

Entire House
Spann's Heating and Air INC.

Job: David Infinger- Model 1
 Date: Feb. 27, 2020
 By:

16051 NW 30th Ave, Trenton, FL 32693 Phone: 3524636440 Email: spann21@bellsouth.net

Project Information

For: David Infinger- Model 1

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	
Daily range	-	M		
Inside humidity (%)	30	50		
Moisture difference (gr/lb)	10	47		

0

HEATING EQUIPMENT

Make Comfortmaker
 Trade
 Model N4h448
 AHRI ref
 Efficiency 8.2 HSPF
 Heating input
 Heating output 0 Btuh @ 47°F
 Temperature rise 0 °F
 Actual air flow 1023 cfm
 Air flow factor 0.035 cfm/Btuh
 Static pressure 0 in H2O
 Space thermostat
 Capacity balance point = -32 °F

COOLING EQUIPMENT

Make Comfortmaker
 Trade
 Cond N4h448
 Coil FXM448
 AHRI ref
 Efficiency 14 SEER
 Sensible cooling 0 Btuh
 Latent cooling 0 Btuh
 Total cooling 0 Btuh
 Actual air flow 1023 cfm
 Air flow factor 0.041 cfm/Btuh
 Static pressure 0 in H2O
 Load sensible heat ratio 0.88

Backup: n/a n/a

Input = 8 kW. Output = 28979 Btuh, 100 AFUE

ROOM NAME	Area (ft²)	Htg load (Btuh)	Clg load (Btuh)	Htg AVF (cfm)	Clg AVF (cfm)
Bedroom 2	203	3337	1404	118	58
Toilet	33	660	665	23	28
Bath 2	28	40	60	1	2
Bedroom 3	160	1949	2447	69	101
Bedroom 4	173	4536	2032	160	84
Kitchen	189	1240	640	44	27
Dining	270	3017	1843	107	76
Great Room	336	3891	2588	137	107
Laundry	72	2430	1171	86	49
Master Bedroom	181	3974	9099	140	377
His Closet	28	0	0	0	0
Her Closet	25	0	0	0	0
Master Bath	125	2788	2325	98	96
Master Toilet	23	1117	407	39	17

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



Entire House	d	1843	28979	24680	1023	1023
Other equip loads			0	0		
Equip. @ 0.97 RSM				23915		
Latent cooling				3235		
TOTALS		1843	28979	27150	1023	1023

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Notes:

Design Information

Weather: Gainesville Rgnl, FL, US

Winter Design Conditions

Outside db	33 °F
Inside db	70 °F
Design TD	37 °F

Summer Design Conditions

Outside db	92 °F
Inside db	75 °F
Design TD	17 °F
Daily range	M
Relative humidity	50 %
Moisture difference	47 gr/lb

Heating Summary

Structure	23295 Btuh
Ducts	5684 Btuh
Central vent (0 cfm)	0 Btuh
(none)	
Humidification	0 Btuh
Piping	0 Btuh
Equipment load	28979 Btuh

Sensible Cooling Equipment Load Sizing

Structure	17487 Btuh
Ducts	7193 Btuh
Central vent (0 cfm)	0 Btuh
(none)	
Blower	0 Btuh
Use manufacturer's data	n
Rate/swing multiplier	0.97
Equipment sensible load	23915 Btuh

Infiltration

Method	Simplified
Construction quality	Average
Fireplaces	0

Latent Cooling Equipment Load Sizing

Structure	1746 Btuh
Ducts	1490 Btuh
Central vent (0 cfm)	0 Btuh
(none)	
Equipment latent load	3235 Btuh

	Heating	Cooling
Area (ft ²)	1843	1843
Volume (ft ³)	16515	16515
Air changes/hour	0.38	0.20
Equiv. AVF (cfm)	105	55

Equipment Total Load (Sen+Lat)	27150 Btuh
Req. total capacity at 0.50 SHR	4.0 ton

Heating Equipment Summary

Make	Comfortmaker
Trade	
Model	N4h448
AHRI ref	
Efficiency	8.2 HSPF
Heating input	0 Btuh @ 47°F
Heating output	0 °F
Temperature rise	0 °F
Actual air flow	1023 cfm
Air flow factor	0.035 cfm/Btuh
Static pressure	0 in H2O
Space thermostat	
Capacity balance point =	-32 °F
Backup:	n/a n/a
Input = 8 kW, Output =	28979 Btuh, 100 AFUE

