



Project Summary

Entire House

DL Williams Heating & Cooling L.L.C.

Job: 1
 Date: Mar 11, 2022
 By: DL Williams Heating & C...
 Plan: 2265

PO Box 2156, Lake City, FL 32056 Phone: 386-754-1987 Email: williamscoolingllc@gmail.com

Project Information

For: Forest Country lot 13, Adams Homes
 491 SW Pinehurst Dr, Lake City, FL 32055

Notes:

Design Information

Weather: Gainesville Regional, FL, US

Winter Design Conditions

Outside db	33 °F
Inside db	68 °F
Design TD	35 °F

Summer Design Conditions

Outside db	92 °F
Inside db	75 °F
Design TD	17 °F
Daily range	M
Relative humidity	50 %
Moisture difference	44 gr/lb

Heating Summary

Structure	22587 Btuh
Ducts	6207 Btuh
Central vent (0 cfm)	0 Btuh
(none)	
Humidification	0 Btuh
Piping	0 Btuh
Equipment load	28794 Btuh

Sensible Cooling Equipment Load Sizing

Structure	16010 Btuh
Ducts	7609 Btuh
Central vent (0 cfm)	0 Btuh
(none)	
Blower	0 Btuh
Use manufacturer's data	n
Rate/swing multiplier	0.97
Equipment sensible load	22958 Btuh

Infiltration

Method	Simplified
Construction quality	Average
Fireplaces	0

Latent Cooling Equipment Load Sizing

Structure	3200 Btuh
Ducts	1506 Btuh
Central vent (0 cfm)	0 Btuh
(none)	
Equipment latent load	4706 Btuh

	Heating	Cooling
Area (ft ²)	2293	2293
Volume (ft ³)	20237	20237
Air changes/hour	0.32	0.16
Equiv. AVF (cfm)	108	54

Equipment Total Load (Sen+Lat)	27664 Btuh
Req. total capacity at 0.70 SHR	2.7 ton

Heating Equipment Summary

Make	
Trade	
Model	
AHRI ref	
Efficiency	80 AFUE
Heating input	0 Btuh
Heating output	0 Btuh
Temperature rise	0 °F
Actual air flow	980 cfm
Air flow factor	0.034 cfm/Btuh
Static pressure	0 in H2O
Space thermostat	

Cooling Equipment Summary

Make	
Trade	
Cond	
Coil	
AHRI ref	
Efficiency	0 SEER
Sensible cooling	0 Btuh
Latent cooling	0 Btuh
Total cooling	0 Btuh
Actual air flow	980 cfm
Air flow factor	0.041 cfm/Btuh
Static pressure	0 in H2O
Load sensible heat ratio	0.83

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



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Static Pressure and Friction Rate

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Available Static Pressure

	Heating (in H2O)	Cooling (in H2O)
External static pressure	0	0
Pressure losses		
Coil	0	0
Heat exchanger	0	0
Supply diffusers	0	0
Return grilles	0	0
Filter	0	0
Humidifier	0	0
Balancing damper	0	0
Other device	0	0
Available static pressure	0	0

Total Effective Length

	Supply (ft)	Return (ft)
Measured length of run-out	10	0
Measured length of trunk	24	0
Equivalent length of fittings	135	0
Total length	169	0
Total effective length		169

Friction Rate

	Heating (in/100ft)	Cooling (in/100ft)
Supply Ducts	0 < 0.06	0 < 0.06
Return Ducts	0 < 0.06	0 < 0.06

Fitting Equivalent Length Details

Supply	4AD=60, 11A=20, 11A=20, 1A=35: TotalEL=135
Return	TotalEL=0



Duct System Summary

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	Heating	Cooling
External static pressure	0 in H ₂ O	0 in H ₂ O
Pressure losses	0 in H ₂ O	0 in H ₂ O
Available static pressure	0 in H ₂ O	0 in H ₂ O
Supply / return available pressure	0.000 / 0.000 in H ₂ O	0.000 / 0.000 in H ₂ O
Lowest friction rate	0 in/100ft	0 in/100ft
Actual air flow	980 cfm	980 cfm
Total effective length (TEL)		169 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
bath2	c 146	3	6	0	0	0x0	VIFx	9.4	95.0	st2
bath3	h 1332	67	55	0	5.0	0x0	VIFx	24.9	115.0	
bed2	h 1498	65	62	0	6.0	0x0	VIFx	13.2	95.0	
bed3	c 1695	64	70	0	0	0x0	VIFx	23.5	115.0	st2
bed4	h 1183	108	49	0	6.0	0x0	VIFx	31.0	115.0	st2
breakfast	c 1736	62	72	0	0	0x0	VIFx	18.8	115.0	st2
dining	c 1960	80	81	0	0	0x0	VIFx	8.5	95.0	st1
family	c 4745	117	197	0	0	0x0	VIFx	19.5	115.0	
kitchen	c 2404	8	100	0	0	0x0	VIFx	7.3	95.0	
lav	c 38	1	2	0	0	0x0	VIFx	30.8	135.0	st3
living	h 2565	156	106	0	7.0	0x0	VIFx	31.0	115.0	st1
mbath	h 955	51	40	0	0	0x0	VIFx	28.0	135.0	st3
mbed	h 2111	165	88	0	0	0x0	VIFx	34.1	135.0	st3
utility	c 931	5	39	0	0	0x0	VIFx	2.0	95.0	st3
wic1	h 239	26	10	0	0	0x0	VIFx	32.0	135.0	
wic2	c 83	2	3	0	0	0x0	VIFx	25.8	135.0	st3

