



Load Short Form

Entire House

DL Williams Heating & Cooling LLC

Job: 1
Date: 04/01/2025
By: DL Williams Heating and...
Plan: 2117

PO Box 2156, Lake City, FL 32056 Phone: 386-754-1987 Email: Office@DLWilliamsHeatingandCooling.com

Project Information

For: Preserve at Laurel Lake lot 12, Adams Homes plan 2117
Lake City, FL 32055

Design Information

	Htg	Clg	Infiltration	
Outside db (°F)	33	92	Method	Simplified
Inside db (°F)	68	75	Construction quality	Average
Design TD (°F)	35	17	Fireplaces	0
Daily range	-	M		
Inside humidity (%)	30	50		
Moisture difference (gr/lb)	8	45		

HEATING EQUIPMENT

Make Trane
Trade TRANE
Model 4TWR5036H1
AHRI ref 9126462
Efficiency 9.5 HSPF2
Heating input
Heating output 33000 Btuh @ 47°F
Temperature rise 29 °F
Actual air flow 1050 cfm
Air flow factor 0.037 cfm/Btuh
Static pressure 0.50 in H2O
Space thermostat
Capacity balance point = 30 °F

Backup:
Input = 8 kW, Output = 28188 Btuh, 100 AFUE

COOLING EQUIPMENT

Make Trane
Trade TRANE
Cond 4TWR5036H1
Coil TEM6A0C36H31++TDR
AHRI ref 9126462
Efficiency 12.5 EER2, 15 SEER2
Sensible cooling 24360 Btuh
Latent cooling 10440 Btuh
Total cooling 34800 Btuh
Actual air flow 1050 cfm
Air flow factor 0.040 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)
utility	54	79	814	3	32
lav	35	51	80	2	3
mbath	118	1688	738	63	29
dining	198	2093	2066	78	82
br4	132	2252	1458	84	58
mwic	52	76	119	3	5
mbed	252	4953	3938	184	157
foyer	108	1446	1124	54	45
wic	30	1189	400	44	16
bath2	60	1186	484	44	19
br3	129	1628	844	61	34
bath3	48	713	319	27	13
br2	168	3112	1828	116	73
hall	98	0	0	0	0

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



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...\\Trane\\Adams Home Preserve lot 94 plan 2117.rup Calc = MJ8 Front Door faces: N

Ah	13	0	0	0	0
living	368	4691	6761	175	269
kitchen	253	3060	5419	114	216
Entire House	2116	28219	26393	1050	1050
Other equip loads		0	0		
Equip. @ 0.97 RSM			25601		
Latent cooling			4212		
TOTALS	2116	28219	29813	1050	1050

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





Building Analysis

Entire House

DL Williams Heating & Cooling LLC

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Project Information

For: Preserve at Laurel Lake lot 12, Adams Homes plan 2117
Lake City, FL 32055

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

33
-
-
15.0

Cooling

92
20 (M)
76
7.5

Indoor:

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

Heating

68
35
30
8.4

Cooling

75
17
50
45.4

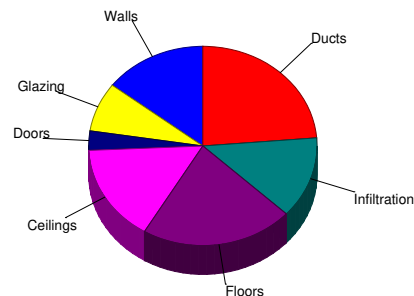
Infiltration:

Method
Construction quality
Fireplaces

Simplified
Average
0

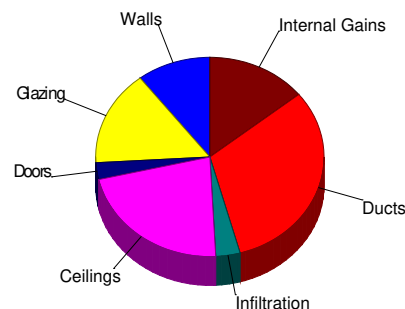
Heating

Component	Btuh/ft²	Btuh	% of load
Walls	3.2	4112	14.6
Glazing	10.5	2258	8.0
Doors	21.0	882	3.1
Ceilings	2.1	4448	15.8
Floors	2.9	6092	21.6
Infiltration	2.4	3737	13.2
Ducts		6689	23.7
Piping		0	0
Humidification		0	0
Ventilation		0	0
Adjustments		0	0
Total		28219	100.0



