



Load Short Form Entire House Nottingham Air Conditioning, Inc.

Job: Weston Oaks Lot 53
Date: 11/4/2021
By: Steve

6512 NW 37 Drive, Gainesville,, FL 32653 Phone: 352-374-7786 License: CAC057027

Project Information

For: Schafer Construction
Gaineville, FL

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 (%)	30	50		
Moisture difference (gr/lb)	11	45		

HEATING EQUIPMENT

Make Trane
Trade TRANE
Model 4TWR5042G1
AHRI ref 7553535

Efficiency 9 HSPF
Heating input
Heating output 38000 Btuh @ 47°F
Temperature rise 26 °F
Actual air flow 1333 cfm
Air flow factor 0.042 cfm/Btuh
Static pressure 0.30 in H2O
Space thermostat
Capacity balance point = 29 °F

Backup:
Input = 9 kW, Output = 29873 Btuh, 100 AFUE

COOLING EQUIPMENT

Make Trane
Trade TRANE
Cond 4TWR5042G1
Coil TEM6A0C36H31++TDR
AHRI ref 7553535

Efficiency 12.5 EER, 15 SEER
Sensible cooling 28000 Btuh
Latent cooling 12000 Btuh
Total cooling 40000 Btuh
Actual air flow 1333 cfm
Air flow factor 0.049 cfm/Btuh
Static pressure 0.30 in H2O
Load sensible heat ratio 0.86

ROOM NAME	Area (ft²)	Htg load (Btuh)	Clg load (Btuh)	Htg AVF (cfm)	Clg AVF (cfm)
laundry	80	1556	933	65	45
wc	80	1570	679	66	33
master bath	80	1735	1619	72	79
master bedroom	323	4588	4244	192	206
kitchen	320	777	1177	32	57
dining	225	2828	2742	118	133
office	150	2646	1565	111	76
family room	288	3434	5124	143	249
foyer	120	1653	1081	69	53
bed 2	156	3599	2119	150	103
bath2	72	862	457	36	22
bed 3	144	2194	3096	92	151
bath 3	72	862	457	36	22
bed 4	155	3596	2114	150	103

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



Entire House	d	2265	31900	27407	1333	1333
Other equip loads			0	0		
Equip. @ 0.97 RSM				26585		
Latent cooling				4581		
TOTALS		2265	31900	31166	1333	1333

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...Wrightsoft HVAC\schafer weston oaks lot 53.rup Calc = MJ8 Front Door faces: N



Duct System Summary

Entire House

Nottingham Air Conditioning, Inc.

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	Heating	Cooling
External static pressure	0.30 in H ₂ O	0.30 in H ₂ O
Pressure losses	0.05 in H ₂ O	0.05 in H ₂ O
Available static pressure	0.25 in H ₂ O	0.25 in H ₂ O
Supply / return available pressure	0.161 / 0.089 in H ₂ O	0.161 / 0.089 in H ₂ O
Lowest friction rate	0.104 in/100ft	0.104 in/100ft
Actual air flow	1333 cfm	1333 cfm
Total effective length (TEL)	240 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
laundry	h 1556	65	45	0.104	6.0	0x0	VIFx	50.0	105.0	st1
wc	h 1570	66	33	0.104	6.0	0x0	VIFx	50.0	105.0	st1
master bath	c 1619	72	79	0.104	7.0	0x0	VIFx	50.0	105.0	st1
master bedroom-A	c 2122	96	103	0.104	7.0	0x0	VIFx	50.0	105.0	st2
master bedroom	c 2122	96	103	0.104	7.0	0x0	VIFx	50.0	105.0	st2
kitchen	c 1177	32	57	0.104	6.0	0x0	VIFx	50.0	105.0	st1
dining	c 2742	118	133	0.104	8.0	0x0	VIFx	50.0	105.0	st2
office	h 2646	111	76	0.104	7.0	0x0	VIFx	50.0	105.0	st1
family room-A	c 2562	72	125	0.104	8.0	0x0	VIFx	50.0	105.0	st3
family room	c 2562	72	125	0.104	8.0	0x0	VIFx	50.0	105.0	st3
foyer	h 1653	69	53	0.104	6.0	0x0	VIFx	50.0	105.0	st3
bed 2	h 3599	150	103	0.104	8.0	0x0	VIFx	50.0	105.0	st4
bath2	h 862	36	22	0.104	5.0	0x0	VIFx	50.0	105.0	st4
bed 3	c 3096	92	151	0.104	8.0	0x0	VIFx	50.0	105.0	st4
bath3	h 862	36	22	0.104	5.0	0x0	VIFx	50.0	105.0	st4
bed 4	h 3596	150	103	0.104	8.0	0x0	VIFx	50.0	105.0	st4

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	1333	1333	0.104	846	17.0	0 x 0	RectFbg	st1 st2 st3
st2	Peak AVF	987	1042	0.104	849	15.0	0 x 0	RectFbg	
st3	Peak AVF	677	703	0.104	762	13.0	0 x 0	RectFbg	
st4	Peak AVF	464	401	0.104	704	11.0	0 x 0	RectFbg	



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	186	125	85.0	0.104	422	9.0	0x 0		VIFx	rt1
rb3	0x 0	92	151	85.0	0.104	431	8.0	0x 0		VIFx	rt1
rb2	0x 0	186	125	85.0	0.104	422	9.0	0x 0		VIFx	rt1
rb1	0x 0	428	538	85.0	0.104	583	13.0	0x 0		VIFx	rt1
rb5	0x 0	111	76	85.0	0.104	414	7.0	0x 0		VIFx	rt1
rb6	0x 0	330	318	85.0	0.104	500	11.0	0x 0		VIFx	rt1

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	1333	1333	0.104	677	19.0	0 x 0	RectFbg	