Supply Trunk Detail Table

Name	Trunk Type	Htg (cfm)	Clg (cfm)	Design FR	Veloc (fpm)	Diam (in)	H x W (in)	Duct Material	Trunk
st3	Peak AVF	245	142	0	0	0	0 x 0	VinIFlx	st1
st2	Peak AVF	301	247	0	0	0	0 x 0	VinIFlx	
st1	Peak AVF	518	445	0	484	14.0	0 x 0	VinIFlx	

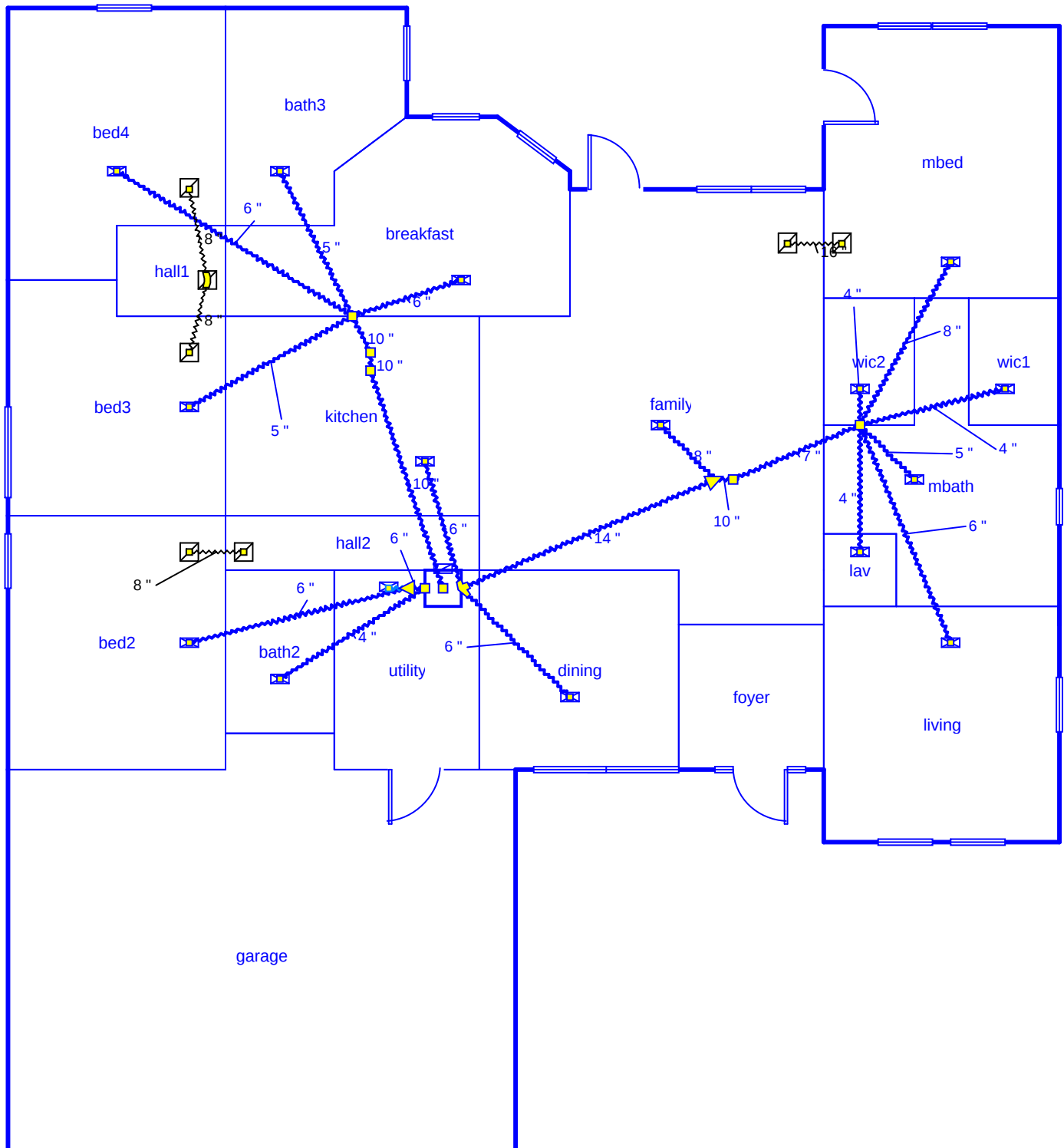
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Return Branch Detail Table

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
rb1	0x 0	980	980	0	0	0	0	0x 0		VIFx	



Main Level



Job #: 1
Performed by DL Williams Heating & Co...
Forest Country Lot 13 plan 2265

FL

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