Cooling

Component	Btuh/ft²	Btuh	% of load
Walls	2.1	2761	10.5
Glazing	19.0	4080	15.5
Doors	17.1	718	2.7
Ceilings	2.7	5855	22.2
Floors	0	0	0
Infiltration	0.6	908	3.4
Ducts		8321	31.5
Ventilation		0	0
Internal gains		3750	14.2
Blower		0	0
Adjustments		0	0
Total		26393	100.0



Latent Cooling Load = 4212 Btuh

Overall U-value = 0.087 Btuh/ft²-°F, Window / Floor Area = 10.2 %

Data entries checked.



Component Constructions
Entire House
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Lake City, FL 32055

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 (%)		30	50
		Moisture difference (gr/lb)		8.4	45.4
		Infiltration:			
		Method		Simplified	
		Construction quality		Average	
		Fireplaces		0	
Outdoor:	Heating	Cooling			
Dry bulb (°F)	33	92			
Daily range (°F)	-	20 (M)			
Wet bulb (°F)	-	76			
Wind speed (mph)	15.0	7.5			

Construction descriptions

Walls

12C-0sw: Frm wall, stucco 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	351	0.091	13.0	3.18	1118	2.14	751
e	193	0.091	13.0	3.19	615	2.14	413
s	423	0.091	13.0	3.18	1347	2.14	905
w	324	0.091	13.0	3.18	1032	2.14	693
all	1291	0.091	13.0	3.18	4112	2.14	2761

Partitions

(none)

Windows

4A5-2ov: 2 glazing, clr low-e outr, air gas, insulated vinyl frm mat, clr innr, 1/4" gap, 1/4" thk; NFRC rated (SHGC=0.23); 50% blinds 45°, light; 50% outdoor insect screen; 1.6 ft overhang (3 ft window ht, 1 ft sep.); 6.67 ft head ht

4A5-2ov: 2 glazing, clr low-e outr, air gas, insulated vinyl frm mat, clr innr, 1/4" gap, 1/4" thk; NFRC rated (SHGC=0.23); 50% blinds 45°, light; 50% outdoor insect screen; 1.6 ft overhang (5 ft window ht, 1 ft sep.); 6.67 ft head ht

4A5-2ov: 2 glazing, clr low-e outr, air gas, insulated vinyl frm mat, clr innr, 1/4" gap, 1/4" thk; NFRC rated (SHGC=0.23); 50% blinds 45°, light; 50% outdoor insect screen; 1.6 ft overhang (6 ft window ht, 1 ft sep.); 6.67 ft head ht

4B5-2fv: 2 glazing, clr low-e outr, air gas, insulated vinyl frm mat, clr innr, 1/4" gap, 1/4" thk; NFRC rated (SHGC=0.23); 8 ft overhang (7 ft window ht, 1 ft sep.); 6.67 ft head ht

4B5-2fv: 2 glazing, clr low-e outr, air gas, insulated vinyl frm mat, clr innr, 1/4" gap, 1/4" thk; NFRC rated (SHGC=0.23); 50% outdoor insect screen; 8 ft overhang (7 ft window ht, 1 ft sep.); 6.67 ft head ht

4A5-2ov: 2 glazing, clr low-e outr, air gas, insulated vinyl frm mat, clr innr, 1/4" gap, 1/4" thk; NFRC rated (SHGC=0.23); 50% blinds 45°, light; 50% outdoor insect screen; 10 ft overhang (5 ft window ht, 1 ft sep.); 6.67 ft head ht

n	6	0.300	0	10.5	63	7.65	46
s	6	0.300	0	10.5	63	7.65	46
all	12	0.300	0	10.5	126	7.65	92
n	15	0.300	0	10.5	158	7.65	115
s	15	0.300	0	10.5	158	7.65	115
w	75	0.300	0	10.5	788	20.0	1497
all	105	0.300	0	10.5	1102	16.4	1727
e	54	0.300	0	10.5	567	20.1	1086
e	7	0.300	0	10.5	74	13.2	93
e	7	0.300	0	10.5	74	11.9	83
w	30	0.300	0	10.5	315	7.65	230

