



Building Analysis
Entire House
DL Williams Heating and Cooling LLC

Job: 1
Date: Aug 15, 2025
By:

PO Box 2156, Lake City, FL 32056 Phone: 1-386-754-1987 Email office@dlwilliamsheatingandcooling.com License: CAC1816913

Project Information

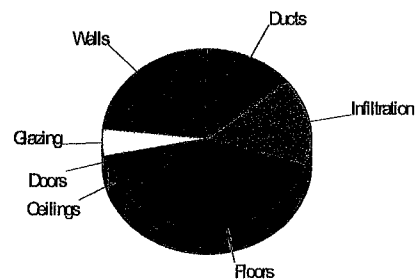
For: David Styer addition, Mike Todd Construction
14495 SW Tustenuggee Ave, Ft White, FL 32038

Design Conditions

Location:			Indoor:		Heating	Cooling
Gainesville Regional AP, FL, US			Indoor temperature (°F)		68	75
Elevation: 164 ft			Design TD (°F)		35	17
Latitude: 30°N			Relative humidity (%)		50	50
Outdoor:	Heating	Cooling	Moisture difference (gr/lb)		29.0	45.4
Drybulb (°F)	33	92	Infiltration:			
Dailyrange (°F)	-	20 (M)	Method		Simplified	
Wet bulb (°F)	-	76	Construction quality		Average	
Wind speed (mph)	15.0	7.5	Fireplaces		0	

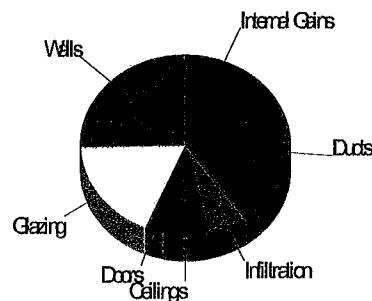
Heating

Component	Btuh/ft²	Btuh	% of load
Walls	3.2	5086	23.3
Glazing	10.5	1071	4.9
Doors	21.0	441	2.0
Ceilings	0.9	1262	5.8
Floors	3.5	7442	34.1
Infiltration	2.0	3465	15.9
Ducts		3062	14.0
Piping		0	0
Humidification		0	0
Ventilation		0	0
Adjustments		0	0
Total		21830	100.0



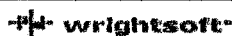
Cooling

Component	Btuh/ft²	Btuh	% of load
Walls	2.1	3415	25.3
Glazing	24.4	2487	18.4
Doors	17.1	359	2.7
Ceilings	0.7	943	7.0
Floors	0	0	0
Infiltration	0.5	842	6.2
Ducts		3773	28.0
Ventilation		0	0
Internal gains		1660	12.3
Blower		0	0
Adjustments		0	0
Total		13479	100.0



Latent Cooling Load = 2539 Btuh
Overall U-value = 0.089 Btuh/ft²·°F, Window / Floor Area = 4.8 %

WARNING: window to floor area ratio = 4.8% - less than 5%.



Right-Suite® Universal 2025 25 0 03 RSU02245

HVAC\Trane\Mike Todd construction Styer Res.rup Calc = MJ8 Front Door faces: N

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Project Information

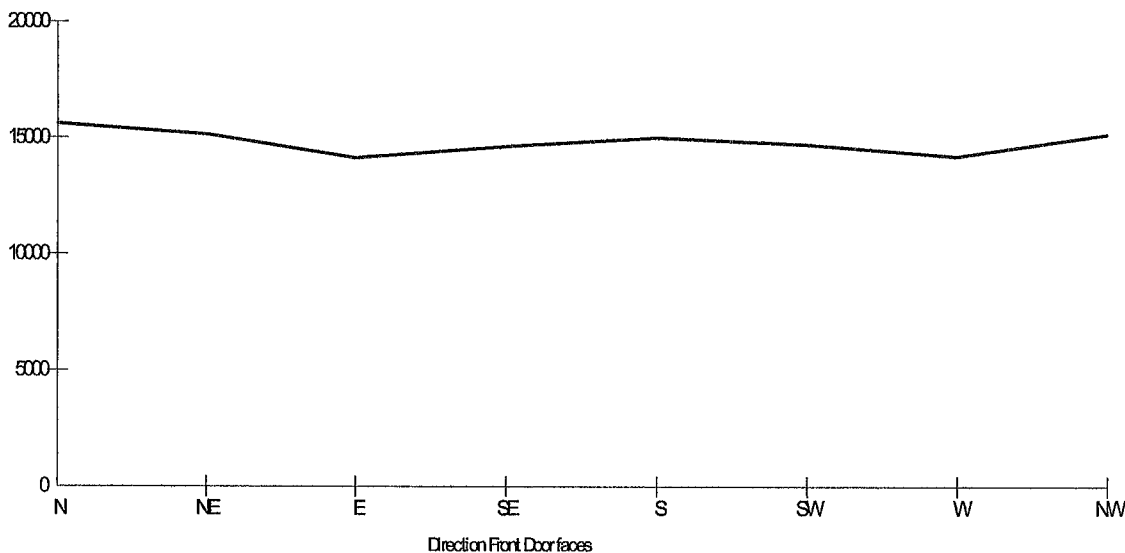
For: David Styer addition, Mike Todd Construction
 14495 SW Tustenuggee Ave, Ft White, FL 32038

Design Conditions

Location:		Indoor:		Heating	Cooling
Gainesville Regional AP, FL, US		Indoor temperature (°F)		68	75
Elevation: 164 ft		Design TD (°F)		35	17
Latitude: 30°N		Relative humidity (%)		50	50
		Moisture difference (gr/lb)		29.0	45.4
Outdoor:	Heating	Cooling	Infiltration:		
Drybulb (°F)	33	92			
Daily range (°F)	-	20 (M)			
Wet bulb (°F)	-	76			
Wind speed (mph)	15.0	7.5			

Front Door	North	Northeast	East	Southeast	South	Southwest	West	Northwest
Sensible Load (Btuh)	13074	12625	11606	12113	12478	12190	11674	12624
Latent Load (Btuh)	2539	2539	2539	2539	2539	2539	2539	2539
Total Load (Btuh)	15613	15164	14144	14651	15017	14729	14213	15162
Heating AVF (cfm)	525	525	525	525	525	525	525	525
Cooling AVF (cfm)	525	525	525	525	525	525	525	525

Building Orientation Cooling Load



Current Orientation: Front Door faces North
 Highest Cooling Load: Front Door faces North

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



Right-J® Worksheet

Entire House

DL Williams Heating and Cooling LLC

Job: 1
Date: Aug 15, 2025
By:

PO Box 2156, Lake City, FL 32056 Phone 1-386-754-1987 Email office@dlwilliamsheatingandcooling.com License CAC1816913

1	Room name					Entire House					existing				
2	Exposed wall					215.0 ft					106.0 ft				
3	Room height					8.0 ft					8.0 ft				
4	Room dimensions					2122.0 ft²					40.0 x 26.0 ft				
5	Room area					2122.0 ft²					1040.0 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	12C-0sw	0.091	n	3.18	2.14	576	535	1704	1144	320	320	1019	684	
11	G	4A5-2ov	0.300	n	10.50	7.65	20	0	210	153	0	0	0	0	
	D	11J0	0.600	n	21.00	17.10	21	21	441	359	0	0	0	0	
	W	12C-0sw	0.091	e	3.18	2.14	336	336	1070	719	208	208	662	445	
	W	12C-0sw	0.091	s	3.18	2.14	472	472	1503	1009	320	320	1019	684	
	W	12C-0sw	0.091	w	3.18	2.14	336	254	809	543	0	0	0	0	
	G	10D-v	0.300	w	10.50	14.27	42	8	441	599	0	0	0	0	
	G	4A5-2ov	0.300	w	10.50	20.83	40	0	420	833	0	0	0	0	
	C	16X19-21ad	0.044	-	0.92	0.69	1368	1368	1262	943	440	440	406	303	
	F	22A-tpi	0.989	-	34.62	0.00	2122	215	7442	0	1040	106	3669	0	
6	c) AED excursion									901				-10	
	Envelope loss/gain								15302	7204			6776	2107	
12	a) Infiltration								3465	842			1708	415	
	b) Room ventilation								0	0			0	0	
13	Internal gains. Occupants @ 230 Appliances/other						2			460	0			0	
										1200				0	
	Subtotal (lines 6 to 13)								18768	9706			8484	2522	
14	Less external load								0	0			0	0	
	Less transfer								0	0			0	0	
	Redistribution								0	0			0	0	
	Subtotal								18768	9706			8484	2522	
15	Duct loads						16%	39%	3062	3773		16%	39%	1384	980
	Total room load								21830	13479			9869	3502	
	Air required (cfm)								525	525			237	136	