Cooling Equipment Summary

Make	Comfortmaker
Trade	
Cond	N4h448
Coil	FXM448
AHRI ref	
Efficiency	14 SEER
Sensible cooling	0 Btuh
Latent cooling	0 Btuh
Total cooling	0 Btuh
Actual air flow	1023 cfm
Air flow factor	0.041 cfm/Btuh
Static pressure	0 in H2O
Load sensible heat ratio	0.88

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1	Room name						Toilet				Bath 2			
	Exposed wall						8.0 ft				0 ft			
	Room height						5.5 ft				heat/cool			
4	Room dimensions						8.0 ft				5.0 ft			
5	Room area						33.0 ft²				27.5 ft²			
	Ty	Construction number	U-value (Btuh/ft²·°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area (ft²) or perimeter (ft)		Load (Btuh)	
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool
6	W	12E-0sw	0.068	n	2.49	1.38	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.570	n	20.86	21.29	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.570	n	20.86	21.29	0	0	0	0	0	0	0	0
	D	11J0	0.600	n	21.96	17.61	0	0	0	0	0	0	0	0
11	W	12E-0sw	0.068	e	2.49	1.38	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.570	e	20.86	63.38	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.570	e	20.86	63.38	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.570	e	20.86	63.38	0	0	0	0	0	0	0	0
	D	11J0	0.600	e	21.96	17.61	0	0	0	0	0	0	0	0
	W	12E-0sw	0.068	s	2.49	1.38	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.570	s	20.86	21.29	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.570	s	20.86	21.73	0	0	0	0	0	0	0	0
	D	11J0	0.600	s	21.96	17.61	0	0	0	0	0	0	0	0
	W	12E-0sw	0.068	w	2.49	1.38	44	40	100	55	0	0	0	0
	G	1D-c2ov	0.570	w	20.86	63.38	4	0	83	254	0	0	0	0
	G	1D-c2ov	0.570	w	20.86	63.38	0	0	0	0	0	0	0	0
	C	16B-30md	0.032	-	1.17	1.69	33	33	39	56	28	28	32	47
	F	22A-tpl	0.989	-	36.20	0.00	33	6	199	0	28	0	0	0
6	c) AED excursion									80				-4
	Envelope loss/gain								421	444			32	42
12	a) Infiltration								110	27			0	0
	b) Room ventilation								0	0			0	0
13	Internal gains: Occupants @ Appliances/other 230						0			0	0			0
	Subtotal (lines 6 to 13)								531	471			32	42
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								0	0			0	0
14	Subtotal								531	471			32	42
15	Duct loads						24%	41%	130	194	24%	41%	8	17
	Total room load								660	665			40	60
	Air required (cfm)								23	28			1	2

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



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Right-Suite® Universal 2019 19.0.15 RSU08917

...nts\Wrightsoft HVAC\David Infinger- Model 1.rup Calc = MJ8 Front Door faces: S

