



Residential Plans Examiner Review Form for HVAC System Design (Loads, Equipment, Ducts)

Form
RPER 1
15 Mar 09

Header Information

Contractor: HOMETOWN HEATING AND AIR
Mechanical license: HOMETOWN HEATING AND AIR
CAC1818078
Building plan #:
Home address (Street or Lot#, Block, Subdivision): SW HERMITAGE GLEN, FLOOR 2

REQUIRED ATTACHMENTS
Manual J1 Form (and supporting worksheets):
or MJ1AE Form* (and supporting worksheets):
OEM performance data (heating, cooling, blower):
Manual D Friction Rate Worksheet:
Duct distribution sketch:

ATTACHED
Yes ☐ No ☐
Yes ☐ No ☐
Yes ☐ No ☐
Yes ☐ No ☐
Yes ☐ No ☐

HVAC LOAD CALCULATION (IRC M1401.3)

Design Conditions

Winter Design Conditions

Outdoor temperature: 33 °F
Indoor temperature: 70 °F
Total heat loss: 11946 Btuh

Summer Design Conditions

Outdoor temperature: 92 °F
Indoor temperature: 72 °F
Grains difference: 52 gr/lb @ 50% RH
Sensible heat gain: 12497 Btuh
Latent heat gain: 4217 Btuh
Total heat gain: 16714 Btuh

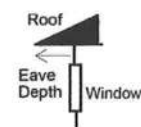
Building Construction Information

Building

Orientation: Front Door faces South
North, East, West, South, Northeast, Northwest, Southeast, Southwest
Number of bedrooms: 2
Conditioned floor area: 752 ft²
Number of occupants: 4

Windows

Eave overhang depth: 1.5 ft
Internal shade: none
Blinds, drapes, etc.
Number of skylights: 0



HVAC EQUIPMENT SELECTION (IRC M1401.3)

Heating Equipment Data

Equipment type: Split ASHP
Furnace, Heat pump, Boiler, etc.
Model: Goodman Mfg.
GSZ140181L+ASPT25B14A
Heating output capacity: 0 Btuh
Heat pumps - capacity at winter design outdoor conditions
Aux. heating output capacity: 0 Btuh

Cooling Equipment Data

Equipment type: Split ASHP
Air Conditioner, Heat pump, etc.
Model: Goodman Mfg.
GSZ140181L+ASPT25B14A
Total cooling capacity: 17418 Btuh
Sensible cooling capacity: 13044 Btuh
Latent cooling capacity: 4374 Btuh

Blower Data

Heating cfm: 620
Cooling cfm: 525
Static pressure: 0.35 in H2O
Fan's rated external static pressure for design airflow

HVAC DUCT DISTRIBUTION SYSTEM DESIGN (IRC M1601.1)

Design airflow: 620 cfm
Equipment design ESP: 0.35 in H2O
Total device pressure losses: 0 in H2O
Available static pressure (ASP): 0.35 in H2O
Longest supply duct: 139 ft
Longest return duct: 64 ft
Total effective length (TEL): 203 ft
Friction rate: 0.172 in/100ft
Friction Rate = ASP ÷ (TEL x 100)
Duct Materials Used
Trunk duct: Round flex vinyl
Branch duct: Round flex vinyl

I declare the load calculation, equipment, equipment selection and duct design were rigorously performed based on the building plan listed above. I understand the claims made on these forms will be subject to review and verification.

Contractor's printed name: _____

Contractor's signature: _____

Date: _____

Reserved for County, Town Municipality or Authority having jurisdiction use.

*Home qualifies for MJ1AE Form based on Abridged Edition Checklist

ANSI / RESNET / ACCA 310 HVAC Design Report (1,2)

1. Design Basis & Architectural Scope		Designer name: HOMETOWN HEATING AND AIR		Date: Dec 28, 2022
1.1 Design description (optional):		Right-Suite® Universal 2022 22.0.07 RSU64164		
1.2 Design company: HOMETOWN HEATING AND AIR		N/A <input type="checkbox"/>		
1.3 Software name and version used to complete design:				
For a Dwelling, Townhouse, or Dwelling / Sleeping Unit Within (i.e. duplex):				
1.4 Architectural plan name or address of property:				
1.5 Architectural options used in the design:(3):				
1.6 Other architectural options that the design can be used with:(4)				
For a Dwelling / Sleeping Unit Not Within a Dwelling or Townhouse (e.g. condo, apartment):				
1.7 Unique ID for bldg. that the dwelling / sleeping unit is in:(5)				
1.8 Architectural plan used in design (e.g. dwelling unit model):				
1.9 Other architectural plans that the design can be used with:(6)				
1.10 Architectural options used in the design:(3)				
1.11 Other architectural options that the design can be used with:(4)				
1.12 Dwelling / sleeping unit location used in design:(7)				
2. Dwelling-Unit Mechanical Ventilation System Design		System 1		System 2
Ventilation System Type & Control Location:				System 2
2.1 Unique name or ID for each system:(8)				
2.2 Vent. equipment manufacturer & model #:(9)		Balanced w/o Recovery		Balanced w/o Recovery
2.3 Specified system type:(10)				
2.4 Specified control location:(11)		FLOOR 1		FLOOR 2
2.5 Ventilation zone name(s) served by system:(12)		Zone 1		Zone 2
Ventilation Zone Served by Ventilation System:		FLOOR 1		FLOOR 2
2.6 Ventilation zone name:(12)		Other		Other
2.7 Design basis:(13)		2388 2		752 2
2.8 Floor area (sq. ft.) and # bedrooms in vent. zone:		0 of every 0		0 of every 0
2.9 Ventilation design airflow rate (CFM):(14)				
2.10 Vent. runtime per cycle & cycle time (mins):				
2.11 Time-averaged mechanical vent. rate (CFM):(15)				
3. Heat Gain & Heat Loss Loads		3.2 Load methodology:(17)		Room-by-Room
3.1 Design basis for the loads:(16) ACCA Manual J 8th Edition		Heating Season: 70		Cooling Season: 72
3.3 Indoor design temperatures used in loads (°F):		Heating Season: 33		Cooling Season: 92
3.4 Outdoor design temperatures used in loads (°F):(18)		Union, FL		Data Source: ACCA std.
3.5 Outdoor design temperature location & data source:(19)		Zone 1		Zone 2
Zone-Specific Inputs & Loads at Design Conditions		FLOOR 1		FLOOR 2
3.6 Name of heated or cooled zone:(20)		6 1380		4 920
3.7 Occupants & total occup. internal gains (Btuh):(21)		3900		1100
3.8 Total non-occupant internal gains (Btuh):		2388		752
3.9 Conditioned floor area (sq. ft.):(22)		355		90
3.10 Window area (sq. ft.):(23)		0.3		0.3
3.11 Predominant window SHGC:(24)		Wall: 13.0 Ceiling: 30.0		Wall: 13.0 Ceiling: 30.0
3.12 Predominant insulation nominal R-value:(24,25)		Semi-tight		Semi-tight
3.13 Infiltration rate (Qualitative or ACH50):(26)		95		61
3.14 Time-averaged mechanical vent. rate (CFM):		Sensible Latent Total		Sensible Latent Total
3.15 Heat gain (kBtuh):(27)		Sensible Latent Total		Sensible Latent Total
		N 31.2 8.5 39.7		13.0 4.2 17.2
		NE 32.8 8.5 41.3		13.4 4.2 17.7
		E 34.5 8.5 42.9		13.3 4.2 17.6
		SE 32.9 8.5 41.4		13.4 4.2 17.7
		S 30.3 8.5 38.8		12.5 4.2 16.7
		SW 32.5 8.5 40.9		13.4 4.2 17.6
		W 32.2 8.5 40.7		13.5 4.2 17.7
		NW 31.7 8.5 40.2		14.0 4.2 18.3
		4.2		1.5
3.16 Maximum -- minimum total heat gain (kBtuh):(28)		33.3		11.9
3.17 Total heat loss (kBtuh):				