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

Right-J® Worksheet
Entire House
DL Williams Heating and Cooling LLC

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1	Room name						storage				mbath				
2	Exposed wall						16.0 ft				16.0 ft				
3	Room height						8.0 ft				8.0 ft				
4	Room dimensions						10.0 x 10.0 ft				10.0 x 12.0 ft				
5	Room area						100.0 ft²				120.0 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 └─┐ G D W W W └─┐ G G C F	12C-0sw	0.091	n	3.18	2.14	80	60	191	128	80	59	188	126	
		4A5-2ov	0.300	n	10.50	7.65	20	0	210	153	0	0	0	0	
		11J0	0.600	n	21.00	17.10	0	0	0	0	21	21	441	359	
11			12C-0sw	0.091	e	3.18	2.14	48	48	153	103	0	0	0	0
			12C-0sw	0.091	s	3.18	2.14	0	0	0	0	0	0	0	0
			12C-0sw	0.091	w	3.18	2.14	0	0	0	0	48	48	153	103
			10D-v	0.300	w	10.50	14.27	0	0	0	0	0	0	0	0
			4A5-2ov	0.300	w	10.50	20.83	0	0	0	0	0	0	0	0
			16X19-21ad	0.044	-	0.92	0.69	100	100	92	69	120	120	111	83
			22A-tpi	0.989	-	34.62	0.00	100	16	554	0	120	16	554	0
		c) AED excursion									-2				-3
	Envelope loss/gain									1200	451			1446	668
	12	a) Infiltration								258	63			258	63
	b) Room ventilation								0	0			0	0	
13	Internal gains						Occupants @ 230	0		0	0	0		0	0
	Appliances/other									0				0	0
	Subtotal (lines 6 to 13)									1458	514			1704	730
14	Less external load								0	0			0	0	
	Less transfer								0	0			0	0	
	Redistribution								0	0			0	0	
	Subtotal								1458	514			1704	730	
15	Duct loads						16%	39%	238	200	16%	39%	278	284	
	Total room load								1696	713			1982	1014	
	Air required (cfm)								41	28			48	40	

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



Right-J® Worksheet

Entire House

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1	Room name					mcloset					mbed				
2	Exposed wall					18.0 ft					39.0 ft				
3	Room height					8.0 ft					8.0 ft				
4	Room dimensions					12.0 x 6.0 ft					1.0 x 392.0 ft				
5	Room area					72.0 ft²					392.0 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	12C-0sw	0.091	n	3.18	2.14	96	96	306	205	0	0	0	0	
11	G	4A5-2ov	0.300	n	10.50	7.65	0	0	0	0	0	0	0	0	
		11J0	0.600	n	21.00	17.10	0	0	0	0	0	0	0	0	
		12C-0sw	0.091	e	3.18	2.14	0	0	0	0	0	0	0	0	
	W	12C-0sw	0.091	s	3.18	2.14	0	0	0	0	152	152	484	325	
	W	12C-0sw	0.091	w	-3.18	-2.14	48	48	153	103	160	120	382	257	
	G	10D-v	0.300	w	10.50	14.27	0	0	0	0	0	0	0	0	
		4A5-2ov	0.300	w	10.50	20.83	0	0	0	0	40	0	420	833	
	C	16X19-21ad	0.044	-	0.92	0.69	72	72	66	50	375	375	346	259	
	F	22A-tpi	0.989	-	34.62	0.00	72	18	623	0	392	39	1350	0	
	6	c) AED excursion									-2				474
		Envelope loss/gain								1148	356			2982	2147
12	a) Infiltration								290	70			629	153	
	b) Room ventilation								0	0			0	0	
13	Internal gains					Occupants @ 230	0			0	1			230	
	Appliances/other									0				0	
	Subtotal (lines 6 to 13)								1438	426			3611	2530	
14	Less external load								0	0			0	0	
	Less transfer								0	0			0	0	
	Redistribution								0	0			0	0	
	Subtotal								1438	426			3611	2530	
15	Duct loads						16%	39%	235	166		16%	39%	589	983
	Total room load								1673	592			4200	3513	
	Air required (cfm)								40	23			101	137	

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Right-J® Worksheet

Entire House

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1	Room name					kitchen								
2	Exposed wall					20.0 ft								
3	Room height					8.0 ft					heat/cool			
4	Room dimensions					10 x 398.0 ft								
5	Room area					398.0 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	12C-0sw	0.091	n	3.18	2.14	0	0	0	0				
11	G	4A5-2ov	0.300	n	10.50	7.65	0	0	0	0				
	D	11J0	0.600	n	21.00	17.10	0	0	0	0				
	W	12C-0sw	0.091	e	3.18	2.14	80	80	255	171				
	W	12C-0sw	0.091	s	3.18	2.14	0	0	0	0				
	W	12C-0sw	0.091	w	3.18	2.14	80	38	121	81				
	G	10D-v	0.300	w	10.50	14.27	42	8	441	599				
	G	4A5-2ov	0.300	w	10.50	20.83	0	0	0	0				
	C	16X19-21ad	0.044	-	0.92	0.69	261	261	241	180				
	F	22A-tpl	0.989	-	34.62	0.00	398	20	692	0				
6	c) AED excursion									444				
	Envelope loss/gain								1750	1475				
12	a) Infiltration								322	78				
	b) Room ventilation								0	0				
13	Internal gains.					Occupants @ 230	1			230				
						Appliances/other				1200				
	Subtotal (lines 6 to 13)								2072	2984				
14	Less external load								0	0				
	Less transfer								0	0				
	Redistribution								0	0				
	Subtotal								2072	2984				
15	Duct loads						16%	39%	338	1160				
	Total room load								2410	4143				
	Air required (cfm)								58	161				

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





J1 Form - Worksheet A
Entire House
DL Williams Heating and Cooling LLC

Job: 1
Date: Aug 15, 2025
By:

PO Box 2156, Lake City, FL 32056 Phone: 1-386-754-1987 Email office@dlwilliamsheatingandcooling.com License: CAC1816913

Supporting Detail

Project Name:	Mike Todd construction Styer Res	Date:	Aug 15, 2025
Address:	14495 SW Tustenuggee Ave, Ft White, FL 32038		
Phone:	Job ID:	1	

Worksheet A
Location and Design Conditions

Weather Location:	Gainesville Regional AP, FL, US	Elevation =	164	Latitude =	30
Indoor Conditions, Heating.	DB = 68 °F	RH = 50 %	Indoor Conditions, Cooling:	DB = 75 °F	RH = 50 %
Table 1 Conditions	99% DB = 33 °F	1% DB = 92 °F	Grains Difference =	45 gr/lb	Daily Range = M
Design Temperature Differences	HTD =	35 °F	CTD =	17 °F	

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



A full range of software solutions for the HVAC industry

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.. HVAC\Trane\Mike Todd construction Styer Res.rup Calc = MJ8 Front Door faces. N

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Page 1



Project Summary
Entire House
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Project Information

For: David Styer addition, Mike Todd Construction
14495 SW Tustenuggee Ave, Ft White, FL 32038

Notes:

Design Information

Weather: Gainesville Regional AP, FL, US

Winter Design Conditions

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

Ventilation Method MJ8

Heating Summary

Structure 18768 Btuh
Ducts (R-6.0) 3062 Btuh
Central vent (0 cfm) 0 Btuh

Humidification 0 Btuh
Piping 0 Btuh
Equipment load 21830 Btuh

Infiltration

Method Simplified
Construction quality Average
Fireplaces 0

	Heating	Cooling
Area (ft ²)	2122	2122
Volume (ft ³)	16976	16976
Air changes/hour	0.32	0.16
Equiv. AVF (cfm)	91	45

Heating Equipment Summary

Make Trane
Trade TRANE
Model 5TWR5018A1
AHRI ref 214074329

Efficiency 7.5 HSPF2
Heating input
Heating output 17800 Btuh @ 47°F
Temperature rise 31 °F
Actual air flow 525 cfm
Air flow factor 0.024 cfm/Btuh
Static pressure 0.50 in H2O
Space thermostat
Capacity balance point = 38 °F

Backup:
Input = 7 kW, Output = 22839 Btuh, 100 AFUE

Summer Design Conditions

Outside db 92 °F
Inside db 75 °F
Design TD 17 °F
Daily range M
Relative humidity 50 %
Moisture difference 45 gr/lb

Sensible Cooling Equipment Load Sizing

Structure 9706 Btuh
Ducts (R-6.0) 3773 Btuh
Central vent (0 cfm) 0 Btuh

Blower 0 Btuh

Use manufacturer's data n
Rate/swing multiplier 0.97
Equipment sensible load 13074 Btuh

Latent Cooling Equipment Load Sizing

Structure 1790 Btuh
Ducts 748 Btuh
Central vent (0 cfm) 0 Btuh

Equipment latent load 2539 Btuh

Equipment Total Load (Sen+Lat) 15613 Btuh
Req. total capacity at 0.70 SHR 1.6 ton