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1	Room name					Bedroom 3					Bedroom 4				
2	Exposed wall					14.5 ft					38.0 ft				
3	Room height					8.0 ft					8.0 ft				
4	Room dimensions					11.0 x 14.5 ft					15.0 x 11.5 ft				
5	Room area					159.5 ft²					172.5 ft²				
	Ty	Construction number	U-value (Btuh/ft²·°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area (ft²) or perimeter (ft)		Load (Btuh)		
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool	
6	W	12E-0sw	0.068	n	2.49	1.38	0	0	0	0	0	0	0	0	
11	G	1D-c2ov	0.570	n	20.86	21.29	0	0	0	0	0	0	0	0	
	G	1D-c2ov	0.570	n	20.86	21.29	0	0	0	0	0	0	0	0	
	D	11J0	0.600	n	21.96	17.61	0	0	0	0	0	0	0	0	
	W	12E-0sw	0.068	e	2.49	1.38	0	0	0	0	92	92	229	127	
	G	1D-c2ov	0.570	e	20.86	63.38	0	0	0	0	0	0	0	0	
	G	1D-c2ov	0.570	e	20.86	63.38	0	0	0	0	0	0	0	0	
	G	1D-c2ov	0.570	e	20.86	63.38	0	0	0	0	0	0	0	0	
	D	11J0	0.600	e	21.96	17.61	0	0	0	0	0	0	0	0	
	W	12E-0sw	0.068	s	2.49	1.38	0	0	0	0	120	90	224	124	
	G	1D-c2ov	0.570	s	20.86	21.29	0	0	0	0	0	0	0	0	
	G	1D-c2ov	0.570	s	20.86	21.73	0	0	0	0	30	26	626	652	
14	D	11J0	0.600	s	21.96	17.61	0	0	0	0	0	0	0	0	
	W	12E-0sw	0.068	w	2.49	1.38	116	101	251	139	92	92	229	127	
	G	1D-c2ov	0.570	w	20.86	63.38	0	0	0	0	0	0	0	0	
15	G	1D-c2ov	0.570	w	20.86	63.38	15	0	313	951	0	0	0	0	
	C	16B-30md	0.032	-	1.17	1.69	160	160	187	270	173	173	202	292	
	F	22A-tpl	0.989	-	36.20	0.00	160	15	525	0	173	38	1376	0	
6	c) AED excursion									304				-66	
	Envelope loss/gain								1276	1663			2885	1255	
12	a) Infiltration								291	71			761	185	
	b) Room ventilation								0	0			0	0	
13	Internal gains: Occupants @ 230 Appliances/other						0			0	0	0		0	0
	Subtotal (lines 6 to 13)								1566	1734			3647	1440	
14	Less external load								0	0			0	0	
	Less transfer								0	0			0	0	
	Redistribution								0	0			0	0	
	Subtotal								1566	1734			3647	1440	
15	Duct loads						24%	41%	382	713	24%	41%	890	592	
	Total room load								1949	2447			4536	2032	
	Air required (cfm)								69	101			160	84	

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1	Room name					Kitchen 9.0 ft				Dining 15.0 ft				
2	Exposed wall					10.0 ft 9.0 x 21.0 ft				10.0 ft 1.0 x 269.5 ft				
3	Room height					heat/cool				heat/cool				
4	Room dimensions					189.0 ft ²				269.5 ft ²				
5	Room area													
	Ty	Construction number	U-value (Btuh/ft ² ·°F)	Or	HTM (Btuh/ft ²)		Area (ft ²) or perimeter (ft)		Load (Btuh)		Area (ft ²) or perimeter (ft)		Load (Btuh)	
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool
6	W	12E-0sw	0.068	n	2.49	1.38	90	90	224	124	150	108	269	149
.	G	1D-c2ov	0.570	n	20.86	21.29	0	0	0	0	0	0	0	0
.	G	1D-c2ov	0.570	n	20.86	21.29	0	0	0	0	0	0	0	0
.	D	11J0	0.600	n	21.96	17.61	0	0	0	0	42	42	922	740
11	W	12E-0sw	0.068	e	2.49	1.38	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.570	e	20.86	63.38	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.570	e	20.86	63.38	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.570	e	20.86	63.38	0	0	0	0	0	0	0	0
	D	11J0	0.600	e	21.96	17.61	0	0	0	0	0	0	0	0
	W	12E-0sw	0.068	s	2.49	1.38	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.570	s	20.86	21.29	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.570	s	20.86	21.73	0	0	0	0	0	0	0	0
	D	11J0	0.600	s	21.96	17.61	0	0	0	0	0	0	0	0
	W	12E-0sw	0.068	w	2.49	1.38	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.570	w	20.86	63.38	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.570	w	20.86	63.38	0	0	0	0	0	0	0	0
	C	16B-30md	0.032	-	1.17	1.69	189	189	221	320	270	270	316	456
	F	22A-tpl	0.989	-	36.20	0.00	189	9	326	0	270	15	543	0
6	c) AED excursion									-45				-130
	Envelope loss/gain								771	399			2050	1214
12	a) Infiltration								225	55			376	91
	b) Room ventilation								0	0			0	0
13	Internal gains:		Occupants @	230			0			0	0			0
			Appliances/other							0				0
	Subtotal (lines 6 to 13)								997	453			2425	1306
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								0	0			0	0
14	Subtotal								997	453			2425	1306
15	Duct loads						24%	41%	243	186	24%	41%	592	537
	Total room load								1240	640			3017	1843
	Air required (cfm)								44	27			107	76