ANSI / RESNET / ACCA 310 HVAC Design Report (1,2)

	1		2		3	
4. Heating & Cooling Equipment Selection						
Air Conditioners, Heat Pumps, & Other Cooling Equipment (If none of these will be installed, check "N/A")						
4.1 Unique name or ID for each system:	FLOOR 1		FLOOR 2			
4.2 Zone that system serves (See Item 3.6):	FLOOR 1		FLOOR 2			
4.3 Equipment type:(29)	HP		HP			
4.4 Evaporator / fan coil mfr. & model #:(30)	GOOD ASPT49D14A		GOOD ASPT25B14A		N/A	
4.5 Condenser mfr. & model #:(30)	GOOD GSZ140491K N/A		GOOD GSZ140181L N/A		OEM	
4.6 AHRI ref. #, or check box for alt. OEM doc.:(31)	201664363 OEM		202630555 OEM		N/A	
4.7 If AC / HP, rated cooling efficiency:(32)	15 SEER N/A		15 SEER N/A		N/A	
4.8 If HP, rated heating efficiency:(33)	8.5 HSPF N/A		8.2 HSPF N/A		N/A	
4.9 If HP, ratio of max. to min. rated capacity:	1.8 N/A		1.7 N/A		N/A	
4.10 If AC / HP, blower fan motor & speed type:(34)	Other Single N/A		Other Single N/A		N/A	
4.11 If AC / HP, compressor speed type:(35)	Single N/A		Single N/A		N/A	
4.12 If AC / HP, meter device type:(36)	N/A		N/A		N/A	
4.13 If TXV or EEV, OEM subcooling target (°F):(37)	0.0 N/A		0.0 N/A		N/A	
4.14 Filter performance metric and rating:(38)	N/A		N/A		N/A	
Furnaces, Boilers, & Other Heating Equipment (If none of these will be installed, check "N/A")						
4.15 Unique name or ID for each system:						
4.16 Zone that system serves (See Item 3.6):						
4.17 Equipment type:(39)						
4.18 Equipment manufacturer & model #:	OEM		OEM		OEM	
4.19 AHRI ref. #, or check box for alt. OEM doc.:(31)	N/A		N/A		N/A	
4.20 If furnace or boiler, rated heating efficiency:	N/A		N/A		N/A	
4.21 If furnace, blower fan motor & speed type:(34)	N/A		N/A		N/A	
4.22 If furnace or boiler, heating capacity type:(40)	N/A		N/A		N/A	
4.23 If furnace or boiler, venting type:(41)	N/A		N/A		N/A	
4.24 Filter performance metric and rating:(38)	N/A		N/A		N/A	
5. Duct Design (Complete if duct system will be installed; otherwise check "N/A")						
5.1 Unique name or ID for each system:	FLOOR 1		FLOOR 2			
5.2 Zone that system serves (See Item 3.6):	FLOOR 1		FLOOR 2			
Design Values for Cooling and Heating Mode	Cooling	Heating	Cooling	Heating	Cooling	Heating
5.3 Design blower fan airflow (CFM):(42)	1225	1225	525	620		
5.4 Design blower fan speed setting:(43)	Medium	Medium	Medium	Medium		
5.5 Design external static pressure (IWC):(44)	0.5		0.35			
5.6 Room-by-room design airflows (CFM):	Room Name	Airflow	Room Name	Airflow	Room Name	Airflow
Total Design Airflow:	[All rooms]	1224	[All rooms]	620	[All rooms]	
1.	Room1	264	BATH	88		
2.	Room10	110	Room35	117		
3.	Room11	64	Room37	143		
4.	Room12	454	Room39	84		
5.	Room13	0	Room40	165		
6.	Room2	0	Room41	20		
7.	Room24	3	Room42	0		
8.	Room4	25	Room43	3		
9.	Room5	32				
10.	Room6	121				
11.	Room7	25				
12.	Room8	114				
13.	Room9	12				
14.						
15.						
16.						
17.						
18.						
19.						
20.						

ANSI / RESNET / ACCA 310 HVAC Design Report (1,2)

5.6 Room-by-room design airflows (Continued):	Room Name	Airflow	Room Name	Airflow	Room Name	Airflow
	21.					
	22.					
	23.					
	24.					
	25.					
	26.					
	27.					
	28.					
	29.					
	30.					
	31.					
	32.					
	33.					
	34.					
	35.					

Footnotes

- The purpose of this report is to document the design information required by ANSI / RESNET / ACCA 310 – a standard for grading the installation of HVAC systems - for a dwelling, townhouse, or dwelling / sleeping unit. The HVAC designer should complete one report per dwelling, townhouse, or dwelling / sleeping unit that encompasses all HVAC systems (e.g., for a dwelling with two zones, the HVAC system for each zone should be documented in the same report).
- Note that this report will be reviewed by users of the standard (e.g., a rater) to ensure that the design meets the tolerances defined in Section 4.3 of ANSI / RESNET / ACCA 310. The HVAC systems will not be eligible to earn recognition for proper installation unless all tolerances are met.
- If the HVAC design documented in this report incorporated one or more options (e.g., media room option), then list those options.
- If this same HVAC design could be used with other options (e.g., bonus room, balcony with sliding glass door), then list those option(s).
- For example, the name of the development or the building's address.
- If this same HVAC design could be used with other plans (e.g., other dwelling unit models) in the building, then list those plan(s).
- Because the loads are dependent on the dwelling / sleeping unit's location in the building, indicate whether the design is for the Top Floor, a Mid-Level-Floor, or the Bottom-Floor of the building; and either a Corner Unit or Middle Unit that is between two other units.
- For example, the unique ID might be "Powder Bath Fan" or "Whole-House ERV".
- The ventilation equipment manufacturer and model number are required to be reported for dwelling / sleeping units not within a dwelling or townhouse; and are optional for dwellings, townhouses, and sleeping / dwelling units within (i.e., duplex).
- Ventilation system types are: Supply - a supply-only system, Exhaust - an exhaust-only system, Balanced w/o Recov. - a balanced system without energy or heat recovery, ERV - an energy recovery ventilator, HRV - a heat recovery ventilator, Vent. Dehumidifier - a ventilation system with integrated dehumidifier, or Other - any other system type.
- For example, common ventilation control locations include a bathroom or utility room.
- For example, the ventilation zone name may be "Whole Dwelling", "Upper Level", "Lower Level", or "Basement".
- Design basis options are: 62.2-2010 - ASHRAE 62.2-2010, 62.2-2013 - ASHRAE 62.2-2013, 62.2-2016 - ASHRAE 62.2-2016, 62.2-2019 - ASHRAE 62.2 - 2019, or Other - any other ventilation standard.
- Enter the airflow rate of the ventilation system when operating (e.g., a 50 CFM cycled bath fan has a ventilation airflow rate of 50 CFM).
- The following formula shall be used to determine the time-averaged ventilation airflow rate: Time Averaged Vent Rate = Vent Rate * Runtime Per Cycle / Cycle Time Where: • Time Averaged Vent Rate = The time - averaged ventilation airflow rate, • Vent Rate = The design's ventilation airflow rate reported in Item 2.9, • Runtime Per Cycle = The runtime per cycle reported in Item 2.10, • Cycle Time = The cycle time reported in Item 2.10.
- Design basis options for the heat gain and heat loss loads are: ACCA Manual J v8 2013 - ACCA Manual J v8, 2013 edition; ACCA Manual J v8 2016 - ACCA Manual J v8, 2016 edition; 2017 ASHRAE Fund. - 2017 ASHRAE Fundamentals; or Per AHJ - a design basis prescribed by the Authority Having Jurisdiction.
- Load methodology options are: Room-by-Room or Single Block. Note that for dwellings, townhouses, and dwelling / sleeping units within (i.e., duplex), the room - by - room load methodology must be used. See Fn. 2 for details.
- Note that the outdoor design temperatures must meet the limits defined in ANSI / RESNET / ACCA 310 Appendix A for the county or U.S. Territory where the project will be constructed. See Fn. 2 for details.
- The location shall include the city or weather station and the state. The data source options are: ACCA - ACCA Manual J, ASHRAE - ASHRAE Handbook of Fundamentals, or AHJ - design conditions prescribed by the Authority Having Jurisdiction.
- For example, the heated or cooled zone name may be "Upper Level", "Master Suite", or "Basement".