Cooling Equipment Summary

Make Trane
Trade TRANE
Cond 5TWR5018A1
Coil 5TEM6B03AV21++TDR
AHRI ref 214074329

Efficiency 12.0 EER2,15.2 SEER2
Sensible cooling 12600 Btuh
Latent cooling 5400 Btuh
Total cooling 18000 Btuh
Actual air flow 525 cfm
Air flow factor 0.039 cfm/Btuh
Static pressure 0.50 in H2O
Load sensible heat ratio 0.84

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Right-Suite® Universal 2025 25 0 03 RSU02245

. HVAC\Trane\Mike Todd construction Styer Res.rup Calc = MJ8 Front Door faces. N

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Page 1

Right-J8® Form J1

Entire House

DL Williams Heating and Cooling LLC

Job: 1
Date: Aug 15, 2025
By:

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1 Name of Room				Entire House				existing					
2 Running Feet of Exposed Wall				215.0 ft				106.0 ft					
3 Ceiling Ht (Ft) and Gross Wall Area (SqFt)				8.0 ft 3408.0 ft²				8.0 ft 1056.0 ft²					
4 Room Dimensions (Ft) and Floor Plan Area (SqFt)				2122.0 ft²				40.0 x 26.0 ft 1040.0 ft²					
5 Ceiling Slope (Deg) and Gross Ceiling Area (SqFt)				0 ° 2122.0 ft²				0 ° 1040.0 ft²					
Type of Exposure	Const., Number	Panel Faces	HTM		Area or Length	Btuh			Area or Length	Btuh			
			Htg	Clg.		Heating	S-Clg	L-Clg		Heating	S-Clg	L-Clg	
6 Wall	12C-0sw	n	3.18	2.14	576	1704	1144		320	1019	684		
Glaz	4A5-2ov	n	10.50	7.65	20	210	153		0	0	0		
Door	11J0	n	21.00	17.10	21	441	359		0	0	0		
11 Wall	12C-0sw	e	3.18	2.14	336	1070	719		208	662	445		
Wall	12C-0sw	s	3.18	2.14	472	1503	1009		320	1019	684		
Wall	12C-0sw	w	3.18	2.14	336	809	543		0	0	0		
Glaz	10D-v	w	10.50	14.27	42	441	599		0	0	0		
Glaz	4A5-2ov	w	10.50	20.83	40	420	833		0	0	0		
Cell	16X19-21ad	-	0.92	0.69	1368	1262	943		440	406	303		
Flor	22A-tpl	-	34.62	0.00	2122	7442	0		1040	3669	0		
12 Infiltration	Heating Load (Btuh)		Effect		WAR 1.00	3465			WAR 0.49	1708			
	Sensible Load (Btuh)		ACH				842				415		
	Latent Load (Btuh)							1390					
13 Internal	a Occupants at 230 and 200 Btuh				2	460	400		0	0	0		
	b Scenario number					1200				0			
	c Default Adjustments												
	d Custom Appliances					0	0			0	0		
	e Plants						0				0		
14 Subtotals	Sum lines 6 through 12					18768	9706	1790		8484	2522		
15 Duct Loads	EHLF & ESGF		0.163	0.389		3062	3773			1384	980		
	ELG							748			367		
16 Ventilation Loads	Vent Cfm	0	E Cfm	0		0	0	0					
17 Winter Humidification Load	Gal/Day			0		0							
18 Piping Load						0							
19 Blower Heat							0						
20 AED Excursion & Latent Moisture Migration Load							901			-10			
21 Total Load	Sum lines 13 through 19					21830	13479	2539		9869	3502		

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1	Name of Room					storage			mbath				
2	Running Feet of Exposed Wall					16.0 ft			16.0 ft				
3	Ceiling Ht (Ft) and Gross Wall Area (SqFt)					8.0 ft			8.0 ft				
4	Room Dimensions (Ft) and Floor Plan Area (SqFt)					10.0 x 10.0 ft			10.0 x 12.0 ft				
5	Ceiling Slope (Deg) and Gross Ceiling Area (SqFt)					0 °			0 °				
						320.0 ft²			352.0 ft²				
						100.0 ft²			120.0 ft²				
						100.0 ft²			120.0 ft²				
	Type of Exposure	Const., Number	Panel Faces	HTM		Area or Length	Btuh			Area or Length	Btuh		
				Htg.	Clg		Heating	S-Clg	L-Clg		Heating	S-Clg	L-Clg
6	Wall	12C-0sw	n	3.18	2.14	80	191	128		80	188	126	
	Glaz	4A5-2ov	n	10.50	7.65	20	210	153		0	0	0	
	Door	11J0	n	21.00	17.10	0	0	0		21	441	359	
11	Wall	12C-0sw	e	3.18	2.14	48	153	103		0	0	0	
	Wall	12C-0sw	s	3.18	2.14	0	0	0		0	0	0	
	Wall	12C-0sw	w	3.18	2.14	0	0	0		0	0	0	
	Glaz	10D-v	w	10.50	14.27	0	0	0		0	0	0	
	Glaz	4A5-2ov	w	10.50	20.83	0	0	0		0	0	0	
	Cell	16X19-21ad	-	0.92	0.69	100	92	69		120	111	83	
	Floor	22A-tpl	-	34.62	0.00	100	554	0		120	554	0	
12	Infiltration	Heating Load (Btuh)		Effect ACH		0.32	258			WAR 0.07	258		
		Sensible Load (Btuh)				0.16		63			63		
		Latent Load (Btuh)											
13	Internal	a Occupants at 230 and 200 Btuh b Scenario number c Default Adjustments d Custom Appliances e Plants				0	0	0		0	0	0	
14	Subtotals	Sum lines 6 through 12					1458	514			1704	730	
15	Duct Loads	EHLF & ESGF		0.163	0.389		238	200			278	284	
		ELG						35				42	
16	Ventilation Loads	Vent Cfm	0	E Cfm	0								
17	Winter Humidification Load	Gal/Day				0							
18	Piping Load												
19	Blower Heat												
20	AED Excursion & Latent Moisture Migration Load							-2			-3		
21	Total Load	Sum lines 13 through 19					1696	713			1982	1014	

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





Right-J8® Form J1
Entire House
DL Williams Heating and Cooling LLC

Job: 1
Date: Aug 15, 2025
By:

PO Box 2156, Lake City, FL 32056 Phone: 1-386-754-1987 Email: office@dlwilliamsheatingandcooling.com License: CAC1816913

1 Name of Room					mclosest 18.0 ft			mbed 39.0 ft					
2 Running Feet of Exposed Wall					8.0 ft			8.0 ft					
3 Ceiling Ht (Ft) and Gross Wall Area (SqFt)					12.0 x 6.0 ft			10 x 392.0 ft					
4 Room Dimensions (Ft) and Floor Plan Area (SqFt)					288.0 ft²			672.0 ft²					
5 Ceiling Slope (Deg) and Gross Ceiling Area (SqFt)					72.0 ft²			392.0 ft²					
Type of Exposure		Const., Number	Panel Faces	HTM		Area or Length	Btuh			Area or Length	Btuh		
				Htg	Clg		Heating	S-Clg	L-Clg		Heating	S-Clg	L-Clg
6	Wall	12C-0sw	n	3.18	2.14	96	306	205		0	0	0	
	Glaz	4A5-2ov	n	10.50	7.65	0	0	0		0	0	0	
	Door	11J0	n	21.00	17.10	0	0	0		0	0	0	
11	Wall	12C-0sw	e	3.18	2.14	0	0	0		0	0	0	
	Wall	12C-0sw	s	3.18	2.14	0	0	0		152	484	325	
	Wall	12C-0sw	w	3.18	2.14	48	153	103		160	382	257	
	Glaz	10D-v	w	10.50	14.27	0	0	0		0	0	0	
	Glaz	4A5-2ov	w	10.50	20.83	0	0	0		40	420	833	
	Cell	16X19-21ad	-	0.92	0.69	72	66	50		375	346	259	
	Flor	22A-tpl	-	34.62	0.00	72	623	0		392	1350	0	
12	Infiltration	Heating Load (Btuh)		Effect		0.32	WAR	290		WAR	629		
		Sensible Load (Btuh)		ACH		0.16	0.08		70	0.18	153		
		Latent Load (Btuh)											
13	Internal	a Occupants at 230 and 200 Btuh				0		0	0	1		230	200
		b Scenario number						0				0	
		c Default Adjustments											
		d Custom Appliances						0	0			0	0
		e Plants							0			0	0
14	Subtotals	Sum lines 6 through 12						1438	426			3611	2530
15	Duct Loads	EHLF & ESGF		0.163	0.369			235	166			589	983
		ELG								25			138
16	Ventilation Loads	Vent Cfm	0	E Cfm	0								
17	Winter Humidification Load	Gal/Day		0									
18	Piping Load												
19	Blower Heat												
20	AED Excursion & Latent Moisture Migration Load								-2			474	
21	Total Load	Sum lines 13 through 19						1673	592			4200	3513

