

RESIDENTIAL ENERGY CONSERVATION CODE DOCUMENTATION CHECKLIST**Florida Department of Business and Professional Regulation
Simulated Performance Alternative (Performance) Method**

Applications for compliance with the 2017 Florida Building Code, Energy Conservation via the residential Simulated Performance method shall include:

- ☐ This Checklist
- ☐ A FORM 405 report that documents that the Proposed Design complies with Section R405.3 of the Florida Energy Code. This form shall include a summary page indicating home address, e-ratio and the pass or fail status along with summary areas and types of components, whether the home was simulated as a worst-case orientation, name and version of the compliance software tool, name of individual completing the compliance report (one page).
- ☐ An input summary checklist that can be used for field verification (usually 4 pages/may be greater).
- ☐ Energy Performance Level (EPL) Display Card (one page)
- ☐ HVAC system sizing and selection based on ACCA Manual S or per exceptions provided in Section R403.7
- ☐ Mandatory Requirements (five pages)

Required prior to CO for the Performance method:

- ☐ Air Barrier and Insulation Inspection Component Criteria checklist (Table 402.4.1.1 - one page)
- ☐ A completed Form 2017 Envelope Leakage Test Report (usually one page). Section R402.4 or R402.4.1.2 exceptions may apply.
- ☐ If FORM R405 duct leakage type indicates anything other than "default leakage", then a completed FORM R405 Duct Leakage Test Report (usually one page).

FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Business and Professional Regulation - Residential Performance Method

Project Name: Street: City, State, Zip: Owner: Design Location: FL, Pensacola NAS	Builder Name: Permit Office: Permit Number: Jurisdiction: County: (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) 4416.25 Conditioned floor area below grade (ft ²) 0 7. Windows (991 ft ²) Description Area (ft ²) a. U-Factor: Dbl Impact, 0.250 991.17 SHGC: 0.20 b. U-Factor: SHGC: c. U-Factor: SHGC: d. U-Factor: SHGC: Area Weighted Average Overhang Depth: 5.764 ft Area Weighted Average SHGC: 0.200 8. Floor types (3435.25 ft ²) Insulation (R) Area (ft ²) a. Slab on grade 0.0 3435.25 b. N/A c. N/A	9. Wall types (5324 ft ²) Insulation (R) Area (ft ²) a. 2x6 R-27 spray foam 27.0 4422.43 b. Knee wall 38.0 320.00 c. Frame Wall 2 x 4 R-11 11.0 582.00 d. N/A 10. Ceiling types (3435 ft ²) Insulation (R) Area (ft ²) a. Shingle R-38 spray foam 38.0 3435.25 b. N/A c. N/A 11. Ducts R Area (ft ²) a. Sup: AHU-2 Master/BR, Rot: AHU-2 Master/BR, AH: AHU-2 Master/BR 6.0 587.37 b. Sup: AHU-2 Master/BR, Rot: AHU-2 Master/BR, AH: AHU-2 Master/BR 12. Cooling systems kBtu/hr Efficiency a. Split air source heat pump 39.7 SEER: 15.0 b. 2 additional cooling units. (See details) 13. Heating systems kBtu/hr Efficiency a. Split air source heat pump 31.9 HSPF: 9.0 b. 2 additional heating units. (See details) 14. Hot water systems a. Gas instantaneous (0 gal) Cap: 0 gal EF: 0.80 b. Conservation features (None) 15. Credits None
--	---

Glass/Floor area: 0.224	Total Proposed Modified Loads: 144.90 Total Baseline Loads: 187.54	PASS
-------------------------	---	------

I hereby certify that the plans and specifications covered by this calculation are in compliance with the Florida Energy Code. PREPARED BY: _____ DATE: _____ 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 4.5 ACH50 (R402.4.1.2).

Building Input Summary Report

PROJECT										
Title:	Bedrooms:		4	Address type:		Street address				
Building Type: FLAsBuilt	Bathrooms:		5	Lot#:						
Owner:	Conditioned Area:		4416	Block/Subdivision:						
# of Units: 1	Total Stories:		2	Platbook:						
Builder Name:	Worst Case:		No	Street:						
Permit Office:	Rotate Angle:		0	County:						
Jurisdiction:	Cross Ventilation:		No	City, State, Zip:						
Family Type: Single-Family	Whole House Fan:		No							
New/Existing: New (From Plans)	Terrain:		Ocean/Lake							
Year Construct: 2020	Shielding:		Suburban							
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, Pensacola NAS	FL_Pensacola_Rgnl	2	30	93	70	75	1459	60	Low
BLOCKS										
#	Name	Area	Volume							
1	AHU-1 Main	2142.50 ft ²	24579.50 ft ³							
2	AHU-3 Second	1007.00 ft ²	10382.00 ft ³							
3	AHU-2 Master/BR2	1266.75 ft ²	12667.50 ft ³							
SPACES										
#		Area	Volume	Kitchen	Occupants	Bedrooms	Infil ID	Finished	Cooled	Heated
1	Clos 3	36.00 ft ²	360.00 ft ³	No	0	0	1	Yes	Yes	Yes
2	Bath 3	58.50 ft ²	585.00 ft ³	No	0	0	1	Yes	Yes	Yes
3	Bath 4	58.50 ft ²	585.00 ft ³	No	0	0	1	Yes	Yes	Yes
4	Clos 4	38.25 ft ²	382.50 ft ³	No	0	0	1	Yes	Yes	Yes
5	Bedroom 3	208.25 ft ²	2082.50 ft ³	No	0	1	1	Yes	Yes	Yes
6	Stairs	89.25 ft ²	1204.50 ft ³	No	0	0	1	Yes	Yes	Yes
7	Den	324.75 ft ²	3247.50 ft ³	No	0	0	1	Yes	Yes	Yes
8	Bedroom 4	193.50 ft ²	1935.00 ft ³	No	0	1	1	Yes	Yes	Yes
9	M Bedroom	321.00 ft ²	3210.00 ft ³	No	0	1	1	Yes	Yes	Yes
10	M Bath	235.00 ft ²	2350.00 ft ³	No	0	0	1	Yes	Yes	Yes
11	M Hall	95.50 ft ²	955.00 ft ³	No	0	0	1	Yes	Yes	Yes
12	WC	21.00 ft ²	210.00 ft ³	No	0	0	1	Yes	Yes	Yes
13	M Clos	216.00 ft ²	2160.00 ft ³	No	0	0	1	Yes	Yes	Yes
14	Utility	115.00 ft ²	1150.00 ft ³	No	0	0	1	Yes	Yes	Yes
15	Bath 2	57.00 ft ²	570.00 ft ³	No	0	0	1	Yes	Yes	Yes
16	Bedroom 2	211.25 ft ²	2112.50 ft ³	No	0	1	1	Yes	Yes	Yes
17	U Hall	61.25 ft ²	612.50 ft ³	No	0	0	1	Yes	Yes	Yes
18	Clos 2	29.25 ft ²	292.50 ft ³	No	0	0	1	Yes	Yes	Yes
19	Bar	76.25 ft ²	762.50 ft ³	No	0	0	1	Yes	Yes	Yes
20	Living Room	488.50 ft ²	5862.00 ft ³	No	4	0	1	Yes	Yes	Yes
21	Breakfast	195.00 ft ²	2340.00 ft ³	No	0	0	1	Yes	Yes	Yes
22	Kitchen	254.75 ft ²	3057.00 ft ³	Yes	1	0	1	Yes	Yes	Yes
23	Pantry	35.75 ft ²	429.00 ft ³	No	0	0	1	Yes	Yes	Yes
24	Foyer	153.75 ft ²	1845.00 ft ³	No	0	0	1	Yes	Yes	Yes
25	H Clos	54.00 ft ²	540.00 ft ³	No	0	0	1	Yes	Yes	Yes
26	H Bath	65.00 ft ²	650.00 ft ³	No	0	0	1	Yes	Yes	Yes
27	Office	93.50 ft ²	935.00 ft ³	No	0	0	1	Yes	Yes	Yes
28	Bonus	247.00 ft ²	2964.00 ft ³	No	0	0	1	Yes	Yes	Yes
29	Hall	181.00 ft ²	1810.00 ft ³	No	0	0	1	Yes	Yes	Yes
30	Dining	202.50 ft ²	2430.00 ft ³	No	0	0	1	Yes	Yes	Yes