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1	Room name					Great Room					Laundry				
2	Exposed wall					20.5 ft					17.0 ft				
3	Room height					10.0 ft					8.0 ft				
4	Room dimensions					1.0 x 336.3 ft					9.0 x 8.0 ft				
5	Room area					336.3 ft²					72.0 ft²				
	Ty	Construction number	U-value (Btuh/ft²·°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area (ft²) or perimeter (ft)		Load (Btuh)		
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool	
6	W	12E-0sw	0.068	n	2.49	1.38	0	0	0	0	72	63	157	87	
11	G	1D-c2ov	0.570	n	20.86	21.29	0	0	0	0	9	0	188	192	
	G	1D-c2ov	0.570	n	20.86	21.29	0	0	0	0	0	0	0	0	
	D	11J0	0.600	n	21.96	17.61	0	0	0	0	0	0	0	0	
	W	12E-0sw	0.068	e	2.49	1.38	0	0	0	0	64	43	107	59	
	G	1D-c2ov	0.570	e	20.86	63.38	0	0	0	0	0	0	0	0	
	G	1D-c2ov	0.570	e	20.86	63.38	0	0	0	0	0	0	0	0	
	G	1D-c2ov	0.570	e	20.86	63.38	0	0	0	0	0	0	0	0	
	D	11J0	0.600	e	21.96	17.61	0	0	0	0	0	0	0	0	
	W	12E-0sw	0.068	s	2.49	1.38	205	154	383	212	21	21	461	370	
	G	1D-c2ov	0.570	s	20.86	21.29	0	0	0	0	0	0	0	0	
	G	1D-c2ov	0.570	s	20.86	21.73	30	26	626	652	0	0	0	0	
	D	11J0	0.600	s	21.96	17.61	21	21	461	370	0	0	0	0	
	W	12E-0sw	0.068	w	2.49	1.38	0	0	0	0	0	0	0	0	
	G	1D-c2ov	0.570	w	20.86	63.38	0	0	0	0	0	0	0	0	
	G	1D-c2ov	0.570	w	20.86	63.38	0	0	0	0	0	0	0	0	
	C	16B-30md	0.032	-	1.17	1.69	336	336	394	569	72	72	84	122	
	F	22A-tpl	0.989	-	36.20	0.00	336	21	742	0	72	17	615	0	
6	c) AED excursion									-104				-82	
	Envelope loss/gain								2606	1698			1612	747	
12	a) Infiltration								513	125			341	83	
	b) Room ventilation								0	0			0	0	
13	Internal gains: Occupants @ 230 Appliances/other						0			0	0			0	0
	Subtotal (lines 6 to 13)									3120	1823			1953	830
	Less external load								0	0			0	0	
	Less transfer								0	0			0	0	
	Redistribution								8	10			0	0	
14	Subtotal								3128	1834			1953	830	
15	Duct loads						24%	41%	763	754	24%	41%	477	341	
	Total room load								3891	2588			2430	1171	
	Air required (cfm)								137	107			86	49	