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





Right-J8® Form J1
Entire House
DL Williams Heating and Cooling LLC

Job: 1
Date: Aug 15, 2025
By:

PO Box 2156, Lake City, FL 32056 Phone: 1-386-754-1987 Email: office@dlwilliamsheatingandcooling.com License: CAC1816913

1	Name of Room					kitchen									
2	Running Feet of Exposed Wall					20.0 ft									
3	Ceiling Ht (Ft) and Gross Wall Area (SqFt)					8.0 ft 720.0 ft²									
4	Room Dimensions (Ft) and Floor Plan Area (SqFt)					10 x 398.0 ft 398.0 ft²									
5	Ceiling Slope (Deg) and Gross Ceiling Area (SqFt)					0 ° 398.0 ft²									
	Type of Exposure	Const., Number	Panel Faces	HTM		Area or Length	Btuh			Area or Length	Btuh				
				Htg	Clg.		Heating	S-Clg	L-Clg		Heating	S-Clg	L-Clg		
6	Wall	12C-0sw	n	3.18	2.14	0	0	0							
	Glaz	4A5-2ov	n	10.50	7.65	0	0	0							
	Door	11J0	n	21.00	17.10	0	0	0							
	Wall	12C-0sw	e	3.18	2.14	80	255	171							
11	Wall	12C-0sw	s	3.18	2.14	0	0	0							
	Wall	12C-0sw	w	3.18	2.14	80	121	81							
	Glaz	10D-v	w	10.50	14.27	42	441	599							
	Glaz	4A5-2ov	w	10.50	20.83	0	0	0							
	Cell	16X19-21ad	-	0.92	0.69	261	241	180							
	Floor	22A-tpf	-	34.62	0.00	398	692	0							
12	Infiltration	Heating Load (Btuh)		Effect ACH	0.32	WAR 0.09	322								
		Sensible Load (Btuh)			0.16			78							
		Latent Load (Btuh)													
13	Internal	a Occupants at 230 and 200 Btuh b Scenario number c Default Adjustments d Custom Appliances e Plants				1		230 1200 0 0 0	200						
14	Subtotals	Sum lines 6 through 12					2072	2984							
15	Duct Loads	EHLF & ESGF		0.163	0.389		338	1160							
		ELG							140						
16	Ventilation Loads	Vent Cfm	0	E Cfm	0										
17	Winter Humidification Load	Gal/Day		0											
18	Piping Load														
19	Blower Heat														
20	AED Excursion & Latent Moisture Migration Load							444							
21	Total Load	Sum lines 13 through 19					2410	4143							

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





AED Assessment

Entire House

DL Williams Heating and Cooling LLC

Job: 1
Date: Aug 15, 2025
By:

PO Box 2156, Lake City, FL 32056 Phone: 1-386-754-1987 Email: office@dlwilliamsheatingandcooling.com License: CAC1816913

Project Information

For: David Styer addition, Mike Todd Construction
14495 SW Tustenuggee Ave, Ft White, FL 32038

Design Conditions

Location:

Galnesville Regional AP, FL, US
Elevation: 164 ft
Latitude: 30°N

Indoor:

Indoor temperature (°F)
Design TD (°F)
Relative humidity (%)
Moisture difference (gr/lb)

Heating

68
35
50
29.0

Cooling

75
17
50
45.4

Outdoor:

Drybulb (°F)
Daily range (°F)
Wet bulb (°F)
Wind speed (mph)

Heating

33
-
-
15.0

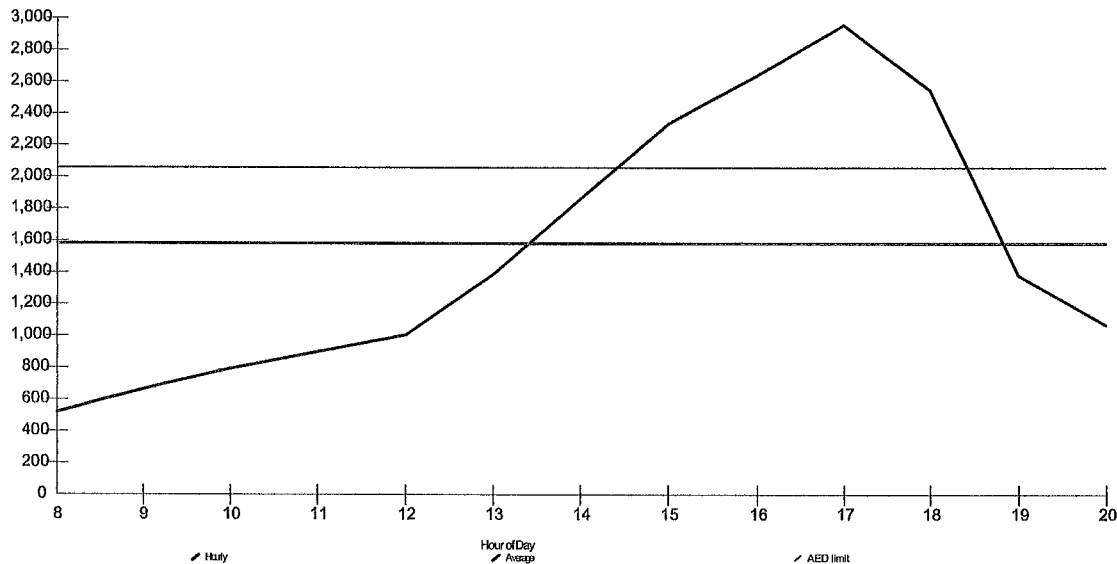
Cooling

92
20 (M)
76
7.5

Infiltration:

Test for Adequate Exposure Diversity

Hourly Glazing Load



Maximum hourly glazing load exceeds average by 86.9%.

House does not have adequate exposure diversity (AED), based on AED limit of 30%.

AED excursion: 901 Btuh (PFG - 1.3*AFG)



Component Constructions

Entire House

DL Williams Heating and Cooling LLC

Job: 1
Date: Aug 15, 2025
By:

PO Box 2156, Lake City, FL 32056 Phone: 1-386-754-1987 Email: office@dlwilliamsheatingandcooling.com License: CAC1816913

Project Information

For: David Styer addition, Mike Todd Construction
14495 SW Tustenuggee Ave, Ft White, FL 32038

Design Conditions

Location:		Indoor:		Heating	Cooling
Gainesville Regional AP, FL, US		Indoor temperature (°F)		68	75
Elevation: 164 ft		Design TD (°F)		35	17
Latitude: 30°N		Relative humidity (%)		50	50
		Moisture difference (gr/lb)		29.0	45.4
Outdoor:	Heating	Cooling	Infiltration:		
Drybulb (°F)	33	92	Method		
Daily range (°F)	-	20 (M)	Construction quality		
Wet bulb (°F)	-	76	Simplified		
Wind speed (mph)	15.0	7.5	Average		
		Fireplaces		0	

Construction descriptions

Construction descriptions	Or	Area ft²	U-value Btuh/ft²-°F	Insul R ft²-°F/Btuh	Htg HTM Btuh/ft²	Loss Btuh	Clg HTM Btuh/ft²	Gain Btuh
Walls 12C-0sw: Frm wall, wd ext, 3/8" wood shth, r-13 cav ins, 1/2" gypsum board int fnsh, 2"x4" wood frm, 16" o.c. stud	n	535	0.091	13.0	3.18	1704	2.14	1144
	e	336	0.091	13.0	3.19	1070	2.14	719
	s	472	0.091	13.0	3.18	1503	2.14	1009
	w	254	0.091	13.0	3.18	809	2.14	543
	all	1597	0.091	13.0	3.19	5086	2.14	3415

Partitions

(none)

Windows

4A5-2ov: 2 glazing, clr low-e outr, air gas, insulated vinyl frm mat, clr innr, 1/4" gap, 1/8" thk; NFRC rated (SHGC=0.23); 50% blinds 45°, light; 50% outdoor insect screen; 1.6 ft overhang (5 ft window ht, 2 ft sep); 6.67 ft head ht	n	20	0.300	0	10.5	210	7.65	153
10D-v 2 glazing, clr low-e outr, air gas, insulated vinyl frm mat, clr innr, 1/4" gap, 1/8" thk; NFRC rated (SHGC=0.23); 50% blinds 45°, light; 4 ft overhang (7 ft window ht, 2 ft sep.); 6.67 ft head ht	w	40	0.300	0	10.5	420	20.8	833
	all	60	0.300	0	10.5	630	16.4	986
	w	42	0.300	0	10.5	441	14.3	599

Doors

11J0 Door, mtl fbrgl type	n	21	0.600	6.3	21.0	441	17.1	359
---------------------------	---	----	-------	-----	------	-----	------	-----

Ceilings

16X19-21ad: Attic ceiling, asphalt shingles roof mat, r-2 roof ins, r-21 cell ins, 1/2" gypsum board int fnsh		1368	0.044	40.0	0.92	1262	0.69	943
---	--	------	-------	------	------	------	------	-----