FLOORS (Total Exposed Area = 3435 sq.ft.)										
✓ #	Floor Type	Space	Perimeter	R-Value	Area	U-Factor	Tile	Wood	Carpet	
1	Slab on grade	Stairs	0 ft	0	26.00 ft ²	0.989	1.0	0	0	
2	Slab on grade	M Bedroom	55 ft	0	321.00 ft ²	0.989	1.0	0	0	
3	Slab on grade	M Bath	13 ft	0	235.00 ft ²	0.989	1.0	0	0	
4	Slab on grade	M Hall	20 ft	0	95.50 ft ²	0.989	1.0	0	0	
5	Slab on grade	WC	4 ft	0	21.00 ft ²	0.989	1.0	0	0	
6	Slab on grade	M Clos	14 ft	0	216.00 ft ²	0.989	1.0	0	0	
7	Slab on grade	Utility	8 ft	0	115.00 ft ²	0.989	1.0	0	0	
8	Slab on grade	Bath 2	6 ft	0	57.00 ft ²	0.989	1.0	0	0	
9	Slab on grade	Bedroom 2	41 ft	0	211.25 ft ²	0.989	1.0	0	0	
10	Slab on grade	U Hall	0 ft	0	61.25 ft ²	0.989	1.0	0	0	
11	Slab on grade	Clos 2	5 ft	0	29.25 ft ²	0.989	1.0	0	0	
12	Slab on grade	Bar	14 ft	0	76.25 ft ²	0.989	1.0	0	0	
13	Slab on grade	Living Room	13 ft	0	488.50 ft ²	0.989	1.0	0	0	
14	Slab on grade	Breakfast	22 ft	0	195.00 ft ²	0.989	1.0	0	0	
15	Slab on grade	Kitchen	6 ft	0	254.75 ft ²	0.989	1.0	0	0	
16	Slab on grade	Pantry	0 ft	0	35.75 ft ²	0.989	1.0	0	0	
17	Slab on grade	Foyer	11 ft	0	153.75 ft ²	0.989	1.0	0	0	
18	Slab on grade	H Clos	5 ft	0	54.00 ft ²	0.989	1.0	0	0	
19	Slab on grade	H Bath	0 ft	0	65.00 ft ²	0.989	1.0	0	0	
20	Slab on grade	Office	0 ft	0	93.50 ft ²	0.989	1.0	0	0	
21	Slab on grade	Bonus	45 ft	0	247.00 ft ²	0.989	1.0	0	0	
22	Slab on grade	Hall	14 ft	0	181.00 ft ²	0.989	1.0	0	0	
23	Slab on grade	Dining	29 ft	0	202.50 ft ²	0.989	1.0	0	0	

ROOF											
✓ #	Type	Materials	Roof Area	Gable Area	Roof Color	Solar Absor.	SA Tested	Emitt	Emitt Tested	Deck Insul.	Pitch (deg)
1	Gable or shed	RoofAsph	1643 ft ²	581 ft ²	Dark	0.75	No	0.90	No	0	45
2	Gable or shed	RoofAsph	1424 ft ²	503 ft ²	Dark	0.75	No	0.90	No	0	45
3	Gable or shed	RoofAsph	1390 ft ²	492 ft ²	Dark	0.75	No	0.90	No	0	45
4	Gable or shed	RoofAsph	1791 ft ²	633 ft ²	Dark	0.75	No	0.90	No	0	45

ATTIC						
✓ #	Type	Ventilation	Vent Ratio (1 in)	Area	RBS	IRCC
1	Full attic	Unvented	0	1161.50 ft ²	N	N
2	Full attic	Unvented	0	1007.00 ft ²	N	N
3	Full attic	Unvented	0	983.00 ft ²	N	N
4	Full attic	Unvented	0	1266.75 ft ²	N	N

CEILING (Total Exposed Area = 3435 sq.ft.)							
✓ #	Ceiling Type	Space	R-Value	U-Factor	Area	Framing Fraction	Truss Type
1	Shingle R-38 spray foam	Clos 3	38	0.032	36.00 ft ²	0.10	Wood
2	Shingle R-38 spray foam	Bath 3	38	0.032	58.50 ft ²	0.10	Wood
3	Shingle R-38 spray foam	Bath 4	38	0.032	58.50 ft ²	0.10	Wood
4	Shingle R-38 spray foam	Clos 4	38	0.032	38.25 ft ²	0.10	Wood
5	Shingle R-38 spray foam	Bedroom 3	38	0.032	208.25 ft ²	0.10	Wood
6	Shingle R-38 spray foam	Stairs	38	0.032	89.25 ft ²	0.10	Wood
7	Shingle R-38 spray foam	Den	38	0.032	324.75 ft ²	0.10	Wood
8	Shingle R-38 spray foam	Bedroom 4	38	0.032	193.50 ft ²	0.10	Wood
9	Shingle R-38 spray foam	M Bedroom	38	0.032	321.00 ft ²	0.10	Wood
10	Shingle R-38 spray foam	M Bath	38	0.032	235.00 ft ²	0.10	Wood
11	Shingle R-38 spray foam	M Hall	38	0.032	95.50 ft ²	0.10	Wood
12	Shingle R-38 spray foam	WC	38	0.032	21.00 ft ²	0.10	Wood
13	Shingle R-38 spray foam	M Clos	38	0.032	216.00 ft ²	0.10	Wood
14	Shingle R-38 spray foam	Utility	38	0.032	115.00 ft ²	0.10	Wood
15	Shingle R-38 spray foam	Bath 2	38	0.032	57.00 ft ²	0.10	Wood
16	Shingle R-38 spray foam	Bedroom 2	38	0.032	211.25 ft ²	0.10	Wood
17	Shingle R-38 spray foam	U Hall	38	0.032	61.25 ft ²	0.10	Wood
18	Shingle R-38 spray foam	Clos 2	38	0.032	29.25 ft ²	0.10	Wood
19	Shingle R-38 spray foam	Bar	38	0.032	13.00 ft ²	0.10	Wood
20	Shingle R-38 spray foam	Living Room	38	0.032	204.25 ft ²	0.10	Wood
21	Shingle R-38 spray foam	Breakfast	38	0.032	195.00 ft ²	0.10	Wood
22	Shingle R-38 spray foam	Kitchen	38	0.032	20.25 ft ²	0.10	Wood
23	Shingle R-38 spray foam	H Clos	38	0.032	49.50 ft ²	0.10	Wood
24	Shingle R-38 spray foam	H Bath	38	0.032	65.00 ft ²	0.10	Wood
25	Shingle R-38 spray foam	Office	38	0.032	93.50 ft ²	0.10	Wood
26	Shingle R-38 spray foam	Bonus	38	0.032	247.00 ft ²	0.10	Wood
27	Shingle R-38 spray foam	Hall	38	0.032	178.50 ft ²	0.10	Wood