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1	Room name				Master Bedroom				His Closet					
2	Exposed wall				14.5 ft				5.5 ft					
3	Room height				9.0 ft				8.0 ft					
4	Room dimensions				12.5 x 14.5 ft				5.0 x 5.5 ft					
5	Room area				181.3 ft²				27.5 ft²					
	Ty	Construction number	U-value (Btuh/ft²·°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area (ft²) or perimeter (ft)		Load (Btuh)	
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool
6	W	12E-0sw	0.068	n	2.49	1.38	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.570	n	20.86	21.29	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.570	n	20.86	21.29	0	0	0	0	0	0	0	0
	D	11J0	0.600	n	21.96	17.61	0	0	0	0	0	0	0	0
11	W	12E-0sw	0.068	e	2.49	1.38	131	41	101	56	44	44	110	61
	G	1D-c2ov	0.570	e	20.86	63.38	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.570	e	20.86	63.38	15	0	313	951	0	0	0	0
	G	1D-c2ov	0.570	e	20.86	63.38	75	0	1565	4753	0	0	0	0
	D	11J0	0.600	e	21.96	17.61	0	0	0	0	0	0	0	0
	W	12E-0sw	0.068	s	2.49	1.38	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.570	s	20.86	21.29	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.570	s	20.86	21.73	0	0	0	0	0	0	0	0
	D	11J0	0.600	s	21.96	17.61	0	0	0	0	0	0	0	0
	W	12E-0sw	0.068	w	2.49	1.38	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.570	w	20.86	63.38	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.570	w	20.86	63.38	0	0	0	0	0	0	0	0
	C	16B-30md	0.032	-	1.17	1.69	181	181	212	307	28	28	32	47
	F	22A-tpi	0.989	-	36.20	0.00	181	15	525	0	28	6	199	0
6	c) AED excursion									254				-12
	Envelope loss/gain								2716	6320			341	95
12	a) Infiltration								327	79			110	27
	b) Room ventilation								0	0			0	0
13	Internal gains:		Occupants @	230			0			0	0		0	0
			Appliances/other							0				0
	Subtotal (lines 6 to 13)								3042	6399			451	122
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								152	48			-451	-122
14	Subtotal								3194	6447			0	0
15	Duct loads						24%	41%	779	2652	24%	41%	0	0
	Total room load								3974	9099			0	0
	Air required (cfm)								140	377			0	0

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

Right-J® Worksheet

Entire House

Spann's Heating and Air INC.

Job: David Infinger- Model 1
 Date: Feb. 27, 2020
 By:

16051 NW 30th Ave, Trenton, FL 32693 Phone: 3524636440 Email: spann21@bellsouth.net

1	Room name					Her Closet				Master Bath					
2	Exposed wall					0 ft				18.0 ft					
3	Room height					8.0 ft				8.0 ft					
4	Room dimensions					4.5 x 5.5 ft				1.0 x 125.0 ft					
5	Room area					24.8 ft²				125.0 ft²					
	Ty	Construction number	U-value (Btuh/ft²·°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area (ft²) or perimeter (ft)		Load (Btuh)		
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool	
6	W	12E-0sw	0.068	n	2.49	1.38	0	0	0	0	0	0	0	0	
	G	1D-c2ov	0.570	n	20.86	21.29	0	0	0	0	0	0	0	0	
	G	1D-c2ov	0.570	n	20.86	21.29	0	0	0	0	0	0	0	0	
	D	11J0	0.600	n	21.96	17.61	0	0	0	0	0	0	0	0	
11	W	12E-0sw	0.068	e	2.49	1.38	0	0	0	0	84	68	169	94	
	G	1D-c2ov	0.570	e	20.86	63.38	0	0	0	0	16	0	334	1014	
	G	1D-c2ov	0.570	e	20.86	63.38	0	0	0	0	0	0	0	0	
	G	1D-c2ov	0.570	e	20.86	63.38	0	0	0	0	0	0	0	0	
	D	11J0	0.600	e	21.96	17.61	0	0	0	0	0	0	0	0	
	W	12E-0sw	0.068	s	2.49	1.38	0	0	0	0	48	42	105	58	
	G	1D-c2ov	0.570	s	20.86	21.29	0	0	0	0	6	6	125	128	
	G	1D-c2ov	0.570	s	20.86	21.73	0	0	0	0	0	0	0	0	
	D	11J0	0.600	s	21.96	17.61	0	0	0	0	0	0	0	0	
	W	12E-0sw	0.068	w	2.49	1.38	0	0	0	0	12	12	30	17	
	G	1D-c2ov	0.570	w	20.86	63.38	0	0	0	0	0	0	0	0	
	G	1D-c2ov	0.570	w	20.86	63.38	0	0	0	0	0	0	0	0	
	C	16B-30md	0.032	-	1.17	1.69	25	25	29	42	125	125	146	211	
	F	22A-tpi	0.989	-	36.20	0.00	25	0	0	0	125	18	652	0	
6	c) AED excursion									-4				-63	
	Envelope loss/gain								29	38			1561	1459	
12	a) Infiltration								0	0			361	88	
	b) Room ventilation								0	0			0	0	
13	Internal gains: Occupants @ 230 Appliances/other						0			0	0			0	0
	Subtotal (lines 6 to 13)								29	38			1921	1546	
	Less external load								0	0			0	0	
	Less transfer								0	0			0	0	
	Redistribution								-29	-38			320	102	
14	Subtotal								0	0			2241	1648	
15	Duct loads						24%	41%	0	0	24%	41%	547	678	
	Total room load								0	0			2788	2325	
	Air required (cfm)								0	0			98	96	