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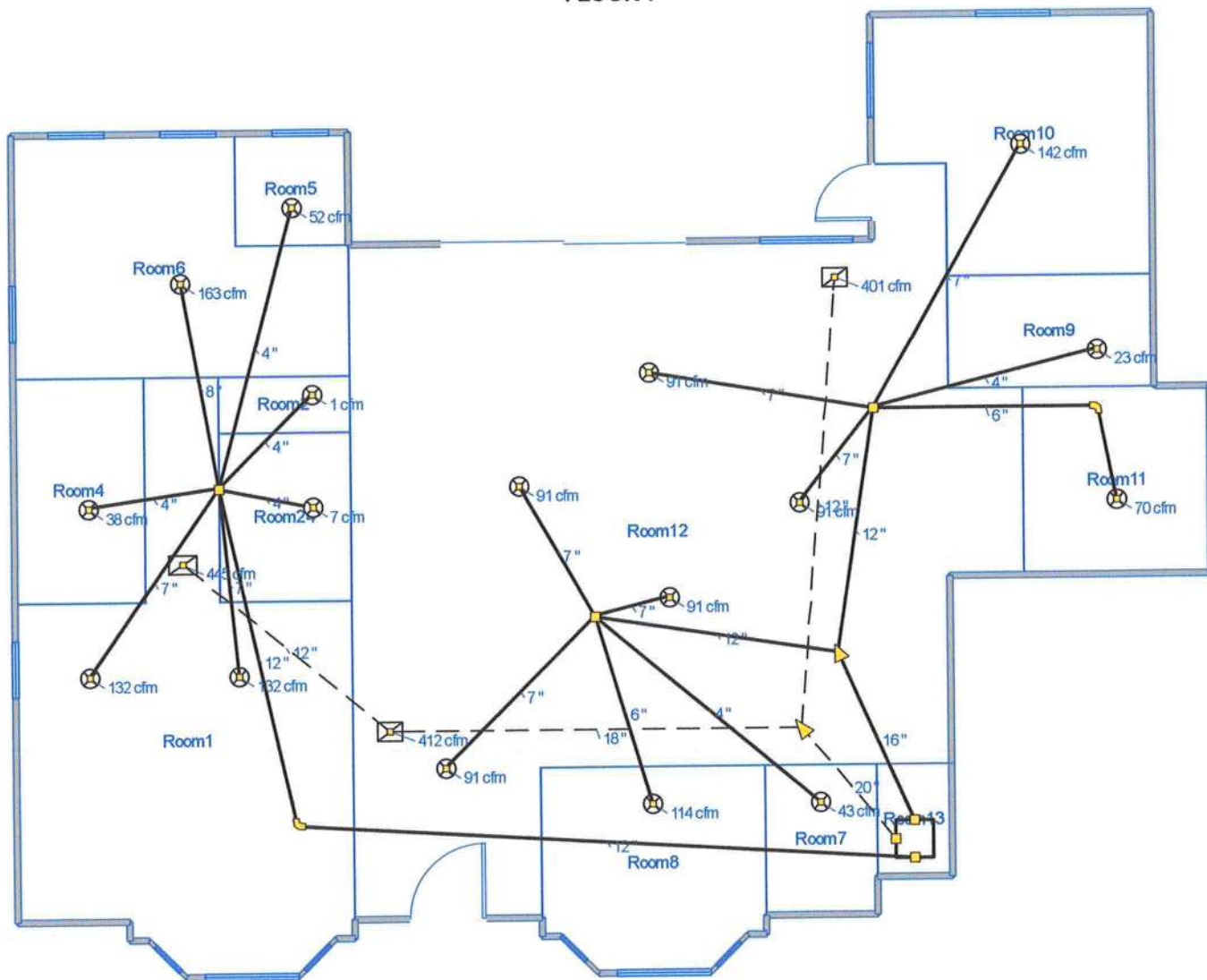
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ANSI / RESNET / ACCA 310 HVAC Design Report (1,2)

21. To determine the number of occupants, calculate the number of bedrooms in the zone and add one. ANSI / RESNET / ACCA 310 defines a "bedroom" for one - and two - family dwellings and townhouses as a room or space 70 square feet of floor area or greater, with egress window or skylight, and doorway to the main body of the dwelling unit, that can be used for sleeping. For all other Dwelling Units, a room or space that can be used for sleeping. For all dwelling or sleeping units, the number of bedrooms shall not be less than one. ANSI / RESNET / ACCA 310 defines an "egress window" as an operable window that provides for a means of escape and access for rescue in the event of an emergency and with the following attributes : • Has a sill height of not more than 44 inches above the floor; and, • Has a minimum net clear opening of 5.7 sq.ft., opening height of 24 in., and opening width of 20 in.; and, • Is operational from the inside of the room without the use of keys, tools or special knowledge. The number of occupants must fall within the tolerance specified in ANSI / RESNET / ACCA 310. See Fn. 2 for details.
22. The difference between the Conditioned Floor Area (CFA) used in the design and the actual dwelling, townhouse, or dwelling / sleeping unit must fall within the tolerance specified in ANSI / RESNET / ACCA 310. See Fn. 2 for details. Be advised, the CFA will be evaluated using the definition in ANSI / RESNET / ACCA 310, which defines this value, in part, as the floor area of the Conditioned Space Volume within a building or dwelling unit, not including the floor area of attics, crawlspaces, and basements below air sealed and insulated floors.
23. The difference between the window area used in the design and the actual dwelling, townhouse, or dwelling / sleeping unit must fall within the tolerance specified in ANSI / RESNET / ACCA 310. See Fn. 2 for details. Be advised, the window area will be evaluated by calculating it using the on - site inspection protocol provided in Normative Appendix B of ANSI / RESNET / ICC 301, which instructs the user to measure the width and height of the rough opening for the window and round to the nearest inch, and then to use these measurements to calculate window area, rounding to the nearest tenth of a square foot. See <https://codes.iccsafe.org/content/chapter/16191/> for the complete protocol.
24. "Predominant" is defined as the SHGC or R-value used in the greatest amount of window, wall, or ceiling area in the zone.
25. If both cavity and continuous insulation are used, report the sum of the nominal R-value of the cavity and continuous insulation.
26. The infiltration rate shall be reported using a qualitative input (i.e., Tight, Semi-Tight, Average, Semi-Leaky, Leaky) or in units of ACH50.
27. Provide loads for the orientation(s) that the design is intended to be used in (e.g., N, S, E, W), where orientation is defined as the direction that the front door of the dwelling is facing. For example, if a site - specific design has been completed for a single project, only the loads for the single orientation of that project need to be provided.
28. If the heat gain has been provided for multiple orientations, then the difference between the max. and min. total heat gain across the orientations specified must be reported and fall within the tolerance specified in ANSI / RESNET / ACCA 310. See Fn. 2 for details.
29. Equipment type options are: AC - Air Conditioner, HP - Heat Pump, MNAC - Mini-Split Air Conditioner, MNHP - Mini-Split Heat Pump, MTAC - Multi - Split Air Conditioner, MTHP - Multi - Split Heat Pump, and Other - any other cooling equipment type.
30. For single-package systems or systems without a condenser (e.g., evaporative cooler), provide manufacturer and model number in Item 4.4 and select "N / A" for Item 4.5.
31. If an AHRI Reference Number is not available, OEM-provided documentation shall be collected with the rated efficiency of the equipment. If the equipment contains multiple components, the rated efficiency shall reflect the specific combination of indoor and outdoor components, along with confirmation from the OEM that the two components are designed to be used together.
32. For example, if the metric for the rated efficiency of the equipment is SEER, then its SEER rating shall be reported; if the metric is EER, then its EER rating shall be reported; if both SEER and EER, then both rated values shall be reported.
33. For example, if the metric for the rated efficiency of the equipment is HSPF, then its HSPF rating shall be reported; if the metric is COP, then its COP rating shall be reported; if both HSPF and COP, then both rated values shall be reported.
34. Blower fan motor type options are: PSC - Permanent Split Capacitor, ECM - Electronically Commutated Motor, or Other - any other motor type. For blower fan speed type, while equipment typically has multiple speed settings to select from during installation, this parameter is related to the number of operational speeds that the blower fan is capable of : Single - a system that operates at no more than one speed setting each for heating mode and cooling mode, Two - a system that can operate at no more than two speeds each for heating mode and cooling mode, Variable - a system that can operate at more than two speeds.
35. The compressor speed type is related to the number of operational speeds that the compressor is capable of: Single - a system that operates at no more than one speed setting each for heating mode and cooling mode, Two - a system that can operate at no more than two speeds each for heating mode and cooling mode, Variable - a system that can operate at more than two speeds.
36. Meter device type options are: Piston/Cap - piston / capillary tube, TXV - thermal expansion valve, or EEV - electronic expansion valve.
37. If the meter device type is TXV or EEV, then provide then the OEM-specified subcooling target at the service valve.
38. For example, MERV or FPR.
39. Equipment type options are: Furnace, Boiler, or Other - any other heating equipment type.
40. Heating capacity type options are: Single-Stage, Two-Stage, or Modulating.
41. Vent. type options are: Natural Draft - natural draft system, Mech. Draft - mechanical draft system, or Direct Vent - direct-vent appliance.
42. Provide design airflow in cubic feet per minute of air with a density of 0.075 pounds per cubic foot. Airflow at this air density is often referred to as Standard CFM(SCFM) and represents air at 68 °F, 50 % relative humidity, and at a barometric pressure of 29.92" Hg.
43. This is the OEM setting that corresponds with the design blower fan airflow. Common examples include low, medium-low, medium, medium - high, and high, but also may be defined in terms of dip - switch settings or other classifications