WALLS										(Total Exposed Area = 5324 sq.ft.)					
✓ #	Ornt	Adjacent To	Wall Type	Space	Cavity R-Value	Width Ft In	Height Ft In	Area	Sheathing R-Value	U-Factor	Frm. Frac.	Solar Absor.	Below Grade%		
1	NE	Exterior	2x6 R-27 spray fo	Clos 3	27	8 0	10 0	80.0 ft²	0	0.065	0.25	0.75	0		
2	NW	Exterior	2x6 R-27 spray fo	Clos 3	27	4 6	10 0	45.0 ft²	0	0.065	0.25	0.75	0		
3	NW	Exterior	2x6 R-27 spray fo	Bath 3	27	9 0	10 0	90.0 ft²	0	0.065	0.25	0.75	0		
4	NW	Exterior	2x6 R-27 spray fo	Bath 4	27	9 0	10 0	90.0 ft²	0	0.065	0.25	0.75	0		
5	NE	Exterior	2x6 R-27 spray fo	Bedroom 3	27	13 0	10 0	130.0 ft²	0	0.065	0.25	0.75	0		
6	SE	Exterior	2x6 R-27 spray fo	Bedroom 3	27	3 0	10 0	30.0 ft²	0	0.065	0.25	0.75	0		
7	NE	Exterior	2x6 R-27 spray fo	Stairs	27	6 4	13 6	85.0 ft²	0	0.065	0.25	0.75	0		
8	SE	Exterior	Knee wall	Stairs	38	7 9	13 6	105.0 ft²	0	0.026	0.10	0.75	0		
9	SE	Exterior	Knee wall	Den	38	21 6	10 0	215.0 ft²	0	0.026	0.10	0.75	0		
10	SW	Exterior	2x6 R-27 spray fo	Den	27	14 6	10 0	145.0 ft²	0	0.065	0.25	0.75	0		
11	SW	Exterior	2x6 R-27 spray fo	Bedroom 4	27	15 0	10 0	150.0 ft²	0	0.065	0.25	0.75	0		
12	NW	Exterior	2x6 R-27 spray fo	Bedroom 4	27	12 6	10 0	125.0 ft²	0	0.065	0.25	0.75	0		
13	SE	Exterior	2x6 R-27 spray fo	M Bedroom	27	22 0	10 0	220.0 ft²	0	0.065	0.25	0.75	0		
14	SW	Exterior	2x6 R-27 spray fo	M Bedroom	27	15 6	10 0	155.0 ft²	0	0.065	0.25	0.75	0		
15	NW	Exterior	2x6 R-27 spray fo	M Bedroom	27	17 0	10 0	170.0 ft²	0	0.065	0.25	0.75	0		
16	SE	Exterior	2x6 R-27 spray fo	M Bath	27	12 6	10 0	125.0 ft²	0	0.065	0.25	0.75	0		
17	SW	Exterior	2x6 R-27 spray fo	M Hall	27	4 0	10 0	40.0 ft²	0	0.065	0.25	0.75	0		
18	W	Exterior	2x6 R-27 spray fo	M Hall	27	4 3	10 0	42.4 ft²	0	0.065	0.25	0.75	0		
19	NW	Exterior	2x6 R-27 spray fo	M Hall	27	12 0	10 0	120.0 ft²	0	0.065	0.25	0.75	0		
20	SE	Exterior	2x6 R-27 spray fo	WC	27	3 6	10 0	35.0 ft²	0	0.065	0.25	0.75	0		
21	SE	Exterior	2x6 R-27 spray fo	M Clos	27	13 6	10 0	135.0 ft²	0	0.065	0.25	0.75	0		
22	SE	Exterior	2x6 R-27 spray fo	Utility	27	8 0	10 0	80.0 ft²	0	0.065	0.25	0.75	0		
23	SE	Exterior	2x6 R-27 spray fo	Bath 2	27	6 0	10 0	60.0 ft²	0	0.065	0.25	0.75	0		
24	NE	Exterior	2x6 R-27 spray fo	Bedroom 2	27	13 6	10 0	135.0 ft²	0	0.065	0.25	0.75	0		
25	SE	Exterior	2x6 R-27 spray fo	Bedroom 2	27	15 0	10 0	150.0 ft²	0	0.065	0.25	0.75	0		
26	NW	Exterior	2x6 R-27 spray fo	Bedroom 2	27	12 0	10 0	120.0 ft²	0	0.065	0.25	0.75	0		
27	NE	Exterior	2x6 R-27 spray fo	Clos 2	27	4 6	10 0	45.0 ft²	0	0.065	0.25	0.75	0		
28	NE	Exterior	2x6 R-27 spray fo	Bar	27	10 6	10 0	105.0 ft²	0	0.065	0.25	0.75	0		
29	SE	Exterior	2x6 R-27 spray fo	Bar	27	3 0	10 0	30.0 ft²	0	0.065	0.25	0.75	0		
30	SW	Exterior	2x6 R-27 spray fo	Living Room	27	13 0	12 0	156.0 ft²	0	0.065	0.25	0.75	0		
31	SE	Exterior	2x6 R-27 spray fo	Breakfast	27	7 0	12 0	84.0 ft²	0	0.065	0.25	0.75	0		
32	SW	Exterior	2x6 R-27 spray fo	Breakfast	27	15 0	12 0	180.0 ft²	0	0.065	0.25	0.75	0		
33	NW	Exterior	2x6 R-27 spray fo	Kitchen	27	6 0	12 0	72.0 ft²	0	0.065	0.25	0.75	0		
34	NE	Exterior	2x6 R-27 spray fo	Foyer	27	7 6	12 0	90.0 ft²	0	0.065	0.25	0.75	0		
35	SE	Exterior	2x6 R-27 spray fo	Foyer	27	3 0	12 0	36.0 ft²	0	0.065	0.25	0.75	0		
36	NE	Exterior	2x6 R-27 spray fo	H Clos	27	5 0	10 0	50.0 ft²	0	0.065	0.25	0.75	0		
37	-	Partition	Frame Wall 2 x 4	H Clos	11	9 6	10 0	95.0 ft²	0	0.101	0.25	0.75	0		
38	-	Partition	Frame Wall 2 x 4	H Bath	11	10 0	10 0	100.0 ft²	0	0.101	0.25	0.75	0		
39	-	Partition	Frame Wall 2 x 4	Office	11	19 6	10 0	195.0 ft²	0	0.101	0.25	0.75	0		
40	SE	Exterior	2x6 R-27 spray fo	Bonus	27	19 0	12 0	228.0 ft²	0	0.065	0.25	0.75	0		
41	SW	Exterior	2x6 R-27 spray fo	Bonus	27	13 0	12 0	156.0 ft²	0	0.065	0.25	0.75	0		
42	NW	Exterior	2x6 R-27 spray fo	Bonus	27	13 0	12 0	156.0 ft²	0	0.065	0.25	0.75	0		
43	-	Partition	Frame Wall 2 x 4	Bonus	11	6 0	12 0	72.0 ft²	0	0.101	0.25	0.75	0		
44	SW	Exterior	2x6 R-27 spray fo	Hall	27	13 6	10 0	135.0 ft²	0	0.065	0.25	0.75	0		
45	-	Partition	Frame Wall 2 x 4	Hall	11	12 0	10 0	120.0 ft²	0	0.101	0.25	0.75	0		
46	NE	Exterior	2x6 R-27 spray fo	Dining	27	13 6	12 0	162.0 ft²	0	0.065	0.25	0.75	0		
47	NW	Exterior	2x6 R-27 spray fo	Dining	27	15 0	12 0	180.0 ft²	0	0.065	0.25	0.75	0		

DOORS										(Total Exposed Area = 48 sq.ft.)			
✓ #	Ornt	Door Type	Space	Storms	U-Value	Width Ft In	Height Ft In	Area					
1	SE	Solid wood	Den	None	0.390	3 0	8 0	24.0 ft²					
2	N	Solid wood	Hall	None	0.390	3 0	8 0	24.0 ft²					

