slab-on-grade (R-value)	9a. 0.0	
b) Wood, raised (R-value)	9b.	
c) Concrete, raised (R-value)	9c.	
10. Wall type and insulation:		
A. Exterior:		
1. Wood frame (Insulation R-value)	10A1. 19.0	
2. Masonry (Insulation R-value)	10A2.	
B. Adjacent:		
1. Wood frame (Insulation R-value)	10B1. 19.0	
2. Masonry (Insulation R-value)	10B2.	
11. Ceiling type and insulation level		
a) Under attic	11a. 0.0	
b) Single assembly	11b.	
c) Knee walls/skylight walls	11c.	
d) Radiant barrier installed	11d. No	
12. Ducts, location & insulation level		
a) Supply ducts		R 6.0
b) Return ducts		R 6.0
c) AHU location		Garage
13. Cooling system:		Capacity 22.2
a) Split system		SEER
b) Single package		SEER
c) Ground/water source		SEER/COP
d) Room unit/PTAC		EER
e) Other		14.0
14. Heating system:		Capacity 22.2
a) Split system heat pump		HSPF
b) Single package heat pump		HSPF
c) Electric resistance		COP
d) Gas furnace, natural gas		AFUE
e) Gas furnace, LPG		AFUE
f) Other		8.20
15. Water heating system		
a) Electric resistance		EF 0.95
b) Gas fired, natural gas		EF
c) Gas fired, LPG		EF
d) Solar system with tank		EF
e) Dedicated heat pump with tank		EF
f) Heat recovery unit		HeatRec%
g) Other		
16. HVAC credits claimed (Performance Method)		
a) Ceiling fans		
b) Cross ventilation		No
c) Whole house fan		No
d) Multizone cooling credit		
e) Multizone heating credit		
f) Programmable thermostat		Yes

*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: SW Round House Circle_____ City/FL Zip: Fort White, FL 32038_____

Envelope Leakage Test Report (Blower Door Test)

Residential Prescriptive, Performance or ERI Method Compliance
2017 Florida Building Code, Energy Conservation, 6th Edition

Jurisdiction:	Permit #:

Job Information

Builder: Chemerys Construction Community: Lot: NA

Address: SW Round House Circle

City: Fort White State: FL Zip: 32038

Air Leakage Test Results

Passing results must meet either the Performance, Prescriptive, or ERI Method

◯ **PRESCRIPTIVE METHOD-**The building or dwelling unit shall be tested and verified as having an air leakage rate of not exceeding 7 air changes per hour at a pressure of 0.2 inch w.g. (50 Pascals) in Climate Zones 1 and 2.

◯ **PERFORMANCE or ERI METHOD-**The building or dwelling unit shall be tested and verified as having an air leakage rate of not exceeding the selected ACH(50) value, as shown on Form R405-2017 (Performance) or R406-2017 (ERI), section labeled as infiltration, sub-section ACH50.

ACH(50) specified on Form R405-2017-Energy Calc (Performance) or R406-2017 (ERI): 7.000

_____ x 60 ÷ 6.510457E33 = _____
CFM(50) Building Volume ACH(50)

☐ **PASS**

☐ When ACH(50) is less than 3, Mechanical Ventilation installation must be verified by building department.

Method for calculating building volume:

◯ Retrieved from architectural plans

● Code software calculated

◯ Field measured and calculated

R402.4.1.2 Testing. Testing shall be conducted in accordance with ANSI/RESNET/ICC 380 and reported at a pressure of 0.2 inch w.g. (50 Pascals). Testing shall be conducted by either individuals as defined in Section 553.993(5) or (7), *Florida Statues.*or individuals licensed as set forth in Section 489.105(3)(f), (g), or (i) or an approved third party. A written report of the results of the test shall be signed by the party conducting the test and provided to the*code official.* Testing shall be performed at any time after creation of all penetrations of the *building thermal envelope.*

During testing:
1. Exterior windows and doors, fireplace and stove doors shall be closed, but not sealed, beyond the intended weatherstripping or other infiltration control measures.
2. Dampers including exhaust, intake, makeup air, back draft and flue dampers shall be closed, but not sealed beyond intended infiltration control measures.
3. Interior doors, if installed at the time of the test, shall be open.
4. Exterior doors for continuous ventilation systems and heat recovery ventilators shall be closed and sealed.
5. Heating and cooling systems, if installed at the time of the test, shall be turned off.
6. Supply and return registers, if installed at the time of the test, shall be fully open.

Testing Company

Company Name: _____ Phone: _____

I hereby verify that the above Air Leakage results are in accordance with the 2017 6th Edition Florida Building Code Energy Conservation requirements according to the compliance method selected above.

Signature of Tester: _____ Date of Test: _____

Printed Name of Tester: _____

License/Certification #: _____ Issuing Authority: _____