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

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1	Room name					Master Toilet								
2	Exposed wall					10.0 ft								
3	Room height					8.0 ft				heat/cool				
4	Room dimensions					6.5 x 3.5 ft								
5	Room area					22.8 ft²								
	Ty	Construction number	U-value (Btuh/ft²·°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area or perimeter		Load	
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool
6	W	12E-0sw	0.068	n	2.49	1.38	0	0	0	0				
	G	1D-c2ov	0.570	n	20.86	21.29	0	0	0	0				
	G	1D-c2ov	0.570	n	20.86	21.29	0	0	0	0				
	D	11J0	0.600	n	21.96	17.61	0	0	0	0				
11	W	12E-0sw	0.068	e	2.49	1.38	0	0	0	0				
	G	1D-c2ov	0.570	e	20.86	63.38	0	0	0	0				
	G	1D-c2ov	0.570	e	20.86	63.38	0	0	0	0				
	G	1D-c2ov	0.570	e	20.86	63.38	0	0	0	0				
	D	11J0	0.600	e	21.96	17.61	0	0	0	0				
	W	12E-0sw	0.068	s	2.49	1.38	52	46	114	63				
	G	1D-c2ov	0.570	s	20.86	21.29	6	6	125	128				
	G	1D-c2ov	0.570	s	20.86	21.73	0	0	0	0				
	D	11J0	0.600	s	21.96	17.61	0	0	0	0				
	W	12E-0sw	0.068	w	2.49	1.38	28	28	70	39				
	G	1D-c2ov	0.570	w	20.86	63.38	0	0	0	0				
	G	1D-c2ov	0.570	w	20.86	63.38	0	0	0	0				
	C	16B-30md	0.032	-	1.17	1.69	23	23	27	38				
	F	22A-tpl	0.989	-	36.20	0.00	23	10	362	0				
6	c) AED excursion									-29				
	Envelope loss/gain								698	239				
12	a) Infiltration								200	49				
	b) Room ventilation								0	0				
13	Internal gains: Occupants @ 230 Appliances/other						0			0				
	Subtotal (lines 6 to 13)								898	288				
	Less external load								0	0				
	Less transfer								0	0				
	Redistribution								0	0				
14	Subtotal								898	288				
15	Duct loads						24%	41%	219	119				
	Total room load								1117	407				
	Air required (cfm)								39	17				

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



Residential Plans Examiner Review Form for HVAC System Design (Loads, Equipment, Ducts)

Form
RPER 1
15 Mar 09

Header Information

Contractor: Spann's Heating and Air INC.
Jack Spann
Mechanical license:
Building plan #:
Home address (Street or Lot#, Block, Subdivision): , Entire House

REQUIRED ATTACHMENTS
Manual J1 Form (and supporting worksheets): Yes ☐ No ☐
or MJ1AE Form* (and supporting worksheets): Yes ☐ No ☐
OEM performance data (heating, cooling, blower): Yes ☐ No ☐
Manual D Friction Rate Worksheet: Yes ☐ No ☐
Duct distribution sketch: Yes ☐ No ☐

HVAC LOAD CALCULATION (IRC M1401.3)

Design Conditions

Winter Design Conditions

Outdoor temperature: 33 °F
Indoor temperature: 70 °F
Total heat loss: 28979 Btuh

Summer Design Conditions

Outdoor temperature: 92 °F
Indoor temperature: 75 °F
Grains difference: 47 gr/lb @50% RH
Sensible heat gain: 25469 Btuh
Latent heat gain: 3339 Btuh
Total heat gain: 28808 Btuh

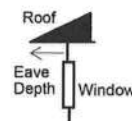
Building Construction Information

Building

Orientation: Front Door faces South
North, East, West, South, Northeast, Northwest, Southeast, Southwest
Number of bedrooms: 0
Conditioned floor area: 1843 ft²
Number of occupants: 0