WINDOWS											(Total Exposed Area = 991 sq.ft.)				
✓ #	Ornt	Wall ID	Frame	Panes	NFRC	U-Factor	SHGC	Impact	Area	Overhang Depth	Separation	Interior Shade	Screening		
1	NE	1	Vinyl	Low-E Double	Yes	0.250	0.20	Yes	21.0ft²	1 ft 6 in	1 ft 6 in	Blinds 45°	None		
2	NW	3	Vinyl	Low-E Double	Yes	0.250	0.20	Yes	9.0ft²	1 ft 6 in	1 ft 6 in	Blinds 45°	None		
3	NW	4	Vinyl	Low-E Double	Yes	0.250	0.20	Yes	9.0ft²	1 ft 6 in	1 ft 6 in	Blinds 45°	None		
4	NE	5	Vinyl	Low-E Double	Yes	0.250	0.20	Yes	21.0ft²	1 ft 6 in	1 ft 6 in	Blinds 45°	None		
5	NE	5	Vinyl	Low-E Double	Yes	0.250	0.20	Yes	21.5ft²	1 ft 6 in	1 ft 6 in	Blinds 45°	None		
6	NE	7	Vinyl	Low-E Double	Yes	0.250	0.20	Yes	9.0ft²	1 ft 6 in	1 ft 6 in	Blinds 45°	None		
7	NE	7	Vinyl	Low-E Double	Yes	0.250	0.20	Yes	21.0ft²	1 ft 6 in	4 ft 6 in	Blinds 45°	None		
8	SW	10	Vinyl	Low-E Double	Yes	0.250	0.20	Yes	17.5ft²	1 ft 6 in	2 ft 0 in	Blinds 45°	None		
9	SW	10	Vinyl	Low-E Double	Yes	0.250	0.20	Yes	36.0ft²	1 ft 6 in	2 ft 0 in	Blinds 45°	None		
10	SW	11	Vinyl	Low-E Double	Yes	0.250	0.20	Yes	21.0ft²	1 ft 6 in	2 ft 0 in	Blinds 45°	None		
11	NW	12	Vinyl	Low-E Double	Yes	0.250	0.20	Yes	21.0ft²	1 ft 6 in	1 ft 6 in	Blinds 45°	None		
12	SE	13	Vinyl	Low-E Double	Yes	0.250	0.20	Yes	17.3ft²	1 ft 6 in	1 ft 2 in	Blinds 45°	None		
13	SW	14	Vinyl	Low-E Double	Yes	0.250	0.20	Yes	52.0ft²	1 ft 6 in	1 ft 2 in	Blinds 45°	None		
14	NW	15	Vinyl	Low-E Double	Yes	0.250	0.20	Yes	17.3ft²	1 ft 6 in	1 ft 2 in	Blinds 45°	None		
15	SW	17	Vinyl	Low-E Double	Yes	0.250	0.20	Yes	15.0ft²	1 ft 6 in	1 ft 2 in	Blinds 45°	None		
16	W	18	Vinyl	Low-E Double	Yes	0.250	0.20	Yes	15.0ft²	1 ft 6 in	1 ft 2 in	Blinds 45°	None		
17	NW	19	Vinyl	Low-E Double	Yes	0.250	0.20	Yes	60.0ft²	1 ft 6 in	1 ft 2 in	Blinds 45°	None		
18	SE	20	Vinyl	Low-E Double	Yes	0.250	0.20	Yes	3.0ft²	1 ft 6 in	2 ft 0 in	Blinds 45°	None		
19	SE	21	Vinyl	Low-E Double	Yes	0.250	0.20	Yes	6.0ft²	1 ft 6 in	2 ft 0 in	Blinds 45°	None		
20	SE	22	Vinyl	Low-E Double	Yes	0.250	0.20	Yes	8.0ft²	1 ft 6 in	2 ft 0 in	Blinds 45°	None		
21	SE	23	Vinyl	Low-E Double	Yes	0.250	0.20	Yes	4.5ft²	1 ft 6 in	2 ft 0 in	Blinds 45°	None		
22	NE	24	Vinyl	Low-E Double	Yes	0.250	0.20	Yes	56.0ft²	1 ft 6 in	1 ft 2 in	Blinds 45°	None		
23	NE	28	Vinyl	Low-E Double	Yes	0.250	0.20	Yes	16.5ft²	1 ft 6 in	16 ft 5 in	Blinds 45°	None		
24	SW	30	Vinyl	Low-E Double	Yes	0.250	0.20	Yes	18.0ft²	1 ft 6 in	1 ft 6 in	Blinds 45°	None		
25	SW	30	Vinyl	Low-E Double	Yes	0.250	0.20	Yes	67.5ft²	1 ft 6 in	3 ft 6 in	Blinds 45°	None		
26	SE	31	Vinyl	Low-E Double	Yes	0.250	0.20	Yes	7.0ft²	1 ft 6 in	1 ft 6 in	Blinds 45°	None		
27	SE	31	Vinyl	Low-E Double	Yes	0.250	0.20	Yes	26.3ft²	1 ft 6 in	3 ft 6 in	Blinds 45°	None		
28	SW	32	Vinyl	Low-E Double	Yes	0.250	0.20	Yes	21.0ft²	20 ft 6 in	0 ft 8 in	Blinds 45°	None		
29	SW	32	Vinyl	Low-E Double	Yes	0.250	0.20	Yes	78.8ft²	20 ft 6 in	2 ft 8 in	Blinds 45°	None		
30	NE	34	Vinyl	Low-E Double	Yes	0.250	0.20	Yes	24.0ft²	10 ft 6 in	3 ft 0 in	Blinds 45°	None		
31	NE	36	Vinyl	Low-E Double	Yes	0.250	0.20	Yes	17.5ft²	1 ft 6 in	0 ft 6 in	Blinds 45°	None		
32	SE	40	Vinyl	Low-E Double	Yes	0.250	0.20	Yes	24.0ft²	30 ft 0 in	2 ft 8 in	Blinds 45°	None		
33	SW	41	Vinyl	Low-E Double	Yes	0.250	0.20	Yes	18.0ft²	1 ft 6 in	1 ft 6 in	Blinds 45°	None		
34	SW	41	Vinyl	Low-E Double	Yes	0.250	0.20	Yes	67.5ft²	1 ft 6 in	3 ft 6 in	Blinds 45°	None		
35	SW	44	Vinyl	Low-E Double	Yes	0.250	0.20	Yes	30.0ft²	20 ft 6 in	2 ft 8 in	Blinds 45°	None		
36	SW	44	Vinyl	Low-E Double	Yes	0.250	0.20	Yes	24.0ft²	20 ft 6 in	2 ft 8 in	Blinds 45°	None		
37	NE	46	Vinyl	Low-E Double	Yes	0.250	0.20	Yes	45.0ft²	10 ft 6 in	3 ft 0 in	Blinds 45°	None		
38	NW	47	Vinyl	Low-E Double	Yes	0.250	0.20	Yes	45.0ft²	1 ft 6 in	15 ft 0 in	Blinds 45°	None		

GARAGE					
✓ #	Floor Area	Ceiling Area	Exposed Wall Perimeter	Avg. Wall Height	Exposed Wall Insulation
1	983 ft²	983 ft²	95 ft	12 ft	27

INFILTRATION							
#	Scope	Method	SLA	CFM 50	ELA	EqLA	ACH 50
1	Wholehouse	Blower Door	0.000309	3572	196.5	368.9	0.44

HEATING SYSTEM						
✓ #	System Type	Subtype	Efficiency	Capacity	Block	Ducts
1	Split air source heat pump		HSPF: 9.0	40.0 kBtu/hr	1	sys#1
2	Split air source heat pump		HSPF: 9.0	15.7 kBtu/hr	2	sys#2
3	Split air source heat pump		HSPF: 9.0	15.7 kBtu/hr	3	sys#3

COOLING SYSTEM							
✓ #	System Type	Subtype	Efficiency	Capacity	Air Flow	SHR	Block
1	Split air source heat pump		SEER: 15.0	42.5 kBtu/hr	1597 cfm	0.80	1
2	Split air source heat pump		SEER: 16.0	18.5 kBtu/hr	620 cfm	0.80	2
3	Split air source heat pump		SEER: 16.0	18.5 kBtu/hr	623 cfm	0.80	3

HOT WATER SYSTEM							
✓ #	System Type	Subtype	Location	EF	Cap	Use	SetPnt
1	Gas instantaneous			0.80	0 gal	70 gal	120 °F