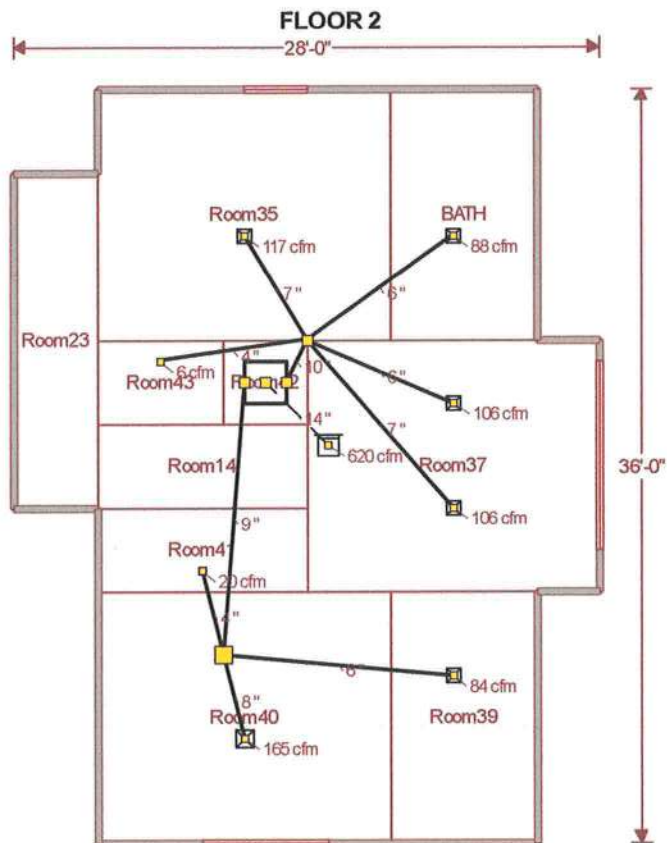
FLOOR 1



Job #:
Performed for:
LERNER LUXURY PROPERTIES
SW HERMITAGE GLEN
HIGH SPRINGS, FL 32643

HOMETOWN HEATING AND AIR
399 SW BOSTON TER
FORT WHITE, FL 32038
Phone: 352-316-7273 License: CAC1818078

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399 SW BOSTON TER
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RESIDENTIAL ENERGY CONSERVATION CODE DOCUMENTATION CHECKLIST

**Florida Department of Business and Professional Regulation
Simulated Performance Alternative (Performance) Method**

Applications for compliance with the 2020 Florida Building Code, Energy Conservation via the residential Simulated Performance method shall include:

- ☐ This Checklist
- ☐ Form R405-2020 report
- ☐ Input summary checklist that can be used for field verification (usually four 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:

- ☐ Air Barrier and Insulation Inspection Component Criteria checklist (Table 402.4.1.1 - one page)
- ☐ A completed 2020 Envelope Leakage Test Report (usually one page); exception in R402.4 allows dwelling units of R - 2 Occupancies and multiple attached single family dwellings to comply with Section C402.5
- ☐ If FORM R405 duct leakage type indicates anything other than "default leakage", then a completed 2020 Duct Leakage Test Report - Performance Method (usually one page).



FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Business and Professional Regulation - Residential Performance Method

<p>Project Name: LERNER LUXURY PROPERTIES Street: SW HERMITAGE GLEN City, State, Zip: HIGH SPRINGS, FL 32643 Owner: LERNER LUXURY PROPERTIES Design Location: FL, Gainesville Regional AP</p>	<p>Builder Name: LERNER LUXURY PROPERTIES Permit Office: Permit Number: Jurisdiction: County: (Florida Climate Zone 2)</p>
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<p>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 (ft²) 3140.00 Conditioned floor area below grade (ft²) 3140.00 7. Windows (445 ft²) Description Area (ft²) a. U-Factor: Dbl, 0.570 71.17 SHGC: 0.56 b. U-Factor: Dbl, 0.470 305.58 SHGC: 0.31 c. U-Factor: Dbl, 0.450 12.00 SHGC: 0.36 d. U-Factor: Dbl, 0.420 56.00 SHGC: 0.32 Area Weighted Average Overhang Depth: 6.608 ft Area Weighted Average SHGC: 0.353 8. Floor types (2626.00 ft²) Insulation (R) Area (ft²) a. Bg floor, heavy dry or light dam 0.0 2304.00 b. Fir floor, frm flr, 12" thkns, c 19.0 79.00 c. Fir floor, frm flr, 6" thkns, ca 30.0 243.00</p>	<p>9. Wall types (3873 ft²) Insulation (R) Area (ft²) a. Frm wall, stucco ext, 1/2" wood 13.0 3752.30 b. Frm wall, stucco ext, r-13 cav i 13.0 0.83 c. Frm wall, 1/2" wood shth, r-13 c 13.0 120.00 d. N/A 10. Ceiling types (2626 ft²) Insulation (R) Area (ft²) a. Attic ceiling, asphalt shingles 30.0 2626.00 b. N/A c. N/A 11. Ducts R Area (ft²) a. Sup: FLOOR 1, Ret: FLOOR 1, AH: FLOOR 1 6.0 565.51 b. Sup: FLOOR 1, Ret: FLOOR 2, AH: FLOOR 2 6.0 129.92 12. Cooling systems kBtu/hr Efficiency a. Split air source heat pump 43.9 15 SEER b. Split air source heat pump 17.4 15 SEER 13. Heating systems kBtu/hr Efficiency a. Split air source heat pump 34.3 8.5 HSPF b. Split air source heat pump 17.2 8.2 HSPF 14. Hot water systems Cap: 0 gal UEF: 0.80 a. Propane instantaneous (0 gal) b. Conservation features (None) 15. Credits Rad.Bar.; Ceiling Fan, Pstat</p>
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Glass/Floor area: 0.142	Total Proposed Modified Loads: 103.59	PASS
	Total Baseline Loads: 110.63	

<p>I hereby certify that the plans and specifications covered by this calculation are in compliance with the Florida Energy Code.</p> <p>Prepared By <u><i>Armetana Huntford Aor</i></u> Signature _____ Date _____</p> <p>I hereby certify that this building, as designed, is in compliance with the Florida Energy Code.</p> <p>Owner/Agent Name _____ Signature _____ Date _____</p>	<p>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.</p> <p style="text-align: center;">   </p> <p>Building Official Name _____ Signature _____ Date _____</p>
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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 7.0 ACH50 (R402.4.1.2).