Windows

Eave overhang depth: 1.0 ft
Internal shade: none
Blinds, drapes, etc.
Number of skylights: 0



HVAC EQUIPMENT SELECTION (IRC M1401.3)

Heating Equipment Data

Equipment type: Split ASHP
Furnace, Heat pump, Boiler, etc.
Model: Comfortmaker
N4h448+FXM448
Heating output capacity: 0 Btuh
Heat pumps - capacity at winter design outdoor conditions
Aux. heating output capacity: 28979 Btuh

Cooling Equipment Data

Equipment type: Split ASHP
Air Conditioner, Heat pump, etc.
Model: Comfortmaker
N4h448+FXM448
Total cooling capacity: 0 Btuh
Sensible cooling capacity: 0 Btuh
Latent cooling capacity: 0 Btuh

Blower Data

Heating cfm: 1023
Cooling cfm: 1023
Static pressure: 0 in H2O
Fan's rated external static pressure for design airflow

HVAC DUCT DISTRIBUTION SYSTEM DESIGN (IRC M1601.1)

Design airflow: 1023 cfm
Equipment design ESP: 0 in H2O
Total device pressure losses: 0 in H2O
Available static pressure (ASP): 0 in H2O
Longest supply duct: 391 ft
Longest return duct: 0 ft
Total effective length (TEL): 391 ft
Friction rate: 0 in/100ft
Friction Rate = ASP ÷ (TEL x 100)
Duct Materials Used
Trunk duct: Fiberglass board
Branch duct: Sheet metal

I declare the load calculation, equipment, equipment selection and duct design were rigorously performed based on the building plan listed above. I understand the claims made on these forms will be subject to review and verification.

Contractor's printed name: _____

Contractor's signature: _____ Date: _____

Reserved for County, Town Municipality or Authority having jurisdiction use.

*Home qualifies for MJ1AE Form based on Abridged Edition Checklist



Duct System Summary

Entire House

Spann's Heating and Air INC.

Job: David Infinger- Model 1 
 Date: Feb. 27, 2020
 By:

16051 NW 30th Ave, Trenton, FL 32693 Phone: 3524636440 Email: spann21@bellsouth.net

Project Information

For: David Infinger- Model 1

	Heating	Cooling
External static pressure	0 in H2O	0 in H2O
Pressure losses	0 in H2O	0 in H2O
Available static pressure	0 in H2O	0 in H2O
Supply / return available pressure	0.000 / 0.000 in H2O	0.000 / 0.000 in H2O
Lowest friction rate	0 in/100ft	0 in/100ft
Actual air flow	1023 cfm	1023 cfm
Total effective length (TEL)		391 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 60	1	2	0	5.0	0x0	ShMt	46.5	335.0	st1
Bedroom 2	h 1404	118	58	0	7.0	0x0	ShMt	51.8	325.0	st1
Bedroom 3	c 2447	69	101	0	7.0	0x0	ShMt	51.0	325.0	st1
Bedroom 4	h 2032	160	84	0	7.0	0x0	ShMt	59.1	325.0	st1
Dining	h 1843	107	76	0	7.0	0x0	ShMt	27.5	260.0	st1
Great Room	h 1294	69	54	0	7.0	0x0	ShMt	35.5	355.0	st1
Great Room-A	h 1294	69	54	0	7.0	0x0	ShMt	26.0	260.0	st1
Kitchen	h 640	44	27	0	7.0	0x0	ShMt	37.5	345.0	st1
Laundry	h 1171	86	49	0	6.0	0x0	ShMt	6.5	180.0	st1
Master Bath	h 2325	98	96	0	6.0	0x0	ShMt	28.3	160.0	st1
Master Bedroom-B	c 9099	140	377	0	8.0	0x0	ShMt	14.5	170.0	st1
Master Toilet	h 407	39	17	0	5.0	0x0	ShMt	33.8	160.0	st1
Toilet	c 665	23	28	0	5.0	0x0	ShMt	49.7	325.0	st1

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	1023	1023	0	0	0	8 x 0	RectFbg	