DUCTS											
✓ #	Supply Location	R-Value	Area	Return Location	Area	Leakage Type	Air Handler	CFM 25 Out	Percent Leakage	QN	RLF
1	AHU-2 Master/BR	6.0	587 ft²	AHU-2 Master/BR	110 ft²	Default Leakage	AHU-2 Master/BR	(Default)	6.00		1
2	AHU-3 Second At	6.0	191 ft²	AHU-3 Second At	75 ft²	Default Leakage	AHU-3 Second At	(Default)	6.00		2
3	AHU-2 Master/BR	6.0	245 ft²	AHU-2 Master/BR	201 ft²	Default Leakage	AHU-2 Master/BR	(Default)	6.00		3



TEMPERATURES

Programmable Thermostat: N												Ceiling Fans:												
Cooling	X	Jan	X	Feb	X	Mar	X	Apr	X	May	X	Jun	X	Jul	X	Aug	X	Sep	X	Oct	X	Nov	X	Dec
Heating	X	Jan	X	Feb	X	Mar	X	Apr	X	May	X	Jun	X	Jul	X	Aug	X	Sep	X	Oct	X	Nov	X	Dec
Venting	X	Jan	X	Feb	X	Mar	X	Apr	X	May	X	Jun	X	Jul	X	Aug	X	Sep	X	Oct	X	Nov	X	Dec
Thermostat Schedule:				Florida Building Code, 6th Edition												Hours								
Schedule Type				(2017)	1	2	3	4	5	6	7	8	9	10	11	12								
Cooling (WD)	AM			75	75	75	75	75	75	75	75	75	75	75	75	75								
	PM			75	75	75	75	75	75	75	75	75	75	75	75									
Cooling (WEH)	AM			75	75	75	75	75	75	75	75	75	75	75	75	75								
	PM			75	75	75	75	75	75	75	75	75	75	75	75									
Heating (WD)	AM			72	72	72	72	72	72	72	72	72	72	72	72	72								
	PM			72	72	72	72	72	72	72	72	72	72	72	72									
Heating (WEH)	AM			72	72	72	72	72	72	72	72	72	72	72	72	72								
	PM			72	72	72	72	72	72	72	72	72	72	72	72									

ENERGY PERFORMANCE LEVEL (EPL) DISPLAY CARD**ESTIMATED ENERGY PERFORMANCE INDEX = 77****The lower the EnergyPerformance 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. Number 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:	AHU-2 Master/BR,AHU-2 Master/BR,AHU-3 Second At
5. Is this a worst case? (yes/no)	5. <u>No</u>	13. Cooling systems	Capacity <u>74.6</u>
6. Conditioned floor area (ft ²)	6. <u>4416.25</u>	a. Split system:	SEER <u>16.00</u>
7. Windows, type and area*		b. Single package:	SEER
a. U-Factor:	7aDbl Impact, 0.250	c. Ground/water source:	SEER/COP
b. Solar Heat Gain Coefficient (SHGC):	7b. <u>0.20</u>	d. Room unit/PTAC:	EER
c. Area (ft ²)	7c. <u>991</u>	e. Other:	
8. Skylights		14. Heating systems	Capacity <u>56.0</u>
a. U-Factor:	8a. _____	a. Split system heat pump:	HSPF <u>9.00</u>
b. Solar Heat Gain Coefficient (SHGC):	8b. _____	b. Single package heat pump:	HSPF
9. Floor type, insulation level		c. Electric resistance:	COP
a. Slab-on-grade (R-value):	9a. <u>0.0</u>	d. Gas furnace, natural gas:	AFUE
b. Wood, raised (R-value):	9b. _____	e. Gas furnace, LPG:	AFUE
c. Concrete, raised (R-value)	9c. _____	f. Other:	
10 Wall type and insulation:		15. Water heating systems	
a. Exterior:		a. Electric resistance:	EF
1. Wood frame (Insulation R-value):	10a1. <u>33</u>	b. Gas fired, natrual gas:	EF <u>0.800</u>
2. Masonry (Insulation R-value):	10a2. _____	c. Gas fired, LPG:	EF
b. Adjacent:		d. Solar system with tank:	EF
1. Wood frame (Insulation R-value):	10b1. <u>11</u>	e. Dedicated heat pump with tank:	EF
2. Masonry (Insulation R-value):	10b2. _____	f. Heat recovery unit:	HeatRec%
11. Ceiling type and insulation level		g. Other:	
a. Under attic (R-value):	11a. <u>38.0</u>	16. HVAC credits claimed (Performance Method)	
b. Single assembly (R-value):	11b. _____	a. Ceiling fans:	
c. Knee walls/skylight walls (R-value)	11c. _____	b. Cross ventilation:	
d. Radiant barrier installed	11d. _____	c. Whole house fan:	
		d. Multizone cooling credit:	Yes
		e. Multizone heating credit:	Yes
		f. Programmable thermostat:	

*Label required by Section 303.1.3 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: _____

Florida Building Code, Energy Conservation, 6th Edition (2017)

Mandatory Requirements for Residential Performance, Prescriptive and ERI Methods

ADDRESS: PERMIT #: **MANDATORY REQUIREMENTS** - See individual code sections for full details.**SECTION R401 GENERAL**

R401.3 Energy Performance Level (EPL) display card (Mandatory). The building official shall require that an energy performance level (EPL) display card be completed and certified by the builder to be accurate and correct before final approval of the building for occupancy. Florida law (Section 553.9085, Florida Statutes) requires the EPL display card to be included as an addendum to each sales contract for both presold and nonpresold residential buildings. The EPL display card contains information indicating the energy performance level and efficiencies of components installed in a dwelling unit, completed and signed by the builder. The building official shall verify that the EPL display card accurately reflects the plans and specifications submitted to demonstrate compliance for the building. A copy of the EPL display card can be found in Appendix RD.



R402.4 Air leakage (Mandatory). The building thermal envelope shall be constructed to limit air leakage in accordance with the requirements of Sections R402.4.1 through R402.4.5.

Exception: Dwelling units of R-2 Occupancies and multiple attached single family dwellings shall be permitted to comply with Section C402.5.



R402.4.1 Building thermal envelope. The building thermal envelope shall comply with Sections R402.4.1.1 and R402.4.1.2. The sealing methods between dissimilar materials shall allow for differential expansion and contraction.



R402.4.1.1 Installation. The components of the building thermal envelope as listed in Table R402.4.1.1 shall be installed in accordance with the manufacturer's instructions and the criteria listed in Table 402.4.1.1, as applicable to the method of construction. Where required by the code official, an approved third party shall inspect all components and verify compliance.



R402.4.1.2 Testing. The building or dwelling unit shall be tested and verified as having an air leakage rate not exceeding seven air changes per hour in Climate Zones 1 and 2, and three air changes per hour in Climate Zones 3 through 8. Testing shall be conducted in accordance with ANSI/RESET/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 Statutes 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.

Exception: Testing is not required for additions, alterations, renovations, or repairs, of the building thermal envelope of existing buildings in which the new construction is less than 85 percent 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, backdraft 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.



R402.4.2 Fireplaces. New wood-burning fireplaces shall have tight-fitting flue dampers or doors, and outdoor combustion air. Where using tight-fitting doors on factory-built fireplaces listed and labeled in accordance with UL 127, the doors shall be tested and listed for the fireplace. Where using tight-fitting doors on masonry fireplaces, the doors shall be listed and labeled in accordance with UL 907.



R402.4.3 Fenestration air leakage. Windows, skylights and sliding glass doors shall have an air infiltration rate of no more than 0.3 cfm per square foot (1.5 L/s/m²), and swinging doors no more than 0.5 cfm per square foot (2.6 L/s/m²), when tested according to NFRC 400 or AAMA/WDMA/CSA 101/I.S.2/A440 by an accredited, independent laboratory and listed and labeled by the manufacturer.

Exception: Site-built windows, skylights and doors.