Floors

22A-tp1 Bg floor, light dry soll, on grade depth, carp 80% flr fnsh		215	0.989	0	34.6	7442	0	0
---	--	-----	-------	---	------	------	---	---



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Component Constructions

existing

DL Williams Heating and Cooling LLC

Job: 1
Date: Aug 15, 2025
By:

PO Box 2156, Lake City, FL 32056 Phone: 1-386-754-1987 Email: office@dlwilliamsheatingandcooling.com License: CAC1816913

Project Information

For: David Styer addition, Mike Todd Construction
14495 SW Tustenuggee Ave, Ft White, FL 32038

Design Conditions

Location:

Gainesville Regional AP, FL, US

Elevation: 164 ft

Latitude: 30°N

Outdoor:

Drybulb (°F)

Daily range (°F)

Wet bulb (°F)

Wind speed (mph)

Heating

33

-

-

15.0

Cooling

92

20 (M)

76

7.5

Indoor:

Indoor temperature (°F)

Design TD (°F) -

Relative humidity (%)

Moisture difference (gr/lb)

Infiltration:

Method

Construction quality

Fireplaces

Heating

68

35

50

29.0

Simplified

Average

0

Cooling

75

17

50

45.4

Construction descriptions

Walls

12C-0sw: Frm wall, wd ext, 3/8" wood shth, r-13 cav ins, 1/2" gypsum board int fnsh, 2"x4" wood frm, 16" o.c. stud

Or	Area ft²	U-value Btuh/ft²-°F	Insul R ft²-°F/Btuh	Htg HTM Btuh/ft²	Loss Btuh	Clg HTM Btuh/ft²	Gain Btuh
n	320	0.091	13.0	3.18	1019	2.14	684
e	208	0.091	13.0	3.18	662	2.14	445
s	320	0.091	13.0	3.18	1019	2.14	684
all	848	0.091	13.0	3.18	2701	2.14	1813

Partitions

(none)

Windows

(none)

Doors

(none)

Ceilings

16X19-21ad: Attic ceiling, asphalt shingles roof mat, r-2 roof ins, r-21 ceil ins, 1/2" gypsum board int fnsh

440 0.044 40.0 0.92 406 0.69 303

Floors

22A-tpl Bg floor, light dry soil, on grade depth, carp 80% flr fnsh

106 0.989 0 34.6 3669 0 0



Right-Suite® Universal 2025 25 0 03 RSU02245

HVAC\Trane\Mike Todd construction Styer Res.rup Calc = MJ8 Front Door faces. N

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Component Constructions storage

DL Williams Heating and Cooling LLC

Job: 1
Date: Aug 15, 2025
By:

PO Box 2156, Lake City, FL 32056 Phone: 1-386-754-1987 Email: office@dlwilliamsheatingandcooling.com License: CAC1816913

Project Information

For: David Styer addition, Mike Todd Construction
14495 SW Tustenuggee Ave, Ft White, FL 32038

Design Conditions

Location:			Indoor:		Heating	Cooling
Gainesville Regional AP, FL, US			Indoor temperature (°F)		68	75
Elevation: 164 ft			Design TD (°F)		35	17
Latitude: 30°N			Relative humidity (%)		50	50
			Moisture difference (gr/lb)		29.0	45.4
Outdoor:	Heating	Cooling	Infiltration:			
Drybulb (°F)	33	92	Method		Simplified	
Daily range (°F)	-	20 (M)	Construction quality		Average	
Wet bulb (°F)	-	76	Fireplaces		0	
Wind speed (mph)	15.0	7.5				

Construction descriptions

	Or	Area ft²	U-value Btuh/ft²·°F	Insul R ft²·°F/Btuh	Htg HTM Btuh/ft²	Loss Btuh	Clg HTM Btuh/ft²	Gain Btuh
Walls								
12C-0sw: Frm wall, wd ext, 3/8" wood shth, r-13 cav ins, 1/2" gypsum	n	60	0.091	13.0	3.18	191	2.14	128
board int fnsh, 2"x4" wood frm, 16" o.c. stud	e	48	0.091	13.0	3.19	153	2.14	103
	all	108	0.091	13.0	3.18	344	2.14	231

Partitions (none)

Windows

4A5-2ov: 2 glazing, clr low-e outr, air gas, insulated vinyl frm mat, clr innr, 1/4" gap, 1/8" thk; NFRC rated (SHGC=0.23), 50% blinds 45°, light; 50% outdoor insect screen; 1 6 ft overhang (5 ft window ht, 2 ft sep.), 6.67 ft head ht	n	20	0.300	0	10.5	210	7.65	153
---	---	----	-------	---	------	-----	------	-----

Doors (none)

Ceilings

16X19-21ad. Attic ceiling, asphalt shingles roof mat, r-2 roof ins, r-21 cell ins, 1/2" gypsum board int fnsh		100	0.044	40.0	0.92	92	0.69	69
--	--	-----	-------	------	------	----	------	----

Floors

22A-tpl. Bg floor, light dry soil, on grade depth, carp 80% flr fnsh		16	0.989	0	34.6	554	0	0
--	--	----	-------	---	------	-----	---	---



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.. HVAC\Trane\Mike Todd construction Styer Res.rup Calc = MJ8 Front Door faces: N



Component Constructions mbath

DL Williams Heating and Cooling LLC

Job: 1
Date: Aug 15, 2025
By:

PO Box 2156, Lake City, FL 32056 Phone 1-386-754-1987 Email office@dlwilliamsheatingandcooling.com License CAC1816913

Project Information

For: David Styer addition, Mike Todd Construction
14495 SW Tustenuggee Ave, Ft White, FL 32038

Design Conditions

Location:		Indoor:		Heating	Cooling
Gainesville Regional AP, FL, US		Indoor temperature (°F)		68	75
Elevation:	164 ft	Design TD (°F)		35	17
Latitude:	30°N	Relative humidity (%)		50	50
		Moisture difference (gr/lb)		29.0	45.4
Outdoor:	Heating	Cooling	Infiltration:		
Drybulb (°F)	33	92	Method		
Daily range (°F)	-	20 (M)	Construction quality		
Wet bulb (°F)	-	76	Fireplaces		
Wind speed (mph)	15.0	7.5	Simplified Average		
				0	

Construction descriptions

Construction descriptions	Or	Area ft²	U-value Btuh/ft²·°F	Insul R ft²·°F/Btuh	Htg HTM Btuh/ft²	Loss Btuh	Clg HTM Btuh/ft²	Gain Btuh
Walls								
12C-0sw: Frm wall, wd ext, 3/8" wood shth, r-13 cav ins, 1/2" gypsum	n	59	0.091	13.0	3.18	188	2.14	126
board int fnsh, 2"x4" wood frm, 16" o.c. stud	w	48	0.091	13.0	3.19	153	2.14	103
	all	107	0.091	13.0	3.18	341	2.14	229
Partitions								
(none)								
Windows								
(none)								
Doors								
11J0: Door, mtl fbrgl type	n	21	0.600	6.3	21.0	441	17.1	359
Ceilings								
16X19-21ad Attic ceiling, asphalt shingles roof mat, r-2 roof ins, r-21		120	0.044	40.0	0.92	111	0.69	83
cell ins, 1/2" gypsum board int fnsh								
Floors								
22A-tpl Bg floor, light dry soil, on grade depth, carp 80% flr fnsh		16	0.989	0	34.6	554	0	0



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Component Constructions

mcloset

DL Williams Heating and Cooling LLC

Job: 1
Date: Aug 15, 2025
By:

PO Box 2156, Lake City, FL 32056 Phone: 1-386-754-1987 Email: office@dlwilliamsheatingandcooling.com License: CAC1816913

Project Information

For: David Styer addition, Mike Todd Construction
14495 SW Tustenuggee Ave, Ft White, FL 32038

Design Conditions

Location:		Indoor:		Heating	Cooling
Gainesville Regional AP, FL, US		Indoor temperature (°F)		68	75
Elevation: 164 ft		Design TD (°F)		35	17
Latitude: 30°N		Relative humidity (%)		50	50
		Moisture difference (gr/lb)		29.0	45.4
Outdoor:	Heating	Cooling	Infiltration:		
Drybulb (°F)	33	92	Method	Simplified	
Daily range (°F)	-	20 (M)	Construction quality	Average	
Wet bulb (°F)	-	76	Fireplaces	0	
Wind speed (mph)	15.0	7.5			