Building Input Summary Report

PROJECT											
Title:	LERNER LUXURY PROPERTIES		Bedrooms:	4	Address type:	Lot information					
Building Type:	FLAsBuilt		Bathrooms:	4	Lot#:	LOT 7					
Owner:	LERNER LUXURY PROPERTIES		Conditioned Area:	6280	Block/Subdivision:						
# of Units:	1		Total Stories:	2	Platbook:						
Builder Name:	LERNER LUXURY PROPERTIES		Worst Case:	No	Street:	SW HERMITAGE GLEN					
Permit Office:			Rotate Angle:	0	County:	HIGH SPRINGS, FL 32643					
Jurisdiction:			Cross Ventilation:	No	City, State, Zip:						
Family Type:	Single-Family		Whole House Fan:	No							
New/Existing:	New (From Plans)		Terrain:	Rural							
Year Construct:			Shielding:	Moderate/Rural							
Comment:											
CLIMATE											
✓	Design Location	TMY Site	IECC Zone	Design Temp 97.5 %	2.5 %	Int Design Temp Winter	Summer	Heating Degree Days	Design Moisture	Daily Temp Range	
	FL, Gainesville Regional AP	FL_Gainesville_Rgn	2	33	92	70	72	0	52	Medium	
BLOCKS											
#	Name	Area	Volume								
1	FLOOR 1	2388.00 ft²	24920.00 ft³								
2	FLOOR 2	752.00 ft²	7060.00 ft³								
SPACES											
#	Area	Volume	Kitchen	Occupants	Bedrooms	Infil ID	Finished	Cooled	Heated		
1	Room1	382.00 ft²	3820.00 ft³	No	2	1	Yes	Yes	Yes		
2	Room4	84.00 ft²	840.00 ft³	No	0	1	Yes	Yes	Yes		
3	Room5	36.00 ft²	360.00 ft³	No	0	1	Yes	Yes	Yes		
4	Room6	198.00 ft²	3020.00 ft³	No	0	1	Yes	Yes	Yes		
5	Room7	48.00 ft²	480.00 ft³	No	1	1	Yes	Yes	Yes		
6	Room8	124.00 ft²	1240.00 ft³	No	0	1	Yes	Yes	Yes		
7	Room9	66.00 ft²	660.00 ft³	No	1	1	Yes	Yes	Yes		
8	Room10	186.00 ft²	1860.00 ft³	No	0	1	Yes	Yes	Yes		
9	Room11	100.00 ft²	1000.00 ft³	No	1	1	Yes	Yes	Yes		
10	Room12	1056.00 ft²	10560.00 ft³	Yes	0	1	Yes	Yes	Yes		
11	BATH	84.00 ft²	840.00 ft³	No	1	1	Yes	Yes	Yes		
12	Room35	168.00 ft²	1512.00 ft³	No	2	1	Yes	Yes	Yes		
13	Room37	168.00 ft²	1680.00 ft³	No	0	1	Yes	Yes	Yes		
14	Room39	84.00 ft²	756.00 ft³	No	1	1	Yes	Yes	Yes		
15	Room40	168.00 ft²	1512.00 ft³	No	0	1	Yes	Yes	Yes		
16	Room41	40.00 ft²	360.00 ft³	No	0	1	Yes	Yes	Yes		
17	Room42	16.00 ft²	160.00 ft³	No	0	1	Yes	Yes	Yes		
18	Room43	24.00 ft²	240.00 ft³	No	0	1	Yes	Yes	Yes		
19	Room13	24.00 ft²	240.00 ft³	No	0	1	Yes	Yes	Yes		
20	Room2	21.00 ft²	210.00 ft³	No	0	1	Yes	Yes	Yes		
21	Room24	63.00 ft²	630.00 ft³	No	0	1	Yes	Yes	Yes		
FLOORS (Total Exposed Area = 2626 sq.ft.)											
✓	#	Floor Type	Space	Perimeter	R-Value	Area	U-Factor	Tile	Wood	Carpet	
	1	Bg floor, heavy dry or light damp soil, 5' depth,	Room1	39 ft	0	382.00 ft²	0.025	0	1.0	0	
	2	Bg floor, heavy dry or light damp soil, 5' depth,	Room4	12 ft	0	84.00 ft²	0.025	0	1.0	0	
	3	Bg floor, heavy dry or light damp soil, 5' depth,	Room5	12 ft	0	36.00 ft²	0.025	0	1.0	0	
	4	Fir floor, frm flr, 12" thkns, carpet flr fnsh, r	Room6	6 ft	19	16.00 ft²	0.050	0	0	1.0	
	5	Bg floor, heavy dry or light damp soil, 5' depth,	Room6	25 ft	0	198.00 ft²	0.025	0	1.0	0	
	6	Bg floor, heavy dry or light damp soil, 5' depth,	Room7	8 ft	0	48.00 ft²	0.025	0	1.0	0	
	7	Bg floor, heavy dry or light damp soil, 5' depth,	Room8	16 ft	0	124.00 ft²	0.025	0	1.0	0	
	8	Bg floor, heavy dry or light damp soil, 5' depth,	Room9	6 ft	0	66.00 ft²	0.025	0	1.0	0	
	9	Bg floor, heavy dry or light damp soil, 5' depth,	Room10	37 ft	0	186.00 ft²	0.025	0	1.0	0	
	10	Bg floor, heavy dry or light damp soil, 5' depth,	Room11	23 ft	0	100.00 ft²	0.025	0	1.0	0	
	11	Bg floor, heavy dry or light damp soil, 5' depth,	Room12	66 ft	0	1056.00 ft²	0.025	0	1.0	0	
	12	Fir floor, frm flr, 6" thkns, carpet flr fnsh, r-	BATH	19 ft	32	84.00 ft²	0.049	0	0	1.0	
	13	Fir floor, frm flr, 6" thkns, carpet flr fnsh, r-	Room35	12 ft	32	116.00 ft²	0.049	0	0	1.0	
	14	Fir floor, frm flr, 6" thkns, carpet flr fnsh, r-	Room37	2 ft	32	22.00 ft²	0.025	0	1.0	0	
	15	Bg floor, heavy dry or light damp soil, 5' depth,	Room13	10 ft	0	24.00 ft²	0.049	0	0	1.0	
	16	Fir floor, frm flr, 6" thkns, carpet flr fnsh, r-	Room2	0 ft	32	21.00 ft²	0.049	0	0	1.0	
	17	Fir floor, frm flr, 12" thkns, carpet flr fnsh, r	Room24	0 ft	19	63.00 ft²	0.050	0	0	1.0	

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	RoofAsph	2030 ft ²	390 ft ²	Dark	Y	0.75	No	0.90	No	0	23	
2	Gable or shed	RoofAsph	815 ft ²	157 ft ²	Dark	Y	0.75	No	0.90	No	0	23	