MANDATORY REQUIREMENTS - (Continued)

- ☐ **R402.4.4 Rooms containing fuel-burning appliances** In Climate Zones 3 through 8, where open combustion air ducts provide combustion air to open combustion fuel burning appliances, the appliances and combustion air opening shall be located outside the building thermal envelope or enclosed in a room, isolated from inside the thermal envelope. Such rooms shall be sealed and insulated in accordance with the envelope requirements of Table R402.1.2, where the walls, floors and ceilings shall meet not less than the basement wall R-value requirement. The door into the room shall be fully gasketed and any water lines and ducts in the room insulated in accordance with Section R403. The combustion air duct shall be insulated where it passes through conditioned space to a minimum of R-8.

Exceptions:

1. Direct vent appliances with both intake and exhaust pipes installed continuous to the outside.
2. Fireplaces and stoves complying with Section R402.4.2 and Section R1006 of the Florida Building Code, Residential.

- ☐ **R402.4.5 Recessed lighting.** Recessed luminaires installed in the building thermal envelope shall be sealed to limit air leakage between conditioned and unconditioned spaces. All recessed luminaires shall be IC-rated and labeled as having an air leakage rate not more than 2.0 cfm (0.944 L/s) when tested in accordance with ASTM E283 at a 1.57 psf (75 Pa) pressure differential. All recessed luminaires shall be sealed with a gasket or caulk between the housing and the interior wall or ceiling covering.

SECTION R403 SYSTEMS

- ☐ **R403.1 Controls**

- ☐ **R403.1.1 Thermostat provision (Mandatory).** At least one thermostat shall be provided for each separate heating and cooling system.

- ☐ **R403.1.3 Heat pump supplementary heat (Mandatory).** Heat pumps having supplementary electric-resistance heat shall have controls that, except during defrost, prevent supplemental heat operation when the heat pump compressor can meet the heating load.

- ☐ **R403.3.2 Sealing (Mandatory).** All ducts, air handlers, filter boxes and building cavities that form the primary air containment passageways for air distribution systems shall be considered ducts and plenum chambers, shall be constructed and sealed in accordance with Section C403.2.9.2 of the Commercial Provisions of this code and shall be shown to meet duct tightness criteria below.

Duct tightness shall be verified by testing in accordance with ANSI/RESNET/ICC 380 by either individuals as defined in Section 553.993(5) or (7), Florida Statutes, or individuals licensed as set forth in Section 489.105(3)(f), (g), or (i), Florida Statutes, to be "substantially leak free" in accordance with Section R403.3.3.

- ☐ **R403.3.2.1 Sealed air handler.** Air handlers shall have a manufacturer's designation for an air leakage of no more than 2 percent of the design air flow rate when tested in accordance with ASHRAE 193.

- ☐ **R403.3.3 Duct testing.** Ducts shall be pressure tested to determine air leakage by one of the following methods:

1. Rough-in test: Total leakage shall be measured with a pressure differential of 0.1 inch w.g. (25 Pa) across the system, including the manufacturer's air handler enclosure if installed at the time of the test. All registers shall be taped or otherwise sealed during the test.
2. Post construction test: Total leakage shall be measured with a pressure differential of 0.1 inch w.g. (25 Pa) across the entire system, including the manufacturer's air handler enclosure. All registers shall be taped or otherwise sealed during the test.

Exceptions:

1. A duct leakage test shall not be required where the ducts and air handlers are located entirely within the building thermal envelope.
2. Duct testing is not mandatory for buildings complying by Section 405 of this code.

A written report of the results of the test shall be signed by the party conducting the test and provided to the code official.

- ☐ **R403.3.5 Building Cavities (Mandatory).** Building framing cavities shall not be used as ducts or plenums.

- ☐ **R403.4 Mechanical system piping insulation (Mandatory).** Mechanical system piping capable of carrying fluids above 105°F (41°C) or below 55°F (13°C) shall be insulated to a minimum of R-3.

- ☐ **R403.4.1 Protection of piping insulation.** Piping insulation exposed to weather shall be protected from damage, including that caused by sunlight, moisture, equipment maintenance, and wind, and shall provide shielding from solar radiation that can cause degradation of the material. Adhesive tape shall not be permitted.

- ☐ **R403.5.1 Heated water circulation and temperature maintenance systems (Mandatory).** Heated water circulation systems shall be in accordance with Section R403.5.1.1. Heat trace temperature maintenance systems shall be in accordance with Section R403.5.1.2. Automatic controls, temperature sensors and pumps shall be accessible. Manual controls shall be readily accessible.

- ☐ **R403.5.1.1 Circulation systems.** Heated water circulation systems shall be provided with a circulation pump. The system return pipe shall be dedicated return pipe or a cold water supply pipe. Gravity and thermosiphon circulation systems shall be prohibited. Controls for circulating hot water system pumps shall start the pump based on the identification of a demand for hot water within the occupancy. The controls shall automatically turn off the pump when the water in the circulation loop is at the desired temperature and when there is no demand for hot water.

- ☐ **R403.5.1.2 Heat trace systems.** Electric heat trace systems shall comply with IEEE 515.1 or UL 515. Controls for such systems shall automatically adjust the energy input to the heat tracing to maintain the desired water temperature in the piping in accordance with the times when heated water is used in the occupancy.

MANDATORY REQUIREMENTS - (Continued)

- ☐ **R403.5.5 Heat traps (Mandatory).** Storage water heaters not equipped with integral heat traps and having vertical pipe risers shall have heat traps installed on both the inlets and outlets. External heat traps shall consist of either a commercially available heat trap or a downward and upward bend of at least 3 1/2 inches (89 mm) in the hot water distribution line and cold water line located as close as possible to the storage tank.
- ☐ **R403.5.6 Water heater efficiencies (Mandatory).**
- ☐ **R403.5.6.1 Storage water heater temperature controls.**
- ☐ **R403.5.6.1.1 Automatic controls.** Service water heating systems shall be equipped with automatic temperature controls capable of adjustment from the lowest to the highest acceptable temperature settings for the intended use. The minimum temperature setting range shall be from 100°F to 140°F (38°C to 60°C).
- ☐ **R403.5.6.1.2 shut down.** A separate switch or a clearly marked circuit breaker shall be provided to permit the power supplied to electric service systems to be turned off. A separate valve shall be provided to permit the energy supplied to the main burner(s) of combustion types of service water heating systems to be turned off.
- ☐ **R403.5.6.2 Water heating equipment.** Water heating equipment installed in residential units shall meet the minimum efficiencies of Table C404.2 in Chapter 4 of the Florida Building Code, Energy Conservation, Commercial Provisions, for the type of equipment installed. Equipment used to provide heating functions as part of a combination system shall satisfy all stated requirements for the appropriate water heating category. Solar water heaters shall meet the criteria of Section R403.5.6.2.1.
- ☐ **R403.5.6.2.1 Solar water heating system.** Solar systems for domestic hot water production are rated by the annual solar energy factor of the system. The solar energy factor of a system shall be determined from the Florida Solar Energy Center Directory of Certified Solar Systems. Solar collectors shall be tested in accordance with ISO Standard 9806, Test Methods for Solar Collectors, and SRCC Standard TM-1, Solar Domestic Hot Water System and Component Test Protocol. Collectors in installed solar water-heating systems should meet the following criteria:
1. Be installed with a tilt angle between 10 degrees and 40 degrees of the horizontal; and
 2. Be installed at an orientation within 45 degrees of true south.
- ☐ **R403.6 Mechanical ventilation (Mandatory).** The building shall be provided with ventilation that meets the requirements of the Florida Building Code, Residential or Florida Building Code, Mechanical, as applicable, or with other approved means of ventilation, including: Natural, Infiltration or Mechanical means. Outdoor air intakes and exhausts shall have automatic or gravity dampers that close when the ventilation system is not operating.
- ☐ **R403.6.1 Whole-house mechanical ventilation system fan efficacy.** When installed to function as a whole-house mechanical ventilation system, fans shall meet the efficacy requirements of Table R403.6.1.
- Exception:** Where mechanical ventilation fans are integral to tested and listed HVAC equipment, they shall be powered by an electronically commutated motor.
- ☐ **R403.6.2 Ventilation air.** Residential buildings designed to be operated at a positive indoor pressure of for mechanical ventilation shall meet the following criteria:
1. The design air change per hour minimums for residential buildings in ASHRAE 62.2, Ventilation for Acceptable Indoor Air Quality, shall be the maximum rates allowed for residential applications.
 2. No ventilation or air-conditioning system make-up air shall be provided to conditioned space from attics, crawlspaces, attached enclosed garages or outdoor spaces adjacent to swimming pools or spas.
 3. If ventilation air is drawn from enclosed spaces(s), then the walls of the space(s) from which air is drawn shall be insulated to a minimum of R-11 and the ceiling shall be insulated to a minimum of R-19, space permitting, or R-10 otherwise.
- ☐ **R403.7 Heating and cooling equipment (Mandatory).**
- ☐ **R403.7.1 Equipment sizing.** Heating and cooling equipment shall be sized in accordance with ACCA Manual S based on the equipment loads calculated in accordance with ACCA Manual J or other approved methodologies, heating and cooling calculation based on building loads for the directional orientation of the building. The manufacturer and model number of the outdoor and indoor units (if split system) shall be submitted along with the sensible and total cooling capacities at the design conditions described in Section R302.1. This code does not allow designer safety factors, provisions for future expansion or other factors that affect equipment sizing. System sizing calculations shall not include loads created by local intermittent mechanical ventilation such as standard kitchen and bathroom exhaust systems. New or replacement heating and cooling equipment shall have an efficiency rating equal to or greater than the minimum required by federal law for the geographic location where the equipment is installed.

