wrightsoft

Project Summary
Entire House

Job: J-12117 - C-2936
Date: Jul 16, 2025
By: Ade Bonner

Project Information

For: Hunter and Ashley Faulkner
Fort White, FL 32038

Notes:

Design Information

Weather: Gainesville, FL, US

Winter Design Conditions

Outside db	33	°F
Inside db	70	°F
Design TD	37	°F
Ventilation Method	ASHRAE 62.2-2019	

Summer Design Conditions

Outside db	92	°F
Inside db	75	°F
Design TD	17	°F
Daily range	M	
Relative humidity	50	%
Moisture difference	43	gr/lb

Heating Summary

Structure	21515	Btuh
Ducts (R-6.0)	4119	Btuh
Central vent (102 cfm)	4099	Btuh
Outside air		
Humidification	0	Btuh
Piping	0	Btuh
Equipment load	29733	Btuh

Sensible Cooling Equipment Load Sizing

Structure	19136	Btuh
Ducts (R-6.0)	2630	Btuh
Central vent (102 cfm)	1944	Btuh
Outside air		
Blower	0	Btuh
Use manufacturer's data	n	
Rate/swing multiplier	0.97	
Equipment sensible load	23093	Btuh

Infiltration

Method	Simplified
Construction quality	Average
Fireplaces	0

	Heating	Cooling
Area (ft²)	2400	2400
Volume (ft³)	21600	21600
Air changes/hour	0.32	0.16
Equiv. AVF (cfm)	115	58

Latent Cooling Equipment Load Sizing

Structure	2495	Btuh
Ducts	1318	Btuh
Central vent (102 cfm)	3002	Btuh
Outside air		
Equipment latent load	6815	Btuh
Equipment Total Load (Sen+Lat)	29908	Btuh
Req. total capacity at 0.80 SHR	2.4	ton

Heating Equipment Summary

Make	ECOTEMP
Trade	
Model	W5H5S36*K*AAA*
AHRI ref	214101862

Efficiency	7.5 HSPF2	
Heating input		
Heating output	35600	Btuh @ 47°F
Temperature rise	28	°F
Actual air flow	1167	cfm
Air flow factor	0.046	cfm/Btuh
Static pressure	0.53	in H2O
Space thermostat		

Capacity balance point = 0 °F

Backup:
Input = 9 kW, Output = 30361 Btuh, 100 AFUE

Cooling Equipment Summary

Make	ECOTEMP
Trade	
Cond	W5H5S36*K*AAA*
Coil	WCHL365*B*
AHRI ref	214101862

Efficiency	12.0 EER2,14.5 SEER2	
Sensible cooling	28000	Btuh
Latent cooling	7000	Btuh
Total cooling	35000	Btuh
Actual air flow	1167	cfm
Air flow factor	0.054	cfm/Btuh
Static pressure	0.53	in H2O
Load sensible heat ratio	0.78	

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

Manual S Compliance Report
Entire House

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Cooling Equipment

Design Conditions

Outdoor design DB:	92.4°F	Sensible gain:	23710	Btuh	Entering coil DB:	77.2°F
Outdoor design WB:	75.8°F	Latent gain:	6815	Btuh	Entering coil WB:	64.4°F
Indoor design DB:	75.0°F	Total gain:	30525	Btuh		
Indoor RH:	50%	Estimated airflow:	1167	cfm		

Manufacturer's Performance Data at Actual Design Conditions

Equipment type: Split ASHP
Manufacturer: ECOTEMP Model: W5H5S36*K*AAA*+WCHL365*B*

Actual airflow:	1167	cfm		
Sensible capacity:	28000	Btuh	118% of load	
Latent capacity:	7000	Btuh	103% of load	
Total capacity:	35000	Btuh	115% of load	SHR: 80%

Heating Equipment

Design Conditions

Outdoor design DB:	33.3°F	Heat loss:	29733	Btuh	Entering coil DB:	65.8°F
Indoor design DB:	70.0°F					

Manufacturer's Performance Data at Actual Design Conditions

Equipment type: Split ASHP
Manufacturer: ECOTEMP Model: W5H5S36*K*AAA*+WCHL365*B*

Actual airflow:	1167	cfm			
Output capacity:	35600	Btuh	120% of load	Capacity balance:	0 °F
Supplemental heat required:	0	Btuh		Economic balance:	0 °F

Backup equipment type: Elec strip
Manufacturer: Model:

Actual airflow:	1167	cfm			
Output capacity:	8.9	kW	102% of load	Temp. rise:	0 °F

Meets all requirements of ACCA Manual S.

Duct System Summary
Entire House

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For: Hunter and Ashley Faulkner
Fort White, FL 32038

	Heating	Cooling
External static pressure	0.53 in H2O	0.53 in H2O
Pressure losses	0 in H2O	0 in H2O
Available static pressure	0.53 in H2O	0.53 in H2O
Supply / return available pressure	0.391 / 0.139 in H2O	0.391 / 0.139 in H2O
Lowest friction rate	0.232 in/100ft	0.232 in/100ft
Actual air flow	1167 cfm	1167 cfm
Total effective length (TEL)	229 ft	

