



Load Short Form
Entire House
FLA Homes In.

Job: 01-65-15-00490-007
Date: Oct 06, 2022
By: Donna Brackeen
Plan: Columbia Model

13919 NW 145th Avenue, Alachua, FL 32615

Project Information

For: Walter & Karlie Johnson
TBD SW Ichetucknee Rd, Ft White, FL 32038

Design Information

	Htg	Clg	Infiltration	
Outside db (°F)	33	92	Method	Simplified
Inside db (°F)	70	75	Construction quality	Average
Design TD (°F)	37	17	Fireplaces	0
Daily range	-	M		
Inside humidity (%)	50	50		
Moisture difference (gr/lb)	33	44		

HEATING EQUIPMENT

Make Goodman Mfg.
Trade GOODMAN
Model GSZ140361K
AHRI ref 201645069

Efficiency 8.2 HSPF
Heating input
Heating output 32800 Btuh @ 47°F
Temperature rise 0 °F
Actual air flow 0 cfm
Air flow factor 0 cfm/Btuh
Static pressure 0.50 in H2O
Space thermostat
Capacity balance point = 31 °F

COOLING EQUIPMENT

Make Goodman Mfg.
Trade GOODMAN
Cond GSZ140361K
Coil ARUF37D14A
AHRI ref 201645069

Efficiency 11.5 EER, 14 SEER
Sensible cooling 24080 Btuh
Latent cooling 10320 Btuh
Total cooling 34400 Btuh
Actual air flow 1147 cfm
Air flow factor 0.041 cfm/Btuh
Static pressure 0.50 in H2O
Load sensible heat ratio 0.86

ROOM NAME	Area (ft²)	Htg load (Btuh)	Clg load (Btuh)	Htg AVF (cfm)	Clg AVF (cfm)
(Rest of House)	1822	29478	28887	0	1181
(Unconditioned)	658	0	0	0	0
Entire House	2480	29478	28157	0	1147
Other equip loads		0	0		
Equip. @ 1.00 RSM			28157		
Latent cooling			4429		
TOTALS	2480	29478	32585	0	1147

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



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Outside db (°F)	33	92	Method	Simplified
Inside db (°F)	70	75	Construction quality	Average
Design TD (°F)	37	17	Fireplaces	0
Daily range	-	M		
Inside humidity (%)	50	50		
Moisture difference (gr/lb)	33	44		

HEATING EQUIPMENT

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

COOLING EQUIPMENT

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

ROOM NAME	Area (ft²)	Htg load (Btuh)	Clg load (Btuh)	Htg AVF (cfm)	Clg AVF (cfm)
bd 3	158	3689	2950	0	121
wic 3	40	769	347	0	14
bath 2	48	678	788	0	32
bd 2	163	3861	2853	0	117
wic 2	39	748	330	0	14
hall	97	0	0	0	0
common area	650	9985	13174	0	539
coffee	29	0	0	0	0
m bath	104	2379	1321	0	54
m bd	270	3400	4706	0	192
m wic	89	1952	709	0	29
laundry	135	2015	1708	0	70

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(Rest of House)	1822	29478	28887	0	1181
Other equip loads		0	0		
Equip. @ 1.00 RSM			28887		
Latent cooling			4429		
TOTALS	1822	29478	33315	0	1181