TABLE R403.6.1**WHOLE-HOUSE MECHANICAL VENTILATION SYSTEM FAN EFFICACY**

FAN LOCATION	AIRFLOW RATE MINIMUM CFM	MINIMUM EFFICACY (a) CFM/WATT	AIRFLOW RATE MAXIMUM CFM
Range hoods	Any	2.8 cfm/watt	Any
In-line fan	Any	2.8 cfm/watt	Any
Bathroom, utility room	10	1.4 cfm/watt	< 90
Bathroom, utility room	90	2.8 cfm/watt	Any

For SI: 1 cfm - 28.3 L/min.

(a) When tested in accordance HVI Standard 916

MANDATORY REQUIREMENTS - (Continued)

- ☐ **R403.7.1.1 Cooling equipment capacity.** Cooling only equipment shall be selected so that its total capacity is not less than the calculated total load but not more than 1.15 times greater than the total load calculated according to the procedure selected in Section 403.7, or the closest available size provided by the manufacturer's product lines. The corresponding latent capacity of the equipment shall not be less than the calculated latent load.

The published value for AHRI total capacity is a nominal, rating-test value and shall not be used for equipment sizing. Manufacturer's expanded performance data shall be used to select cooling-only equipment. This selection shall be based on the outdoor design dry-bulb temperature for the load calculation (or entering water temperature for water-source equipment), the blower CFM provided by the expanded performance data, the design value for entering wet-bulb temperature and the design value for entering dry-bulb temperature.

Design values for entering wet-bulb and dry-bulb temperatures shall be for the indoor dry bulb and relative humidity used for the load calculation and shall be adjusted for return side gains if the return duct(s) is installed in an unconditioned space.

Exceptions:

1. Attached single- and multiple-family residential equipment sizing may be selected so that its cooling capacity is less than the calculated total sensible load but not less than 80 percent of that load.
2. When signed and sealed by a Florida-registered engineer, in attached single- and multiple-family units, the capacity of equipment may be sized in accordance with good design practice.

- ☐ **R403.7.1.2 Heating equipment capacity.**

- ☐ **R403.7.1.2.1 Heat pumps** Heat pump sizing shall be based on the cooling requirements as calculated according to Section R403.7.1.1, and the heat pump total cooling capacity shall not be more than 1.15 times greater than the design cooling load even if the design heating load is 1.15 times greater than the design cooling load.
- ☐ **R403.7.1.2.2 Electric resistance furnaces.** Electric resistance furnaces shall be sized within 4 kW of the design requirements calculated according to the procedure selected in Section R403.7.1.
- ☐ **R403.7.1.2.3 Fossil fuel heating equipment.** The capacity of fossil fuel heating equipment with natural draft atmospheric burners shall not be less than the design load calculated in accordance with Section R403.7.1.

- ☐ **R403.7.1.3 Extra capacity required for special occasions.** Residences requiring excess cooling or heating equipment capacity on an intermittent basis, such as anticipated additional loads caused by major entertainment events, shall have equipment sized or controlled to prevent continuous space cooling or heating within that space by one or more of the following options:

1. A separate cooling or heating system is utilized to provide cooling or heating to the major entertainment areas.
2. A variable capacity system sized for optimum performance during base load periods is utilized.

- ☐ **R403.8 Systems serving multiple dwelling units (Mandatory).** Systems serving multiple dwelling units shall comply with Sections C403 and C404 of the IECC—Commercial Provisions in lieu of Section R403.

- ☐ **R403.9 Snow melt and ice system controls (Mandatory).** Snow- and ice-melting systems, supplied through energy service to the building, shall include automatic controls capable of shutting off the system when the pavement temperature is above 50°F (10°C), and no precipitation is falling and an automatic or manual control that will allow shutoff when the outdoor temperature is above 40°F (4.8°C).

- ☐ **R403.10 Pools and permanent spa energy consumption (Mandatory).** The energy consumption of pools and permanent spas shall be in accordance with Sections R403.10.1 through R403.10.5.

- ☐ **R403.10.1 Heaters.** The electric power to heaters shall be controlled by a readily accessible on-off switch that is an integral part of the heater mounted on the exterior of the heater, or external to and within 3 feet (914 mm) of the heater. Operation of such switch shall not change the setting of the heater thermostat. Such switches shall be in addition to a circuit breaker for the power to the heater. Gas-fired heaters shall not be equipped with continuously burning ignition pilots.
- ☐ **R403.10.2 Time switches.** Time switches or other control methods that can automatically turn off and on according to a preset schedule shall be installed for heaters and pump motors. Heaters and pump motors that have built-in time switches shall be in compliance with this section.

Exceptions:

1. Where public health standards require 24-hour pump operations.
2. Pumps that operate solar- and waste-heat-recovery pool heating systems.
3. Where pumps are powered exclusively from on-site renewable generation.

- ☐ **R403.10.3 Covers.** Outdoor heated swimming pools and outdoor permanent spas shall be equipped with a vapor- retardant cover on or at the water surface or a liquid cover or other means proven to reduce heat loss.

Exception: Where more than 70 percent of the energy for heating, computed over an operation season, is from site-recovered energy, such as from a heat pump or solar energy source, covers or other vapor-retardant means shall not be required.

- ☐ **R403.10.4 Gas- and oil-fired pool and spa heaters.** All gas- and oil-fired pool and spa heaters shall have a minimum thermal efficiency of 82 percent for heaters manufactured on or after April 16, 2013, when tested in accordance with ANSI Z 21.56. Pool heaters fired by natural or LP gas shall not have continuously burning pilot lights.

MANDATORY REQUIREMENTS - (Continued)

- ☐ **R403.10.5 Heat pump pool heaters.** Heat pump pool heaters shall have a minimum COP of 4.0 when tested in accordance with AHRI 1160, Table 2, Standard Rating Conditions-Low Air Temperature. A test report from an independent laboratory is required to verify procedure compliance. Geothermal swimming pool heat pumps are not required to meet this standard.
- ☐ **R403.11 Portable spas (Mandatory).** The energy consumption of electric-powered portable spas shall be controlled by the requirements of APSP-14.