ATTIC						
✓ #	Type	Ventilation	Vent Ratio (1 in)	Area	RBS	IRCC
1	Full attic	Vented	300	1874.00 ft ²	Y	N
2	Full attic	Vented	300	752.00 ft ²	Y	N

CEILING (Total Exposed Area = 2626 sq.ft.)							
✓ #	Ceiling Type	Space	R-Value	U-Factor	Area	Framing Fraction	Truss Type
1	Attic ceiling, asphalt shingles roof	Room1	30	0.032	295.00 ft ²	0.10	—
2	Attic ceiling, asphalt shingles roof	Room4	30	0.032	60.00 ft ²	0.10	—
3	Attic ceiling, asphalt shingles roof	Room6	30	0.032	121.00 ft ²	0.10	—
4	Attic ceiling, asphalt shingles roof	Room7	30	0.032	48.00 ft ²	0.10	—
5	Attic ceiling, asphalt shingles roof	Room8	30	0.032	124.00 ft ²	0.10	—
6	Attic ceiling, asphalt shingles roof	Room9	30	0.032	66.00 ft ²	0.10	—
7	Attic ceiling, asphalt shingles roof	Room10	30	0.032	186.00 ft ²	0.10	—
8	Attic ceiling, asphalt shingles roof	Room11	30	0.032	100.00 ft ²	0.10	—
9	Attic ceiling, asphalt shingles roof	Room12	30	0.032	850.00 ft ²	0.10	—
10	Attic ceiling, asphalt shingles roof	BATH	30	0.032	84.00 ft ²	0.10	—
11	Attic ceiling, asphalt shingles roof	Room35	30	0.032	168.00 ft ²	0.10	—
12	Attic ceiling, asphalt shingles roof	Room37	30	0.032	168.00 ft ²	0.10	—
13	Attic ceiling, asphalt shingles roof	Room39	30	0.032	84.00 ft ²	0.10	—
14	Attic ceiling, asphalt shingles roof	Room40	30	0.032	168.00 ft ²	0.10	—
15	Attic ceiling, asphalt shingles roof	Room41	30	0.032	40.00 ft ²	0.10	—
16	Attic ceiling, asphalt shingles roof	Room42	30	0.032	16.00 ft ²	0.10	—
17	Attic ceiling, asphalt shingles roof	Room43	30	0.032	24.00 ft ²	0.10	—
18	Attic ceiling, asphalt shingles roof	Room13	30	0.032	24.00 ft ²	0.10	—

WALLS (Total Exposed Area = 3873 sq.ft.)														
✓ #	Omt	Adjacent To	Wall Type	Space	Cavity R-Value	Width Ft In	Height Ft In	Area	Sheathing R-Value	U-Factor	Frm. Solar Absor. Frac.	Solar Absor.	Below Grade%	
1	E	Exterior	Frm wall, stucco	Room1	13	1 0	10 0	10.0 ft²	0	0.091	0.25	0.75	0	
2	SE	Exterior	Frm wall, stucco	Room1	13	2 10	10 0	28.3 ft²	0	0.091	0.25	0.75	0	
3	S	Exterior	Frm wall, stucco	Room1	13	8 0	10 0	80.0 ft²	0	0.091	0.25	0.75	0	
4	S	Exterior	Frm wall, stucco	Room1	13	6 0	10 0	60.0 ft²	0	0.091	0.25	0.75	0	
5	SW	Exterior	Frm wall, stucco	Room1	13	2 10	10 0	28.3 ft²	0	0.091	0.25	0.75	0	
6	W	Exterior	Frm wall, stucco	Room1	13	18 0	10 0	180.0 ft²	0	0.091	0.25	0.75	0	
7	W	Exterior	Frm wall, stucco	Room4	13	12 0	10 0	120.0 ft²	0	0.091	0.25	0.75	0	
8	N	Exterior	Frm wall, stucco	Room5	13	6 0	10 0	60.0 ft²	0	0.091	0.25	0.75	0	
9	N	Exterior	Frm wall, stucco	Room5	13	12 0	10 0	120.0 ft²	0	0.091	0.25	0.75	0	
10	N	Exterior	Frm wall, stucco	Room6	13	2 7	15 3	40.0 ft²	0	0.091	0.25	0.75	0	
11	N	Exterior	Frm wall, stucco	Room6	13	7 10	15 3	120.0 ft²	0	0.091	0.25	0.75	0	
12	S	Exterior	Frm wall, stucco	Room6	13	2 7	15 3	40.0 ft²	0	0.091	0.25	0.75	0	
13	W	Exterior	Frm wall, stucco	Room6	13	19 0	15 3	290.0 ft²	0	0.091	0.25	0.75	0	
14	W	Exterior	Frm wall, stucco	Room7	13	2 0	10 0	20.0 ft²	0	0.091	0.25	0.75	0	
15	SE	Exterior	Frm wall, stucco	Room7	13	6 0	10 0	60.0 ft²	0	0.091	0.25	0.75	0	
16	SE	Exterior	Frm wall, stucco	Room8	13	1 0	10 0	10.0 ft²	0	0.091	0.25	0.75	0	
17	SE	Exterior	Frm wall, stucco	Room8	13	2 10	10 0	28.3 ft²	0	0.091	0.25	0.75	0	
18	S	Exterior	Frm wall, stucco	Room8	13	8 0	10 0	80.0 ft²	0	0.091	0.25	0.75	0	
19	SW	Exterior	Frm wall, stucco	Room8	13	2 10	10 0	28.3 ft²	0	0.091	0.25	0.75	0	
20	W	Exterior	Frm wall, stucco	Room8	13	1 0	10 0	10.0 ft²	0	0.091	0.25	0.75	0	
21	W	Exterior	Frm wall, stucco	Room9	13	6 0	10 0	60.0 ft²	0	0.091	0.25	0.75	0	
22	N	Exterior	Frm wall, stucco	Room10	13	15 0	10 0	150.0 ft²	0	0.091	0.25	0.75	0	
23	E	Exterior	Frm wall, stucco	Room10	13	14 0	10 0	140.0 ft²	0	0.091	0.25	0.75	0	
24	W	Exterior	Frm wall, stucco	Room10	13	8 0	10 0	80.0 ft²	0	0.091	0.25	0.75	0	
25	N	Exterior	Frm wall, stucco	Room11	13	0 1	10 0	0.8 ft²	0	0.091	0.25	0.75	0	
26	N	Exterior	Frm wall, stucco	Room11	13	2 11	10 0	29.2 ft²	0	0.091	0.25	0.75	0	
27	E	Exterior	Frm wall, stucco	Room11	13	10 0	10 0	100.0 ft²	0	0.091	0.25	0.75	0	
28	E	Exterior	Frm wall, stucco	Room11	13	10 0	10 0	100.0 ft²	0	0.091	0.25	0.75	0	
29	N	Exterior	Frm wall, stucco	Room12	13	28 0	10 0	280.0 ft²	0	0.091	0.25	0.75	0	
30	E	Exterior	Frm wall, stucco	Room12	13	16 0	10 0	160.0 ft²	0	0.091	0.25	0.75	0	
31	S	Exterior	Frm wall, stucco	Room12	13	4 0	10 0	40.0 ft²	0	0.091	0.25	0.75	0	
32	S	Exterior	Frm wall, stucco	Room12	13	14 0	10 0	140.0 ft²	0	0.091	0.25	0.75	0	
33	W	Exterior	Frm wall, stucco	Room12	13	4 0	10 0	40.0 ft²	0	0.091	0.25	0.75	0	
34	N	Exterior	Frm wall, stucco	BATH	13	7 0	10 0	70.0 ft²	0	0.091	0.25	0.75	0	
35	N	Exterior	Frm wall, stucco	BATH	13	12 0	10 0	120.0 ft²	0	0.091	0.25	0.75	0	
36	N	Exterior	Frm wall, stucco	Room35	13	15 7	9 0	140.0 ft²	0	0.091	0.25	0.75	0	
37	W	Exterior	Frm wall, stucco	Room35	13	4 5	9 0	40.0 ft²	0	0.091	0.25	0.75	0	
38	N	Exterior	Frm wall, stucco	Room37	13	3 0	10 0	30.0 ft²	0	0.091	0.25	0.75	0	
39	E	Exterior	Frm wall, 1/2" wo	Room37	13	12 0	10 0	120.0 ft²	0	0.091	0.25	0.75	0	
40	E	Exterior	Frm wall, stucco	Room37	13	3 0	10 0	30.0 ft²	0	0.091	0.25	0.75	0	
41	SE	Exterior	Frm wall, stucco	Room39	13	13 4	9 0	120.0 ft²	0	0.091	0.25	0.75	0	
42	S	Exterior	Frm wall, stucco	Room39	13	7 9	9 0	70.0 ft²	0	0.091	0.25	0.75	0	
43	W	Exterior	Frm wall, stucco	Room40	13	15 7	9 0	140.0 ft²	0	0.091	0.25	0.75	0	
44	W	Exterior	Frm wall, stucco	Room40	13	13 4	9 0	120.0 ft²	0	0.091	0.25	0.75	0	
45	W	Exterior	Frm wall, stucco	Room41	13	4 5	9 0	40.0 ft²	0	0.091	0.25	0.75	0	
46	E	Exterior	Frm wall, stucco	Room13	13	6 0	10 0	60.0 ft²	0	0.091	0.25	0.75	0	
47	S	Exterior	Frm wall, stucco	Room13	13	4 0	10 0	40.0 ft²	0	0.091	0.25	0.75	0	

