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Load Short Form
Entire House
High Springs Electric

Job: 59-22-016
Date: May 03, 2022
By: Donna Brackeen
Plan: Union MFH

Project Information

For: Daniel Flatt, America's Home Place
236 SW Nebraska Ter., Ft. White, FL 32038

Design Information

	Htg	Clg
Outside db (°F)	33	94
Inside db (°F)	70	75
Design TD (°F)	37	19
Daily range	-	M
Inside humidity (%)	50	50
Moisture difference (gr/lb)	33	42

Infiltration

Method	Simplified
Construction quality	Average
Fireplaces	0

HEATING EQUIPMENT

Make	Goodman Mfg.
Trade	GOODMAN
Model	GSZ160301B
AHRI ref	201667396

Efficiency	9.5 HSPF	
Heating input		
Heating output	29400	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 = 30 °F		

COOLING EQUIPMENT

Make	Goodman Mfg.
Trade	GOODMAN
Cond	GSZ160301B
Coil	ASPT37C14A
AHRI ref	201667396

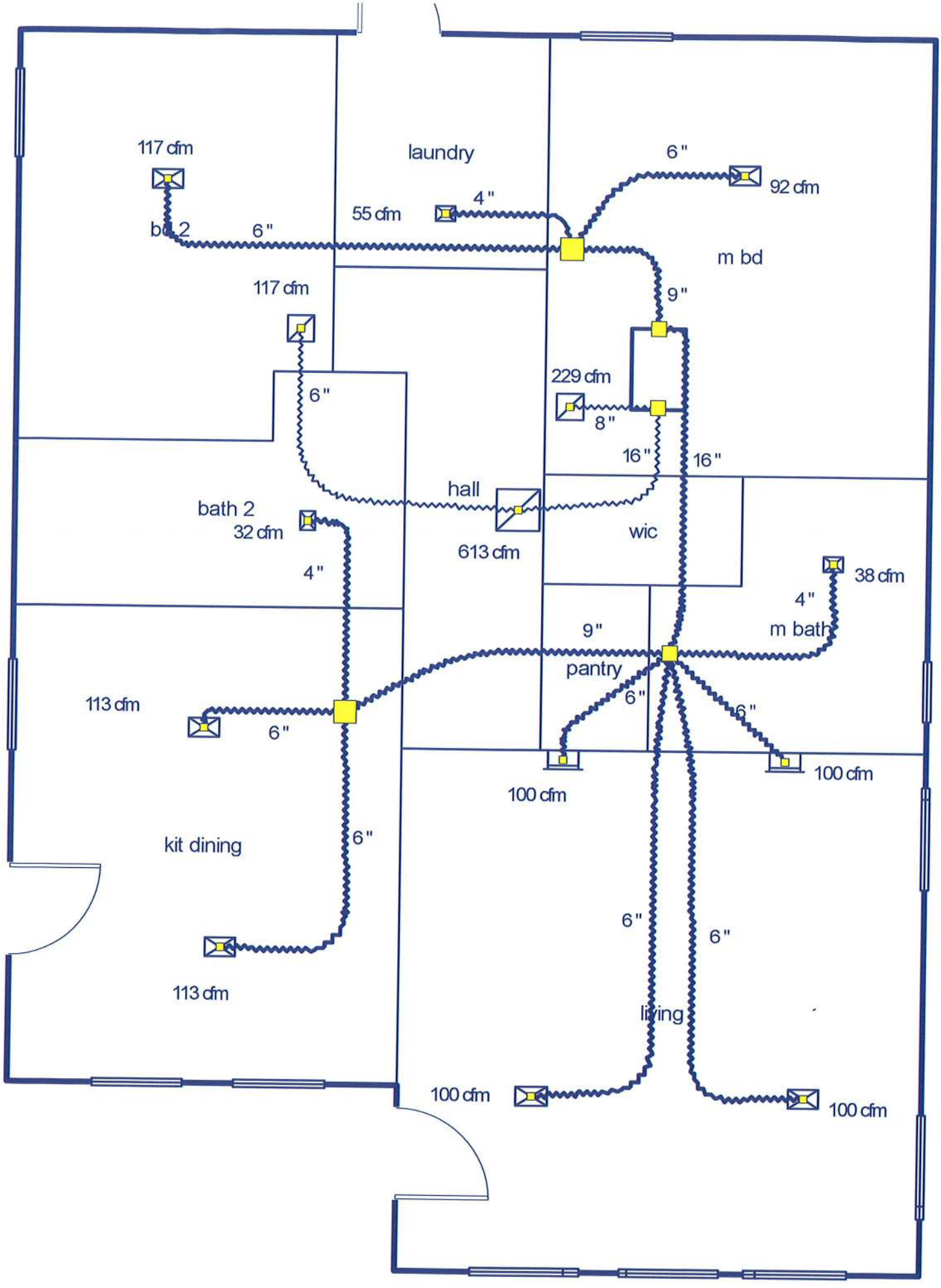
Efficiency	13.0 EER, 16 SEER	
Sensible cooling	20160	Btuh
Latent cooling	8640	Btuh
Total cooling	28800	Btuh
Actual air flow	960	cfm
Air flow factor	0.041	cfm/Btuh
Static pressure	0.50	in H2O
Load sensible heat ratio	0.88	