Bold/italic values have been manually overridden



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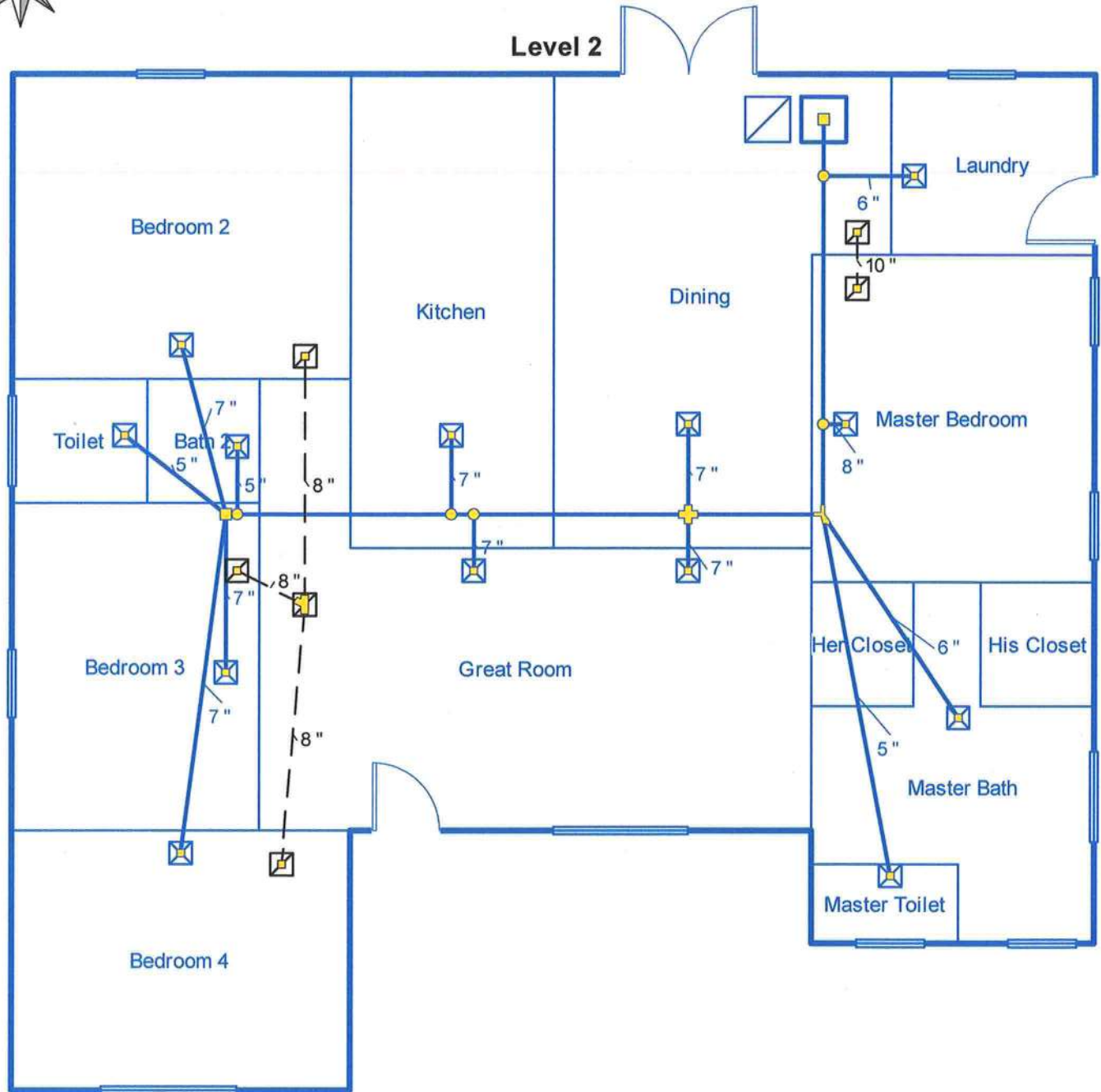
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Return Branch Detail Table

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	0x0	1023	1023	0	0	0	0	0x 0		ShMt	





A/C Register locations to be determined. Registers may be moved due to trusses, dead wood, lights, fire alarms, and etc..

Job #: David Infinger- Model 1
Performed for:
 David Infinger- Model 1

Spann's Heating and Air INC.

16051 NW 30th Ave
 Trenton, FL 32693
 Phone: 3524636440
 spann21@bellsouth.net

Scale: 1 : 84

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