WINDOWS (Total Exposed Area = 445 sq.ft.)														
✓ #	Omt	Wall ID	Frame	Panels	NFRC	U-Factor	SHGC	Impact	W x H, Area	Overhang Depth	Separation	Interior Shade	Screening	
1	SE	2	Wood	Double (Clear)	No	0.570	0.56	No	1'11" x 5'0", 10 ft²	8 ft 0 in	3 ft 0 in	None	None	
2	S	3	Vinyl	Low-E Double	No	0.470	0.31	No	5'0" x 5'0", 25 ft²	8 ft 0 in	3 ft 0 in	None	None	
3	SW	5	Wood	Double (Clear)	No	0.570	0.56	No	1'11" x 5'0", 10 ft²	8 ft 0 in	3 ft 0 in	None	None	
4	W	6	Vinyl	Low-E Double	No	0.470	0.31	No	3'0" x 5'0", 15 ft²	1 ft 6 in	3 ft 0 in	None	None	
5	N	8	Vinyl	Low-E Double	No	0.470	0.31	No	3'0" x 2'0", 6 ft²	1 ft 6 in	3 ft 0 in	None	None	
6	N	11	Vinyl	Low-E Double	No	0.450	0.36	No	3'0" x 2'0", 6 ft²	1 ft 6 in	3 ft 0 in	None	None	
7	N	11	Vinyl	Low-E Double	No	0.450	0.36	No	3'0" x 2'0", 6 ft²	1 ft 6 in	3 ft 0 in	None	None	
8	W	13	Vinyl	Low-E Double	No	0.470	0.31	No	3'0" x 5'0", 15 ft²	1 ft 6 in	3 ft 0 in	None	None	
9	SE	17	Wood	Double (Clear)	No	0.570	0.56	No	1'9" x 4'0", 7 ft²	8 ft 0 in	2 ft 0 in	None	None	
10	S	18	Wood	Low-E Double	No	0.470	0.31	No	5'0" x 5'0", 25 ft²	8 ft 0 in	3 ft 0 in	None	None	
11	SW	19	Wood	Low-E Double	No	0.470	0.31	No	1'11" x 5'0", 10 ft²	8 ft 0 in	3 ft 0 in	None	None	
12	N	22	Wood	Low-E Double	No	0.470	0.31	No	4'0" x 5'0", 20 ft²	1 ft 6 in	3 ft 0 in	Drapes	None	
13	W	24	Vinyl	Low-E Double	No	0.470	0.31	No	4'0" x 4'0", 16 ft²	13 ft 0 in	0 ft 0 in	Drapes	None	
14	N	29	Vinyl	Low-E Double	No	0.470	0.31	No	5'0" x 5'0", 25 ft²	8 ft 0 in	3 ft 0 in	Drapes	None	
15	N	29	Vinyl	Low-E Double	No	0.470	0.31	No	13'0" x 8'0", 104 ft²	13 ft 0 in	3 ft 0 in	None	None	
16	S	32	Wood	Low-E Double	No	0.420	0.32	No	4'0" x 8'0", 32 ft²	8 ft 0 in	3 ft 0 in	None	None	
17	W	33	Wood	Low-E Double	No	0.420	0.32	No	3'0" x 8'0", 24 ft²	0 ft 0 in	0 ft 0 in	Roller	None	
18	N	36	Vinyl	Double (Clear)	No	0.570	0.56	No	3'0" x 5'0", 15 ft²	1 ft 6 in	3 ft 0 in	None	None	
19	E	39	Vinyl	Low-E Double	No	0.470	0.31	No	9'0" x 5'0", 45 ft²	1 ft 6 in	3 ft 0 in	None	None	
20	S	43	Vinyl	Double (Clear)	No	0.570	0.56	No	6'0" x 5'0", 30 ft²	1 ft 6 in	3 ft 0 in	None	None	

GARAGE					
✓ #	Floor Area	Ceiling Area	Exposed Wall Perimeter	Avg. Wall Height	Exposed Wall Insulation
1					0

INFILTRATION							
#	Scope	Method	SLA	CFM 50	ELA	EqLA	ACH 50
1	Wholehouse	Simplified	0.000453	3731	204.7	384.4	7.00

HEATING SYSTEM																								
✓	#	System Type	Subtype	Efficiency	Capacity	Block	Ducts																	
	1	Split air source heat pump		8.5 HSPF	45.5 kBtu/hr	1	sys#1																	
	2	Split air source heat pump		8.2 HSPF	17.2 kBtu/hr	2	sys#2																	
COOLING SYSTEM																								
✓	#	System Type	Subtype	Efficiency	Capacity	Air Flow	SHR	Block	Ducts															
	1	Split air source heat pump		15 SEER	45.5 kBtu/hr	1225 cfm	0.70	1	sys#1															
	2	Split air source heat pump		15 SEER	18.0 kBtu/hr	525 cfm	0.70	2	sys#2															
HOT WATER SYSTEM																								
✓	#	System Type	Subtype	Location	EF	Cap	Use	SetPnt	Conservation															
	1	Propane instantaneous			0.80 UEF	0 gal	70 gal	120 °F	None															
DUCTS																								
✓	#	Location	Supply R-Value	Area	Return Location	Area	Leakage Type	Air Handler	CFM 25 Out	Percent Leakage	QN	RLF	HVAC # Heat	Cool										
	1	FLOOR 1	6.0	566 ft²	FLOOR 1	265 ft²	Default Leakage	FLOOR 1	(Default)	6.00	0.08		1	1										
	2	FLOOR 1	6.0	130 ft²	FLOOR 2	16 ft²	Default Leakage	FLOOR 2	(Default)	6.00	0.08		2	2										
TEMPERATURES																								
Programmable Thermostat: Y																								
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, 7th Edition																						
Schedule Type		(2020)	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	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	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	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	72										