Construction descriptions

Construction descriptions	Or	Area ft²	U-value Btuh/ft²·°F	Insul R ft²·°F/Btuh	Htg HTM Btuh/ft²	Loss Btuh	Clg HTM Btuh/ft²	Gain Btuh
Walls								
12C-0sw: Frm wall, wd ext, 3/8" wood shth, r-13 cav ins, 1/2" gypsum	n	96	0.091	13.0	3.19	306	2.14	205
board int fnsh, 2"x4" wood frm, 16" o.c. stud	w	48	0.091	13.0	3.19	153	2.14	103
	all	144	0.091	13.0	3.19	459	2.14	308
Partitions								
(none)								
Windows								
(none)								
Doors								
(none)								
Ceilings								
16X19-21ad Attic ceiling, asphalt shingles roof mat, r-2 roof ins, r-21		72	0.044	40.0	0.92	66	0.69	50
cell ins, 1/2" gypsum board int fnsh								
Floors								
22A-tpl Bg floor, light dry soil, on grade depth, carp 80% flr fnsh		18	0.989	0	34.6	623	0	0



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.HVAC\Trane\Mike Todd construction Styer Res.rup Calc = MJ8 Front Door faces. N

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Component Constructions

mbed

DL Williams Heating and Cooling LLC

Job: 1
Date: Aug 15, 2025
By:

PO Box 2156, Lake City, FL 32056 Phone 1-386-754-1987 Email: office@dlwilliamsheatingandcooling.com License: CAC1816913

Project Information

For: David Styer addition, Mike Todd Construction
14495 SW Tustenuggee Ave, Ft White, FL 32038

Design Conditions

Location:		Indoor:		Heating	Cooling
Gainesville Regional AP, FL, US		Indoor temperature (°F)		68	75
Elevation: 164 ft		Design TD (°F)		35	17
Latitude: 30°N		Relative humidity (%)		50	50
		Moisture difference (gr/lb)		29.0	45.4
Outdoor:	Heating	Cooling	Infiltration:		
Drybulb (°F)	33	92	Method		
Daily range (°F)	-	20 (M)	Construction quality		
Wet bulb (°F)	-	76	Fireplaces		
Wind speed (mph)	15.0	7.5	Simplified Average		
				0	

Construction descriptions

Construction descriptions	Or	Area ft²	U-value Btuh/ft²·°F	Insul R ft²·°F/Btuh	Htg HTM Btuh/ft²	Loss Btuh	Clg HTM Btuh/ft²	Gain Btuh
Walls								
12C-0sw: Frm wall, wd ext, 3/8" wood shth, r-13 cav ins, 1/2" gypsum	s	152	0.091	13.0	3.18	484	2.14	325
board int fnsh, 2"x4" wood frm, 16" o.c. stud	w	120	0.091	13.0	3.18	382	2.14	257
	all	272	0.091	13.0	3.18	866	2.14	582
Partitions								
(none)								
Windows								
4A5-2ov 2 glazing, clr low-e outr, air gas, insulated vinyl frm mat, clr	w	40	0.300	0	10.5	420	20.8	833
innr, 1/4" gap, 1/8" thk; NFRC rated (SHGC=0.23), 50% blinds 45°, light,								
50% outdoor insect screen; 1.6 ft overhang (5 ft window ht, 2 ft sep.),								
6.67 ft head ht								
Doors								
(none)								
Ceilings								
16X19-21ad. Attic ceiling, asphalt shingles roof mat, r-2 roof ins, r-21		375	0.044	40.0	0.92	346	0.69	259
cell ins, 1/2" gypsum board int fnsh								
Floors								
22A-tpl Bg floor, light dry soil, on grade depth, carp 80% flr fnsh		39	0.989	0	34.6	1350	0	0



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Component Constructions kitchen

DL Williams Heating and Cooling LLC

Job: 1
Date: Aug 15, 2025
By:

PO Box 2156, Lake City, FL 32056 Phone: 1-386-754-1987 Email: office@dlwilliamsheatingandcooling.com License: CAC1816913

Project Information

For: David Styer addition, Mike Todd Construction
14495 SW Tustenuggee Ave, Ft White, FL 32038

Design Conditions

Location:

Gainesville Regional AP, FL, US

Elevation: 164 ft

Latitude: 30°N

Outdoor:

Dry bulb (°F)

Daily range (°F)

Wet bulb (°F)

Wind speed (mph)

Heating

Cooling

Indoor:

Indoor temperature (°F)

Design TD (°F)

Relative humidity (%)

Moisture difference (gr/lb)

Heating

Cooling

Infiltration:

Method

Construction quality

Fireplaces

Simplified

Average

0

Construction descriptions

Walls

12C-0sw: Frm wall, wd ext, 3/8" wood shth, r-13 cav ins, 1/2" gypsum board int fnsh, 2"x4" wood frm, 16" o.c. stud

Or	Area ft²	U-value Btuh/ft²·°F	Insul R ft²·°F/Btuh	Htg HTM Btuh/ft²	Loss Btuh	Clg HTM Btuh/ft²	Gain Btuh
e	80	0.091	13.0	3.18	255	2.14	171
w	38	0.091	13.0	3.18	121	2.14	81
all	118	0.091	13.0	3.18	376	2.14	252

Partitions

(none)

Windows

10D-v 2 glazing, clr low-e outr, air gas, insulated vinyl frm mat, clr innr, w 1/4" gap, 1/8" thk; NFRC rated (SHGC=0.23), 50% blinds 45°, light; 4 ft overhang (7 ft window ht, 2 ft sep.), 6.67 ft head ht

42	0.300	0	10.5	441	14.3	599
----	-------	---	------	-----	------	-----

Doors

(none)

Ceilings

16X19-21ad. Attic ceiling, asphalt shingles roof mat, r-2 roof ins, r-21 cell ins, 1/2" gypsum board int fnsh

261	0.044	40.0	0.92	241	0.69	180
-----	-------	------	------	-----	------	-----

Floors

22A-1pl Bg floor, light dry soil, on grade depth, carp 80% flr fnsh

20	0.989	0	34.6	692	0	0
----	-------	---	------	-----	---	---



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Load Short Form

Entire House

DL Williams Heating and Cooling LLC

Job: 1
Date: Aug 15, 2025
By:

PO Box 2156, Lake City, FL 32056 Phone: 1-386-754-1987 Email: office@dlwilliamsheatingandcooling.com License: CAC1816913

Project Information

For: David Styer addition, Mike Todd Construction
14495 SW Tustenuggee Ave, Ft White, FL 32038

Design Information

	Htg	Clg	Infiltration	Simplified
Outside db (°F)	33	92	Method	Average
Inside db (°F)	68	75	Construction quality	0
Design TD (°F)	35	17	Fireplaces	
Daily range	-	M		
Inside humidity (%)	50	50		
Moisture difference (gr/lb)	29	45		

HEATING EQUIPMENT

Make Trane
Trade TRANE
Model 5TWR5018A1
AHRI ref 214074329

Efficiency 7.5 HSPF2
Heating input
Heating output 17800 Btuh @ 47°F
Temperature rise 31 °F
Actual air flow 525 cfm
Air flow factor 0.024 cfm/Btuh
Static pressure 0.50 in H2O
Space thermostat
Capacity balance point = 38 °F

Backup:

Input = 7 kW, Output = 22839 Btuh, 100 AFUE

COOLING EQUIPMENT

Make Trane
Trade TRANE
Cond 5TWR5018A1
Coil 5TEM6B03AV21++TDR
AHRI ref 214074329

Efficiency 12.0 EER2, 15.2 SEER2
Sensible cooling 12600 Btuh
Latent cooling 5400 Btuh
Total cooling 18000 Btuh
Actual air flow 525 cfm
Air flow factor 0.039 cfm/Btuh
Static pressure 0.50 in H2O
Load sensible heat ratio 0.84

ROOM NAME	Area (ft²)	Htg load (Btuh)	Clg load (Btuh)	Htg AVF (cfm)	Clg AVF (cfm)
existing	1040	9869	3502	237	136
storage	100	1696	713	41	28
mbath	120	1982	1014	48	40
mcloset	72	1673	592	40	23
mbed	392	4200	3513	101	137
kitchen	398	2410	4143	58	161

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



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Entire House	2122	21830	13479	525	525
Other equip loads		0	0		
Equip. @ 0.97 RSM			13074		
Latent cooling			2539		
TOTALS	2122	21830	15613	525	525

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





Duct system multi orientation report
Entire House
DL Williams Heating and Cooling LLC

Job: 1
Date: Aug 15, 2025
By:

PO Box 2156, Lake City, FL 32056 Phone 1-386-754-1987 Email office@dlwilliamsheatingandcooling.com License: CAC1816913

Project Information

For: David Styer addition, Mike Todd Construction
14495 SW Tustenuggee Ave, Ft White, FL 32038

Group 1: (N, NE, E, SE, S, SW, W, NW)