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

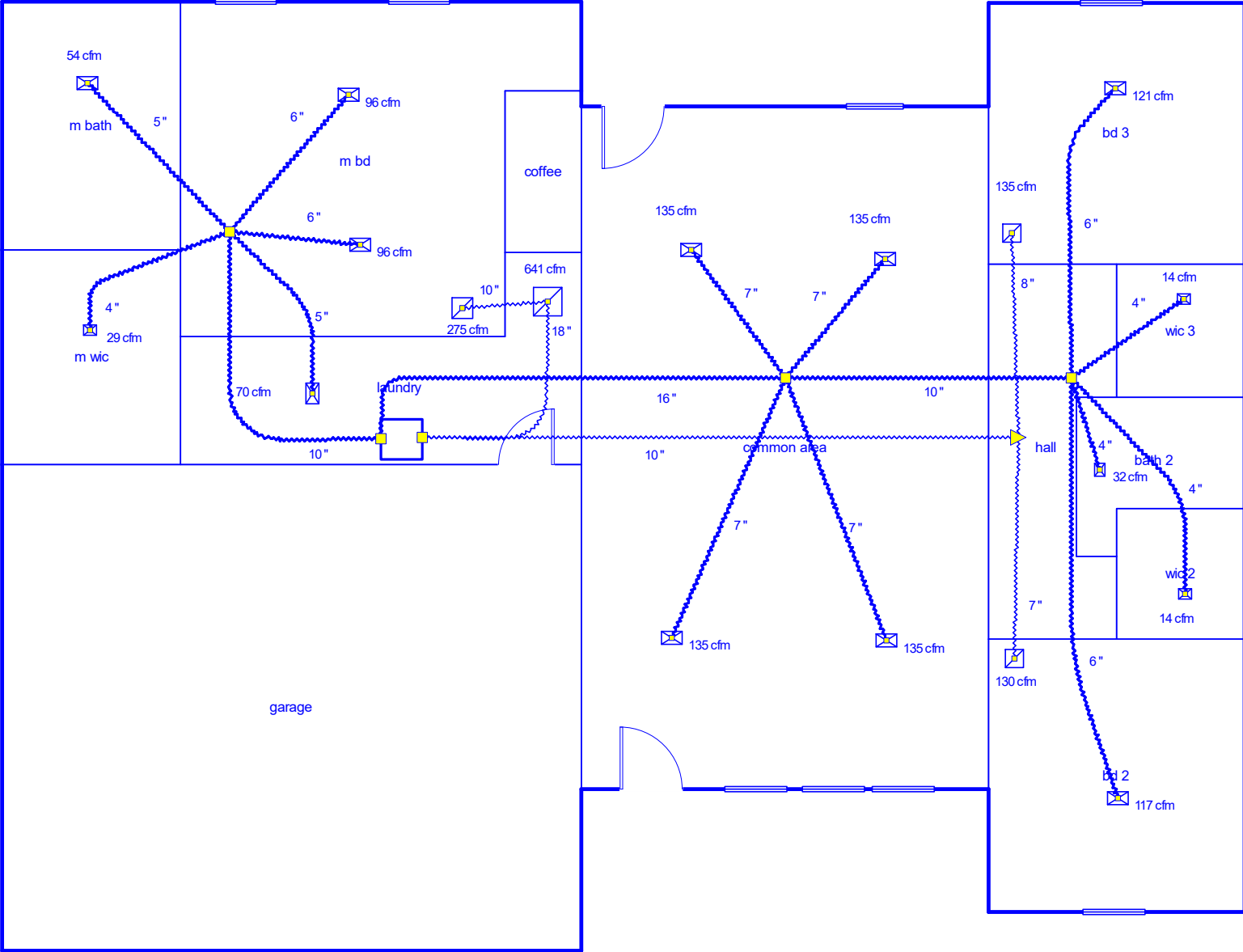


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Manual S Compliance Report

Entire House

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Cooling Equipment

Design Conditions

Outdoor design DB:	92.2°F	Sensible gain:	28157	Btuh	Entering coil DB:	77.5°F
Outdoor design WB:	75.8°F	Latent gain:	4429	Btuh	Entering coil WB:	63.7°F
Indoor design DB:	75.0°F	Total gain:	32585	Btuh		
Indoor RH:	50%	Estimated airflow:	1147	cfm		

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split ASHP		
Manufacturer:	Goodman Mfg.	Model:	GSZ140361K+ARUF37D14A
Actual airflow:	1147	cfm	
Sensible capacity:	29931	Btuh	106% of load
Latent capacity:	4535	Btuh	102% of load
Total capacity:	34465	Btuh	106% of load SHR: 87%

Heating Equipment

Design Conditions

Outdoor design DB:	33.2°F	Heat loss:	29478	Btuh	Entering coil DB:	70.0°F
Indoor design DB:	70.0°F					

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split ASHP		
Manufacturer:	Goodman Mfg.	Model:	GSZ140361K+ARUF37D14A
Actual airflow:	0	cfm	
Output capacity:	32800	Btuh	111% of load
Supplemental heat required:	0	Btuh	
Capacity balance:	31	°F	
Economic balance:	-99	°F	

Meets all requirements of ACCA Manual S.



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Duct System Summary

Entire House

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	Heating	Cooling
External static pressure	0.50 in H2O	0.50 in H2O
Pressure losses	0.18 in H2O	0.18 in H2O
Available static pressure	0.32 in H2O	0.32 in H2O
Supply / return available pressure	0.225 / 0.095 in H2O	0.225 / 0.095 in H2O
Lowest friction rate	0.106 in/100ft	0.106 in/100ft
Actual air flow	0 cfm	1147 cfm
Total effective length (TEL)	301 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
bath 2	c 788	0	32	0.144	4.0	0x0	VIFx	40.9	115.0	st3
bd 2	c 2853	0	117	0.106	6.0	0x0	VIFx	56.9	155.0	st3
bd 3	c 2950	0	121	0.131	6.0	0x0	VIFx	51.1	120.0	st3
common area	c 3294	0	135	0.172	7.0	0x0	VIFx	36.0	95.0	st1
common area-A	c 3293	0	135	0.180	7.0	0x0	VIFx	29.9	95.0	st1
common area-B	c 3293	0	135	0.172	7.0	0x0	VIFx	36.2	95.0	st1
common area-C	c 3293	0	135	0.180	7.0	0x0	VIFx	30.1	95.0	st1
laundry	c 1708	0	70	0.177	5.0	0x0	VIFx	26.9	100.0	st2
m bath	c 1321	0	54	0.184	5.0	0x0	VIFx	27.3	95.0	st2
m bd	c 2353	0	96	0.186	6.0	0x0	VIFx	26.1	95.0	st2
m bd-A	c 2353	0	96	0.190	6.0	0x0	VIFx	23.7	95.0	st2
m wic	c 709	0	29	0.177	4.0	0x0	VIFx	26.8	100.0	st2
wic 2	c 330	0	14	0.133	4.0	0x0	VIFx	48.9	120.0	st3
wic 3	c 347	0	14	0.142	4.0	0x0	VIFx	42.9	115.0	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	0	297	0.106	545	10.0	0 x 0	VinIFlx	st1
st1	Peak AVF	0	836	0.106	599	16.0	0 x 0	VinIFlx	
st2	Peak AVF	0	345	0.177	633	10.0	0 x 0	VinIFlx	



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
rb2	0x 0	0	130	89.5	0.106	487	7.0	0x 0		VIFx	rt1
rb3	0x 0	0	135	88.7	0.107	386	8.0	0x 0		VIFx	rt1
rb4	0x 0	0	275	51.8	0.184	505	10.0	0x 0		VIFx	rt2
rb1	0x 0	0	641	57.6	0.165	599	14.0	0x 0		VIFx	rt2

Return Trunk Detail Table

Name	Trunk Type	Htg (cfm)	Clg (cfm)	Design FR	Veloc (fpm)	Diam (in)	H x W (in)	Duct Material	Trunk
rt1	Peak AVF	0	265	0.106	486	10.0	0 x 0	VinIFlx	
rt2	Peak AVF	0	916	0.165	519	18.0	0 x 0	VinIFlx	