ENERGY PERFORMANCE LEVEL (EPL) DISPLAY CARD**ESTIMATED ENERGY PERFORMANCE INDEX = 94****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:	<u>FLOOR 1, FLOOR 2</u>
5. Is this a worst case? (yes/no)	5. <u>No</u>	13. Cooling systems	Capacity <u>61.3</u>
6. Conditioned floor area (ft ²)	6. <u>6280.00</u>	a. Split system:	SEER <u>15.00</u>
7. Windows, type and area*		b. Single package:	SEER
a. U-Factor:	7a. <u>DbI(Avg), 0.479</u>	c. Ground/water source:	SEER/COP
b. Solar Heat Gain Coefficient (SHGC):	7b. <u>0.35</u>	d. Room unit/PTAC:	EER
c. Area (ft ²)	7c. <u>445</u>	e. Other:	
8. Skylights		14. Heating systems	Capacity <u>51.5</u>
a. U-Factor:	8a. _____	a. Split system heat pump:	HSPF <u>8.20</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. <u>27.3</u>	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:	
1. Wood/mtl frame (Insulation R-value):	10a1. <u>13</u>	b. Gas fired, natural gas:	
2. Masonry (Insulation R-value):	10a2. _____	c. Gas fired, LPG:	<u>0.80 UEF</u>
b. Adjacent:		d. Solar system with tank:	
1. Wood/mtl frame (Insulation R-value):	10b1. _____	e. Dedicated heat pump with tank:	
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>30.0</u>	16. HVAC credits claimed (Performance Method)	
b. Single assembly (R-value):	11b. _____	a. Ceiling fans:	<u>Yes</u>
c. Knee walls/skylight walls (R-value):	11c. _____	b. Cross ventilation:	
d. Radiant barrier installed	11d. _____	c. Whole house fan:	
		d. Multizone cooling credit:	<u>Yes</u>
		e. Multizone heating credit:	
		f. Programmable thermostat:	<u>Yes</u>

*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: SW HERMITAGE GLENCity/FL Zip: HIGH SPRINGS, FL 32643

Florida Building Code, Energy Conservation, 7th Edition (2020)

Mandatory Requirements for Residential Performance, Prescriptive and ERI Methods

ADDRESS: SW HERMITAGE GLEN
HIGH SPRINGS, FL 32643

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.

SECTION R402 BUILDING THERMAL ENVELOP

- ☐ **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 (Mandatory).** 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. Duct leakage testing is required for Section R405 compliance where credit is taken for leakage, and a duct air leakage Q_n to the outside of less than 0.080 (where Q_n = duct leakage to the outside in cfm per 100 square feet of conditioned floor area tested at 25 Pascals) is indicated in the compliance report for the proposed design.

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 or 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.**
- ☐ **R403.7.1 Equipment sizing (Mandatory).** 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
HRV or ERV	Any	1.2 cfm/watt	Any
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.
- ☐ **R403.13 Dehumidifiers (Mandatory)** If installed, a dehumidifier shall conform to the following requirements:
1. The minimum rated efficiency of the dehumidifier shall be greater than 1.7 liters/ kWh if the total dehumidifier capacity for the house is less than 75 pints/day and greater than 2.38 liters/kWh if the total dehumidifier capacity for the house is greater than or equal to 75 pints/day.
 2. The dehumidifier shall be controlled by a sensor that is installed in a location where it is exposed to mixed house air.
 3. Any dehumidifier unit located in unconditioned space that treats air from conditioned space shall be insulated to a minimum of R-2.
 4. Condensate disposal shall be in accordance with Section M1411.3.1 of the Florida Building Code, Residential.
- ☐ **R403.13.1 Ducted dehumidifiers** Ducted dehumidifiers shall, in addition to conforming to the requirements of Section R403.13, conform to the following requirements:
1. If a ducted dehumidifier is configured with return and supply ducts both connected into the supply side of the cooling system, a backdraft damper shall be installed in the supply air duct between the dehumidifier inlet and outlet duct.
 2. If a ducted dehumidifier is configured with only its supply duct connected into the supply side of the central heating and cooling system, a backdraft damper shall be installed in the dehumidifier supply duct between the dehumidifier and central supply duct.
 3. A ducted dehumidifier shall not be ducted to or from a central ducted cooling system on the return duct side upstream from the central cooling evaporator coil.
 4. Ductwork associated with a dehumidifier located in unconditioned space shall be insulated to a minimum of R-6.

SECTION R404

ELECTRICAL POWER AND LIGHTING SYSTEMS

- ☐ **R404.1 Lighting equipment (Mandatory).** Not less than 90 percent of the lamps in permanently installed luminaires shall have an efficacy of at least 45 lumens-per-watt or shall utilize lamps with an efficacy of not less than 65 lumens-per-watt.

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: LERNER LUXURY PROPERTIES Street: SW HERMITAGE GLEN City, State, Zip: HIGH SPRINGS, FL 32643 Owner: LERNER LUXURY PROPERTIES Design Location: FL, Gainesville Regional AP		Builder Name: LERNER LUXURY PROPERTIES 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.	<input type="checkbox"/>
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.	<input type="checkbox"/>
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.	<input type="checkbox"/>
Windows, skylights and doors	The space between window/door jambs and framing, and skylights and framing shall be sealed.		<input type="checkbox"/>
Rim joists	Rim joists are insulated and include an air barrier.	Rim joists shall be insulated.	<input type="checkbox"/>
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.	<input type="checkbox"/>
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.	<input type="checkbox"/>
Shafts, penetrations	Duct shafts, utility penetrations, and flue shaft openings to exterior or unconditioned space shall be sealed.		<input type="checkbox"/>
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.	<input type="checkbox"/>
Garage separation	Air sealing shall be provided between the garage and conditioned spaces.		<input type="checkbox"/>
Recessed lighting	Recessed light fixtures installed in the building thermal envelope shall be sealed to the finished surface.	Recessed light fixtures installed in the building thermal envelope shall be air tight and IC rated.	<input type="checkbox"/>
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.	<input type="checkbox"/>
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.	<input type="checkbox"/>
Electrical/phone box on exterior walls	The air barrier shall be installed behind electrical or communication boxes or air-sealed boxes shall be installed.		<input type="checkbox"/>
HVAC register boots	HVAC supply and return register boots that penetrate building thermal envelope shall be sealed to the subfloor, wall covering or ceiling penetrated by the boot.		<input type="checkbox"/>
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.		<input type="checkbox"/>

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
2020 Florida Building Code, Energy Conservation, 7th Edition

Jurisdiction:

Permit Number:

Job Information

Builder: LERNER LUXURY Community: Lot: LOT 7
 Address: SW HERMITAGE GLEN Unit:
 City: HIGH SPRINGS State: FL Zip: 32643

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 R405-2020 (Performance) or R406-2020 (ERI), section labeled as Infiltration, sub-section ACH50.

ACH(50) specified on Form R405-2020-Energy Calc (Performance) or R406-2020 (ERI): **7.000**

$$\frac{\text{CFM}(50)}{\text{Building Volume}} \times 60 \div \frac{31980}{\text{ACH}(50)} =$$

☐ **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 2020 7th 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

LERNER LUXURY PROPERTIES
SW HERMITAGE GLEN
HIGH SPRINGS, FL 32643

Title: LERNER LOT 7 REV
FLBase2020

TMY City: FL_Gainesville_Rgn

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)	0.064
Slab Insulation R-Value	0.0
Ceilings (Uo)	0.030
Roof Solar Absorptance	0.75
Roof Infrared Emittance	0.90
Attic Vent Area (ft²)	6.25
Crawlspace Vent Area (ft²)	n/a
Exposed Masonry Floor Area (ft²)	460.80
Carpet & Pad R-Value	1.7
Door Area (ft²)	40.00
Door U-Factor	0.400
North Window Area (ft²)	111.19
South Window Area (ft²)	111.19
East Window Area (ft²)	111.19
West Window Area (ft²)	111.19
Window U-Factor	0.400
Window SHGC (Heating)	0.2169
Window SHGC (Cooling)	0.2169
ACH50	7.00
Internal Gains * (Btu/day)	126948
Water heater gallons per day	140.00
Water Heater set point temperature	120.00
Water heater efficiency rating	0.77
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)