Supply Branch Detail Table

Name		Design (Btuh)	Htg (cfm)	Clg (cfm)	Design FR	Diam (in)	H x W (in)	Duct Matl	Actual Ln (ft)	Ftg.Eqv Ln (ft)	Trunk
1/2 Bath	c	128	2	7	0.232	4.0	0x 0	VIFx	28.6	140.0	st4
Bath 2	h	1006	46	24	0.232	5.0	0x 0	VIFx	28.6	140.0	st1
Bed 2	h	3349	152	114	0.232	7.0	0x 0	VIFx	28.6	140.0	st1
Bed 3	c	1634	75	88	0.232	6.0	0x 0	VIFx	28.6	140.0	st2
Dining	c	1551	70	83	0.232	6.0	0x 0	VIFx	28.6	140.0	st2
Great Room	c	2047	83	110	0.232	6.0	0x 0	VIFx	28.6	140.0	st1
Great Room-A	c	2047	83	110	0.232	6.0	0x 0	VIFx	28.6	140.0	st1
Kitchen	c	1923	35	103	0.232	6.0	0x 0	VIFx	28.6	140.0	st2
Kitchen-A	c	1923	35	103	0.232	6.0	0x 0	VIFx	28.6	140.0	st2
Laundry	h	2509	114	79	0.232	6.0	0x 0	VIFx	28.6	140.0	st4
Mud Room	h	1281	58	16	0.232	5.0	0x 0	VIFx	28.6	140.0	st4
Office	c	1467	54	79	0.232	5.0	0x 0	VIFx	28.6	140.0	st3
P Bedroom	h	1938	88	86	0.232	6.0	0x 0	VIFx	28.6	140.0	st3
P Bedroom-A	h	1938	88	86	0.232	6.0	0x 0	VIFx	28.6	140.0	st3
P WC	h	28	1	1	0.232	4.0	0x 0	VIFx	28.6	140.0	st3
P WIC	c	276	9	15	0.232	4.0	0x 0	VIFx	28.6	140.0	st4
Pantry	h	732	33	9	0.232	4.0	0x 0	VIFx	28.6	140.0	st2
Primary Bath	h	1934	88	43	0.232	6.0	0x 0	VIFx	28.6	140.0	st4
WIC	h	1112	51	13	0.232	5.0	0x 0	VIFx	28.6	140.0	st2

Supply Trunk Detail Table

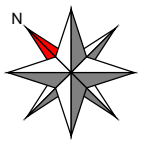
Name	Trunk Type	Htg (cfm)	Clg (cfm)	Design FR	Veloc (fpm)	Diam (in)	H x W (in)	Duct Material	Trunk
st1	Peak AVF	365	357	0.232	464	12.0	0 x 0	VinlFlx	
st3	Peak AVF	232	252	0.232	569	9.0	0 x 0	VinlFlx	
st4	Peak AVF	272	160	0.232	498	10.0	0 x 0	VinlFlx	
st2	Peak AVF	298	399	0.232	507	12.0	0 x 0	VinlFlx	

Return Branch Detail Table

Name	Grille Size (in)	Htg (cfm)	Clg (cfm)	TEL (ft)	Design FR	Veloc (fpm)	Diam (in)	H x W (in)	Stud/Joist Opening (in)	Duct Matl	Trunk
rb4	0x 0	275	231	74.2	0.232	504	10.0	0x 0		VlFx	
rb1	0x 0	892	936	60.0	0.232	530	18.0	0x 0		VlFx	rst2

Return Trunk Detail Table

Name	Trunk Type	Htg (cfm)	Clg (cfm)	Design FR	Veloc (fpm)	Diam (in)	H x W (in)	Duct Material	Trunk
rst2	Peak AVF	892	936	0.232	530	18.0	0 x 0	VinlFlx	



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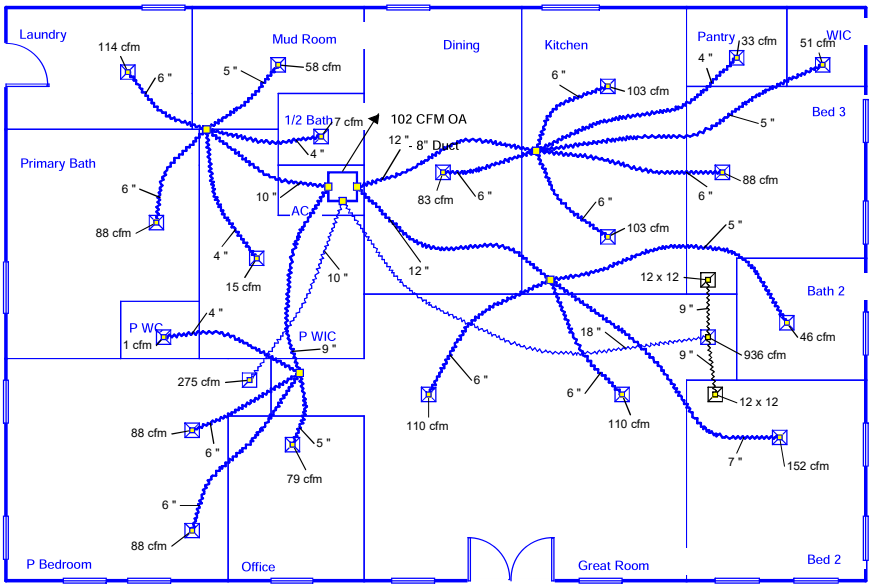

Job #: J-12117 - C-2936
Performed by Ade Bonner for:
Hunter and Ashley Faulkner

Fort White, FL 32038

Scale: 1 : 161

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