ROOM NAME	Area (ft²)	Htg load (Btuh)	Clg load (Btuh)	Htg AVF (cfm)	Clg AVF (cfm)
laundry	54	1164	1346	0	55
m bd	185	3454	2256	0	92
bd 2	138	3017	2885	0	117
hall	79	0	0	0	0
bath 2	81	729	796	0	32
wic	24	0	0	0	0
pantry	19	0	0	0	0
m bath	72	1216	928	0	38
kit dining	205	4274	5567	0	227
living	295	9116	9799	0	399

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

Entire House	1152	22971	23576	0	960
Other equip loads		0	0		
Equip. @ 1.00 RSM			23576		
Latent cooling			3172		
TOTALS	1152	22971	26748	0	960

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


117 cfm
laundry
6"
92 cfm
4"
55 cfm
6"
m bd
117 cfm
9"
229 cfm
6"
8"
16"
16"
hall
bath 2
32 cfm
613 cfm
wic
4"
38 cfm
4"
m bath
9"
pantry
113 cfm
6"
6"
6"
100 cfm
100 cfm
kit dining
6"
6"
6"
113 cfm
living
100 cfm
100 cfm

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Manual S Compliance Report
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Cooling Equipment

Design Conditions

Outdoor design DB:	93.8°F	Sensible gain:	23576	Btuh	Entering coil DB:	76.7°F
Outdoor design WB:	75.9°F	Latent gain:	3172	Btuh	Entering coil WB:	63.3°F
Indoor design DB:	75.0°F	Total gain:	26748	Btuh		
Indoor RH:	50%	Estimated airflow:	960	cfm		

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split ASHP				
Manufacturer:	Goodman Mfg.		Model:	GSZ160301B+ASPT37C14A	
Actual airflow:	960	cfm			
Sensible capacity:	24242	Btuh	103% of load		
Latent capacity:	3822	Btuh	121% of load		
Total capacity:	28064	Btuh	105% of load	SHR:	86%

Heating Equipment

Design Conditions

Outdoor design DB:	33.2°F	Heat loss:	22971	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:	GSZ160301B+ASPT37C14A		
Actual airflow:	0	cfm				
Output capacity:	29400	Btuh	128% of load		Capacity balance:	30 °F
Supplemental heat required:	0	Btuh			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	0.236 / 0.084 in H2O	0.236 / 0.084 in H2O
Lowest friction rate	0.139 in/100ft	0.139 in/100ft
Actual air flow	0 cfm	960 cfm
Total effective length (TEL)	230 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 796	0	32	0.143	4.0	0x0	VlFx	30.3	135.0	st3
bd 2	c 2885	0	117	0.195	6.0	0x0	VlFx	20.8	100.0	st2
kit dining	c 2784	0	113	0.139	6.0	0x0	VlFx	34.8	135.0	st3
kit dining-A	c 2784	0	113	0.145	6.0	0x0	VlFx	27.9	135.0	st3
laundry	c 1346	0	55	0.214	4.0	0x0	VlFx	10.4	100.0	st2
living-A	c 2450	0	100	0.163	6.0	0x0	VlFx	30.2	115.0	st1
living-B	c 2450	0	100	0.163	6.0	0x0	VlFx	30.0	115.0	st1
living-C	c 2450	0	100	0.186	6.0	0x0	VlFx	17.0	110.0	st1
living-D	c 2450	0	100	0.186	6.0	0x0	VlFx	16.9	110.0	st1
m bath	c 928	0	38	0.181	4.0	0x0	VlFx	20.1	110.0	st1
m bd	c 2256	0	92	0.210	6.0	0x0	VlFx	12.4	100.0	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
st3	Peak AVF	0	259	0.139	587	9.0	0 x 0	VinlFlx	st1
st1	Peak AVF	0	696	0.139	498	16.0	0 x 0	VinlFlx	
st2	Peak AVF	0	264	0.195	598	9.0	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
rb2	0x0	0	117	60.3	0.139	598	6.0	0x 0		VlFx	rt1
rb3	0x0	0	229	32.9	0.255	657	8.0	0x 0		VlFx	
rb1	0x0	0	613	52.6	0.159	574	14.0	0x 0		VlFx	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	0	731	0.139	523	16.0	0 x 0	VinlFlx	