SECTION R404

ELECTRICAL POWER AND LIGHTING SYSTEMS

- ☐ **R404.1 Lighting equipment (Mandatory).** Not less than 75 percent of the lamps in permanently installed lighting fixtures shall be high-efficacy lamps or not less than 75 percent of the permanently installed lighting fixtures shall contain only high-efficacy lamps.
 - Exception:** Low-voltage lighting.
- ☐ **R404.1.1 Lighting equipment (Mandatory).** Fuel gas lighting systems shall not have continuously burning pilot lights.

TABLE 402.4.1.1
AIR BARRIER AND INSULATION INSPECTION COMPONENT CRITERIA

Project Name: Street: City, State, Zip: Owner: Design Location: FL, Pensacola NAS		Builder Name Permit Office: Permit Number: Jurisdiction:	
COMPONENT	AIR BARRIER CRITERIA	INSULATION INSTALLATION CRITERIA	✓
General requirements	A continuous air barrier shall be installed in the building envelope. The exterior thermal envelope contains a continuous barrier. Breaks or joints in the air barrier shall be sealed.	Air-permeable insulation shall not be used as a sealing material.	☐
Ceiling/attic	The air barrier in any dropped ceiling/soffit shall be aligned with the insulation and any gaps in the air barrier shall be sealed. Access openings, drop down stairs or knee wall doors to unconditioned attics spaces shall be sealed.	The insulation in any dropped ceiling/soffit shall be aligned with the air barrier.	☐
Walls	The junction of the foundation and sill plate shall be sealed. The junction of the top plate and the top of exterior walls shall be sealed. Knee walls shall be sealed.	Cavities with corners and headers of frame walls shall be insulated by completely filling the cavity with a material having a thermal resistance of R-3 per inch minimum. Exterior thermal envelope insulation for framed walls shall be installed in substantial contact and continuous alignment with the air barrier	☐
Windows, skylights and doors	The space between window/door jambs and framing, and skylights and framing shall be sealed.		☐
Rim joists	Rim joists are insulated and include an air barrier.	Rim joists shall be insulated.	☐
Floors (including above-garage and cantilevered floors)	The air barrier shall be installed at any exposed edge of insulation.	Floor framing cavity insulation shall be installed to maintain permanent contact with the underside of subfloor decking, or floor framing cavity insulation shall be permitted to be in contact with the top side of sheathing, or continuous insulation installed on the underside of floor framing and extends from the bottom to the top of all perimeter floor framing members.	☐
Crawl space walls	Exposed earth in unvented crawl spaces shall be covered with a Class I vapor retarder with overlapping joints taped.	Where provided in lieu of floor insulation, insulation shall be permanently attached to the crawlspace walls.	☐
Shafts, penetrations	Duct shafts, utility penetrations, and flue shaft openings to exterior or unconditioned space shall be sealed.		☐
Narrow cavities		Batts in narrow cavities shall be cut to fit, or narrow cavities shall be filled by insulation that on installation readily conforms to the available cavity spaces.	☐
Garage separation	Air sealing shall be provided between the garage and conditioned spaces.		☐
Recessed lighting	Recessed light fixtures installed in the building thermal envelope shall be sealed to the drywall.	Recessed light fixtures installed in the building thermal envelope shall be air tight and IC rated.	☐
Plumbing and wiring		Batt insulation shall be cut neatly to fit around wiring and plumbing in exterior walls, or insulation that on installation readily conforms to available space shall extend behind piping and wiring.	☐
Shower/tub on exterior wall	The air barrier shall be installed behind electrical or communication boxes or air-sealed boxes shall be installed.	Exterior walls adjacent to showers and tubs shall be insulated.	☐
Electrical/phone box on exterior walls	The air barrier shall be installed behind electrical or communication boxes or air-sealed boxes shall be installed.		☐
HVAC register boots	HVAC register boots that penetrate building thermal envelope shall be sealed to the subfloor or drywall.		☐
Concealed sprinklers	When required to be sealed, concealed fire sprinklers shall only be sealed in a manner that is recommended by the manufacturer. Caulking or other adhesive sealants shall not be used to fill voids between fire sprinkler cover plates and walls or ceilings.		☐

a. In addition, inspection of log walls shall be in accordance with the provisions of ICC-400.

Envelope Leakage Test Report (Blower Door Test)Residential Prescriptive, Performance or ERI Method Compliance
2017 Florida Building Code, Energy Conservation, 6th Edition

Jurisdiction:

Permit Number:

Job Information

Builder:

Community:

Lot:

Address:

Unit:

City:

State: FL

Zip:

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): 4.500

$$\frac{\text{CFM}(50)}{\text{Building Volume}} \times 60 \div \frac{47629}{\text{ACH}(50)} =$$

☐**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 Statutes, or individuals licensed as set forth in Section 489.105(3)(f), (g), or (i) or and 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: _____

Duct Leakage Test Report

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

Jurisdiction: _____

Permit Number: _____

Job Information

Builder: _____

Community: _____

Lot: _____

Address: _____

Unit: _____

City: _____

State: FL

Zip: _____

Duct Leakage Test Results

System 1	_____ cfm25
System 2	_____ cfm25
System 3	_____ cfm25
Sum of any additional systems	_____ cfm25
Total of all systems	_____ cfm25

☐ Prescriptive Method cfm25 (Total)

To qualify as "substantially leak free" Qn Total must be less than or equal to 0.04 if air handler unit is installed. If air handler unit is not installed, Qn Total must be less than or equal to 0.03. This testing method meets the requirements in accordance with Section R403.3.3.

Is the air handler unit installed during testing?

☐ YES (<= 0.04 Qn)

☐ NO (<= 0.03 Qn)

_____ ÷ _____ = _____ Qn
Total of all systems Total Conditioned Square Footage

☐ **PASS**
☐ **FAIL**

☐ Performance / ERI Method cfm25 (Out or Total)

To qualify using this method, Qn must be not greater than the proposed duct leakage Qn specified on Form R405-2017 or R406-2017.

Leakage Type selected on Form R405-2017 (Energy Calc) or R406-2017

Qn specified on Form R405-2017 (Energy Calc) or R406-2017

 Default Leakage

Duct tightness shall be verified by testing in accordance with ANSI/RESNET/ICC380 by either individuals as defined in Section 553.993(5) or (7), Florida Statutes, or individuals licensed as set forth in Section 489.105(3)(f), (g) or (i), Florida Statutes.

Testing Company

Company Name: _____ Phone: _____

I hereby verify that the above duct leakage test 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: _____

Reference Home Characteristics

TMY City: FL_Pensacola_Rgnl

FLBase2017

Above-grade Walls (Uo)	0.084
Above-grade Wall Solar Absorptance	0.75
Above-grade Wall Infrared Emittance	0.90
Basement Walls (Uo)	n/a
Above-grade Floors (Uo)	n/a
Slab Insulation R-Value	0.0
Ceilings (Uo)	0.030
Roof Solar Absorptance	0.75
Roof Infrared Emittance	0.90
Attic Vent Area (ft ²)	3.87
Crawlspace Vent Area (ft ²)	n/a
Exposed Masonry Floor Area (ft ²)	883.65
Carpet & Pad R-Value	1.8
Door Area (ft ²)	40.00
Door U-Factor	0.400
North Window Area (ft ²)	159.15
South Window Area (ft ²)	159.15
East Window Area (ft ²)	159.15
West Window Area (ft ²)	159.15
Window U-Factor	0.400
Window SHGC (Heating)	0.2169
Window SHGC (Cooling)	0.2169
ACH50	7.00
Internal Gains * (Btu/day)	175223
Water heater gallons per day	210.00
Water Heater set point temperature	120.00
Water heater efficiency rating	0.32
Labeled Heating System Rating and Efficiency	HSPF = 8.2
Labeled Cooling System Rating and Efficiency	SEER = 14.0
Air Distribution System Efficiency	0.88
Thermostat Type	Manual
Heating Thermostat Settings	72.0 (All hours)