Duct Name	(N)			(NE)			(E)			(SE)		
	Reg CFM	Reg Size	Duct Size	Reg CFM	Reg Size	Duct Size	Reg CFM	Reg Size	Duct Size	Reg CFM	Reg Size	Duct Size
Supply Branches												
existing	119 h	12x12	0	119 h	12x12	0	119 h	12x12	0	119 h	12x12	0
existing-A	119 h	12x12	0	119 h	12x12	0	119 h	12x12	0	119 h	12x12	0
kitchen	81 c	12x12	0	73 c	12x12	0	68 c	12x12	0	70 c	12x12	0
kitchen-A	81 c	12x12	0	73 c	12x12	0	68 c	12x12	0	70 c	12x12	0
mbath	48 h	12x12	0	48 h	12x12	0	48 h	12x12	0	48 h	12x12	0
mbed	137 c	12x12	0	124 c	12x12	0	101 h	12x12	0	128 c	12x12	0
mcloset	40 h	12x12	0	40 h	12x12	0	40 h	12x12	0	40 h	12x12	0
storage	41 h	12x12	0	48 c	12x12	0	63 c	12x12	0	48 c	12x12	0
Return Branches												
rb2	525 c	12x12	0	525 c	12x12	0	525 c	12x12	0	525 c	12x12	0
Friction Rates												
Heating FR	0.000			0.000			0.000			0.000		
Cooling FR	0.000			0.000			0.000			0.000		



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Project Information

For: David Styer addition, Mike Todd Construction
14495 SW Tustenuggee Ave, Ft White, FL 32038

Duct Name	(S)			(SW)			(W)			(NW)		
	Reg CFM	Reg Size	Duct Size	Reg CFM	Reg Size	Duct Size	Reg CFM	Reg Size	Duct Size	Reg CFM	Reg Size	Duct Size
Supply Branches												
existing	119 h	12x12	0	119 h	12x12	0	119 h	12x12	0	119 h	12x12	0
existing-A	119 h	12x12	0	119 h	12x12	0	119 h	12x12	0	119 h	12x12	0
kitchen	76 c	12x12	0	72 c	12x12	0	69 c	12x12	0	78 c	12x12	0
kitchen-A	76 c	12x12	0	72 c	12x12	0	69 c	12x12	0	78 c	12x12	0
mbath	48 h	12x12	0	48 h	12x12	0	48 h	12x12	0	48 h	12x12	0
mbed	133 c	12x12	0	112 c	12x12	0	101 h	12x12	0	123 c	12x12	0
mcloset	40 h	12x12	0	40 h	12x12	0	40 h	12x12	0	40 h	12x12	0
storage	41 h	12x12	0	52 c	12x12	0	58 c	12x12	0	41 h	12x12	0
Return Branches												
rb2	525 c	12x12	0	525 c	12x12	0	525 c	12x12	0	525 c	12x12	0
Friction Rates												
Heating FR	0.000			0.000			0.000			0.000		
Cooling FR	0.000			0.000			0.000			0.000		



Project Information

For: David Styer addition, Mike Todd Construction
14495 SW Tustenuggee Ave, Ft White, FL 32038

Duct Name	Largest			Smallest		
	Reg CFM	Reg Size	Duct Size	Reg CFM	Reg Size	Duct Size
Supply Branches						
existing	119 h	12x12	0	119 h	12x12	0
existing-A	119 h	12x12	0	119 h	12x12	0
kitchen	81 c	12x12	0	68 c	12x12	0
kitchen-A	81 c	12x12	0	68 c	12x12	0
mbath	48 h	12x12	0	48 h	12x12	0
mbed	137 c	12x12	0	101 h	12x12	0
mcloset	40 h	12x12	0	40 h	12x12	0
storage	63 c	12x12	0	41 h	12x12	0
Return Branches						
rb2	525 c	12x12	0	525 c	12x12	0
Friction Rates						
Heating FR	0.000			0.000		
Cooling FR	0.000			0.000		



Background Color Legend

Yellow background

- Duct Size - duct size is smaller than the largest duct size in the row
- Reg Size - register size is smaller than the largest register size in the row
- Reg CFM - register design cfm is larger than 150 CFM
- Friction Rate - friction rate is outside ACCA Manual-D recommended range (0.06 - 0.18)

Pink background column header

- Largest cooling load orientation





Duct System Summary

Entire House

DL Williams Heating and Cooling LLC

Job: 1
Date: Aug 15, 2025
By:

PO Box 2156, Lake City, FL 32056 Phone: 1-386-754-1987 Email: office@dlwilliamsheatingandcooling.com License: CAC1816913

Project Information

For: David Styer addition, Mike Todd Construction
14495 SW Tustenuggee Ave, Ft White, FL 32038

	Heating	Cooling
External static pressure	0.50 in H2O	0.50 in H2O
Pressure losses	0 in H2O	0 in H2O
Available static pressure	0.50 in H2O	0.50 in H2O
Supply / return available pressure	0.250 / 0.250 in H2O	0.250 / 0.250 in H2O
Lowest friction rate	0 in/100ft	0 in/100ft
Actual air flow	525 cfm	525 cfm
Total effective length (TEL)		0 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
existing	h 1751	119	68	0	0	0x0	ShMt	0	0	
existing-A	h 1751	119	68	0	0	0x0	ShMt	0	0	
kitchen	c 2072	29	81	0	0	0x0	ShMt	0	0	
kitchen-A	c 2072	29	81	0	0	0x0	ShMt	0	0	
mbath	h 1014	48	40	0	0	0x0	ShMt	0	0	
mbed	c 3513	101	137	0	0	0x0	ShMt	0	0	
mcloset	h 592	40	23	0	0	0x0	ShMt	0	0	
storage	h 713	41	28	0	0	0x0	ShMt	0	0	

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	525	525	0	0	0	0	0x0		ShMt	



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Static Pressure and Friction Rate
Entire House
DL Williams Heating and Cooling LLC

Job: 1
Date: Aug 15, 2025
By:

PO Box 2156, Lake City, FL 32056 Phone: 1-386-754-1987 Email: office@dlwilliamsheatingandcooling.com License: CAC1816913

Project Information

For: David Styer addition, Mike Todd Construction
14495 SW Tustenuggee Ave, Ft White, FL 32038

Available Static Pressure

	Heating (in H2O)	Cooling (in H2O)
External static pressure	0.50	0.50
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	0.50	0.50

Total Effective Length

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

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 TotalEL=0
Return TotalEL=0



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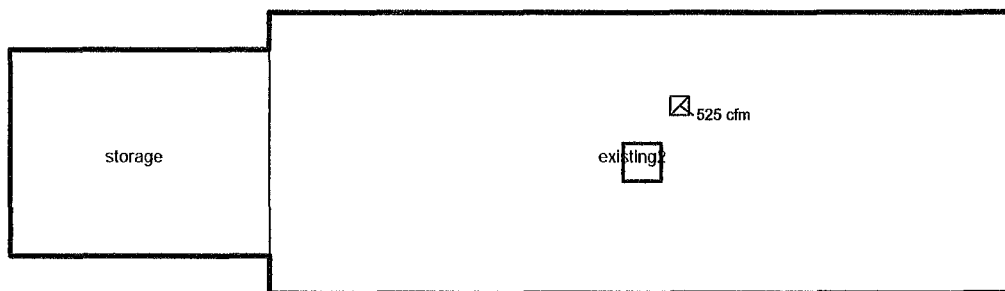
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Level 2



Job #: 1
Performed for:

David Styer addition
14495 SW Tustenuggee Ave
Ft White, FL 32038

DL Williams Heating and Cooling LLC

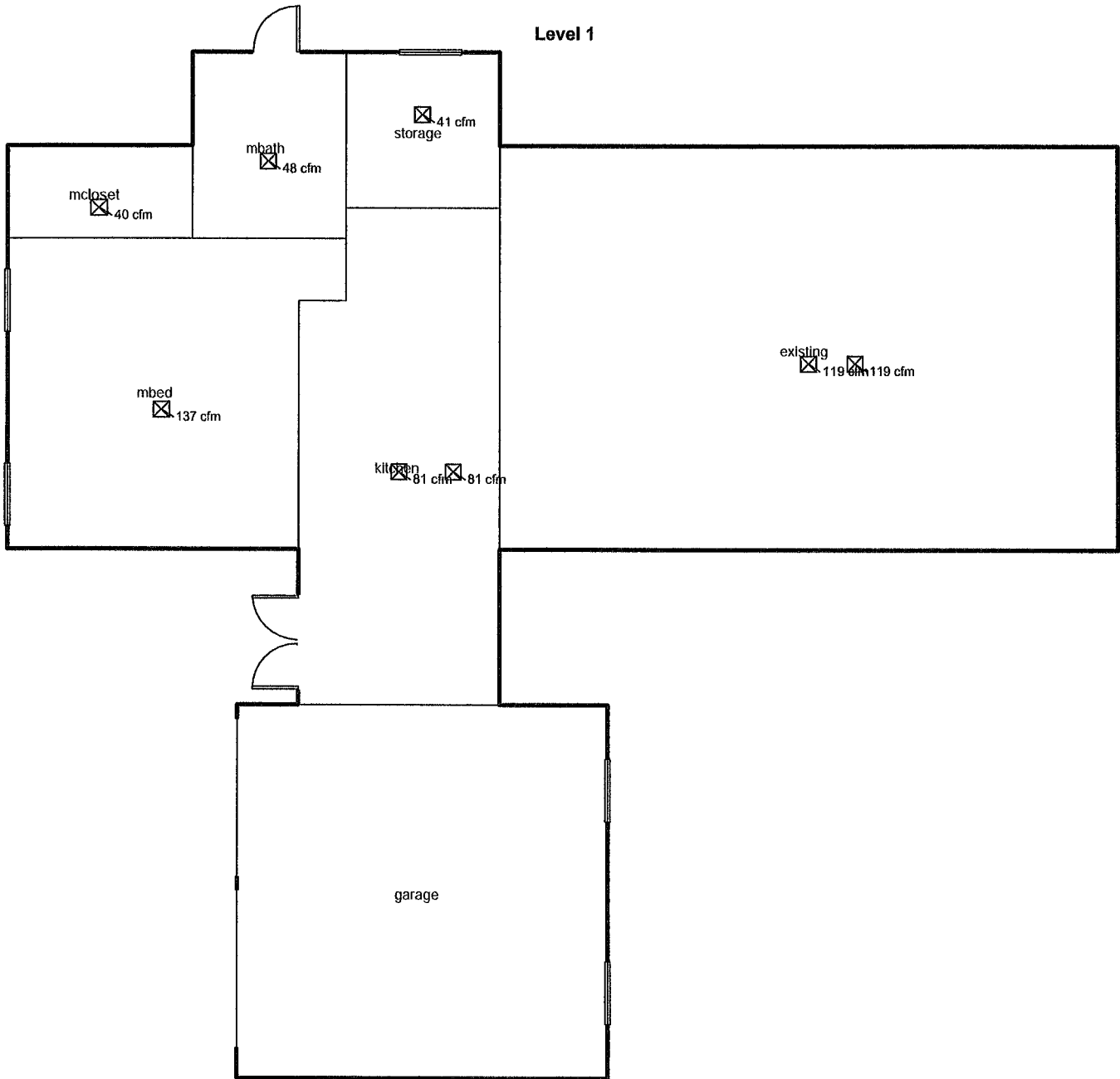
PO Box 2156
Lake City, FL 32056
Phone: 1-386-754-1987 License: CAC1816913
office@dlwilliamsheatingandcooling.com

Scale: 1 : 120

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... Todd construction Styer Res.rup



Level 1



Job #: 1
Performed for:
David Styer addition
14495 SW Tustenuggee Ave
Ft White, FL 32038

DL Williams Heating and Cooling LLC

PO Box 2156
Lake City, FL 32056
Phone 1-386-754-1987 License: CAC1816913
office@dlwilliamsheatingandcooling.com

Scale: 1 : 120

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.. Todd construction Styer Res.rup



DHW Report

Entire House

DL Williams Heating and Cooling LLC

Job: 1
Date: Aug 15, 2025
By:

PO Box 2156, Lake City, FL 32056 Phone: 1-386-754-1987 Email: office@dlwilliamsheatingandcooling.com License: CAC1816913

Project Information

For: David Styer addition, Mike Todd Construction
14495 SW Tustenuggee Ave, Ft White, FL 32038

Design Criteria

Occupants		Not occupied during the day	
Age	Number		
0-5	0	Dishwasher	
6-13	2	Clothes washer	
14-59	2	Additional use (gpd)	0
60+	0	Setpoint (°F)	120
		Daily use (gpd)	61

Electric conventional (40 gal, 0.90 EF)

Manufacturer	Tank size (gal)	40
Trade name	Energy factor	0.90
Model	Input (kWh)	0.0
AHRI ref. number	1st hour (gal)	50
	Recovery eff. (%)	98



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Manual S Compliance Report

Entire House

DL Williams Heating and Cooling LLC

Job: 1
Date: Aug 15, 2025
By:

PO Box 2156, Lake City, FL 32056 Phone: 1-386-754-1987 Email: office@dlwilliamsheatingandcooling.com License: CAC1816913

Project Information

For: David Styer addition, Mike Todd Construction
14495 SW Tustenuggee Ave, Ft White, FL 32038

Cooling Equipment

Design Conditions

Outdoor design DB:	92.0°F	Sensible gain:	13479 Btuh	Entering coil DB:	77.2°F
Outdoor design WB:	76.0°F	Latent gain:	2539 Btuh	Entering coil WB:	63.5°F
Indoor design DB:	75.0°F	Total gain:	16017 Btuh		
Indoor RH:	50%	Estimated airflow:	525 cfm		

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split ASHP		
Manufacturer:	Trane	Model:	5TWR5018A1+5TEM6B03AV21++TDR
Actual airflow:	525 cfm		
Sensible capacity:	14003 Btuh	104% of load	
Latent capacity:	3011 Btuh	119% of load	
Total capacity:	17014 Btuh	106% of load	SHR: 82%

Heating Equipment

Design Conditions

Outdoor design DB:	33.0°F	Heat loss:	21830 Btuh	Entering coil DB:	67.0°F
Indoor design DB:	68.0°F				

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split ASHP		
Manufacturer:	Trane	Model:	5TWR5018A1+5TEM6B03AV21++TDR
Actual airflow:	525 cfm		
Output capacity:	13338 Btuh	61% of load	
Supplemental heat required:	8492 Btuh		
		Capacity balance:	38 °F
		Economic balance:	-99 °F

Backup equipment type:	Elec strip		
Manufacturer:		Model:	
Actual airflow:	525 cfm		
Output capacity:	6.7 kW	105% of load	Temp. rise: 50 °F

Meets all requirements of ACCA Manual S.



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

Form
RPER 2.0

Columbia Header Information

Contractor DL Williams Heating and Cooling LLC
Mechanical license# CAC1816913
Building plan #
Home address (Street or Lot#, Block, Subdivision) 14495 SW Tustenuggee Ave, Entire House

Applicable Attachments
Manual J1 Form and Worksheet A- ☐ Yes ☐ No
OEM performance data (heating, cooling, blower) ☐ Yes ☐ No
Duct distribution sketch: ☐ Yes ☐ No
IRC Table R301.2 (climate & geographic design criteria) ☐ Yes ☐ No

HVAC LOAD CALCULATION

(IRC M1401.3)

Manual J Design Criteria and Loads

Location		Summer Design Conditions		Manual J Loads	
Elevation	164 ft	Outdoor Cooling Temp	92 °F	Total Heat Loss	21830 Btuh
Altitude Correction Factor	0.99	Indoor Cooling Temp	75 °F		
Latitude	30 °N	Cooling Temp Diff	17 °F	Sensible Heat Gain	13479 Btuh
		Indoor Summer Design RH	50 %	Latent Heat Gain	2539 Btuh
		Coincident Wet Bulb Temp	76 °F	Total Heat Gain	16017 Btuh
Winter Design Conditions					
Outdoor Winter Temp	33 °F				
Indoor Winter Temp	68 °F				
Heating Temp Diff	35 °F				

The heat loss/gain was calculated in accordance with ACCA Manual J? Y ☒ N ☐

HVAC EQUIPMENT SELECTION

(IRC M1401.3)

Heating Equipment

☐ Furnace ☐ Boiler ☒ Electric Heat
☐ Single Speed ☐ Multi Stage ☐ Modulating

Cooling Equipment

☐ Air Conditioner ☒ Heat Pump
☒ Air-to-Air ☐ Geothermal Open Loop ☐ Geothermal Closed Loop
☒ Single Speed ☐ Multi Stage ☐ Variable Speed

Model

Output	13338 Btuh	Sizing Value	21830 Btuh
Supplemental Heat	8492 Btuh	Sizing Limit	175.0 %
		Load Capacity	104.6 %

Model 5TWR5018A1+5TEM6B03AV21++TDR

Sensible	14003 Btuh	Sizing Value	16017 Btuh
Latent	3011 Btuh	Sizing Limit	115.0 %
Total	17014 Btuh	Load Capacity	106.2 %

Size Factor is within Manual S Size Limit? Y ☒ N ☐

Size Factor is within Manual S Size Limit? Y ☒ N ☐

HVAC DUCT DISTRIBUTION DESIGN

(IRC M1601.1)

Design airflow	525 cfm	Longest Supply Duct	0 ft	Duct Materials Used	
External Static Pressure (ESP)	0.50 in H2O	Longest Return Duct	0 ft	Trunk Duct	☐ Duct Board ☐ Sheet Metal
Component Pressure Loss (CPL)	0 in H2O	Total Effective Length (TEL)	0 ft		☐ Flex ☐ Lined Sheet Metal ☐ Other
Available static pressure (ASP)	0.50 in H2O	Friction Rate	0 in/100ft	Branch Duct	☐ Duct Board ☒ Sheet Metal
ESP - CPL = ASP		(ASP x 100) / TEL = Friction Rate			☐ Flex ☐ Lined Sheet Metal ☐ Other

Ducts are sized per Manual D? Y ☒ N ☐

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

Contractor's printed name: _____

Contractor's signature: _____

Date: _____