Doors

11J0: Door, mtl fbrgl type	e	21	0.600	6.3	21.0	441	17.1	359
	w	21	0.600	6.3	21.0	441	17.1	359
	all	42	0.600	6.3	21.0	882	17.1	718

Ceilings

16B-30ad: Attic ceiling, asphalt shingles roof mat, r-2 roof ins, r-30 ceil ins, 1/2" gypsum board int fnsh		1355	0.032	30.0	1.12	1518	1.66	2255
17B-6al: Rf/clg ceiling, asphalt shingles roof mat, wd cons, r-6 deck ins, 1" thkns		797	0.105	6.0	3.67	2931	4.51	3601

Floors

22A-tp1: Bg floor, light dry soil, on grade depth, carp 80% flr fnsh		176	0.989	0	34.6	6092	0	0
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Component Constructions
utility
DL Williams Heating & Cooling LLC

Job: 1
Date: 04/01/2025
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Plan: 2117

PO Box 2156, Lake City, FL 32056 Phone: 386-754-1987 Email: Office@DLWilliamsHeatingandCooling.com

Project Information

For: Preserve at Laurel Lake lot 12, Adams Homes plan 2117
Lake City, FL 32055

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 (%)	30	50
Outdoor:			Moisture difference (gr/lb)	8.4	45.4
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

Walls
(none)

Partitions
(none)

Windows
(none)

Doors
(none)

Ceilings
16B-30ad: Attic ceiling, asphalt shingles roof mat, r-2 roof ins, r-30 ceil
ins, 1/2" gypsum board int fnsh

Floors
(none)

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
	54	0.032	30.0	1.12	60	1.66	90





Component Constructions
lav
DL Williams Heating & Cooling LLC

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Design Conditions

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Gainesville Regional AP, FL, US			Indoor temperature (°F)	68	75
Elevation: 164 ft			Design TD (°F)	35	17
Latitude: 30°N			Relative humidity (%)	30	50
Outdoor:			Moisture difference (gr/lb)	8.4	45.4
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 (none)								
Partitions (none)								
Windows (none)								
Doors (none)								
Ceilings 16B-30ad: Attic ceiling, asphalt shingles roof mat, r-2 roof ins, r-30 ceil ins, 1/2" gypsum board int fnsh		35	0.032	30.0	1.12	39	1.66	58
Floors (none)								



Component Constructions

mbath

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Gainesville Regional AP, FL, US			Indoor temperature (°F)	68	75
Elevation: 164 ft			Design TD (°F)	35	17
Latitude: 30°N			Relative humidity (%)	30	50
Outdoor:			Moisture difference (gr/lb)	8.4	45.4
Heating	Cooling		Infiltration:		
Dry bulb (°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, stucco ext, 3/8" wood shth, r-13 cav ins, 1/2" gypsum board int fnsh, 2"x4" wood frm, 16" o.c. stud	n	106	0.091	13.0	3.18	338	2.14	227
Partitions (none)								
Windows								
4A5-2ov: 2 glazing, clr low-e outr, air gas, insulated vinyl frm mat, clr innr, 1/4" gap, 1/4" thk; NFRC rated (SHGC=0.23); 50% blinds 45°, light; 50% outdoor insect screen; 1.6 ft overhang (3 ft window ht, 1 ft sep.); 6.67 ft head ht	n	6	0.300	0	10.5	63	7.65	46
Doors (none)								
Ceilings								
16B-30ad: Attic ceiling, asphalt shingles roof mat, r-2 roof ins, r-30 ceil ins, 1/2" gypsum board int fnsh		118	0.032	30.0	1.12	132	1.66	196
Floors								
22A-tpl: Bg floor, light dry soil, on grade depth, carp 80% flr fnsh		14	0.989	0	34.6	485	0	0





Component Constructions

dining

DL Williams Heating & Cooling LLC

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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 (%)		30	50
		Moisture difference (gr/lb)		8.4	45.4
Outdoor:	Heating	Cooling	Infiltration:		
Dry bulb (°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

	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, stucco ext, 3/8" wood shth, r-13 cav ins, 1/2" gypsum board int fnsh, 2"x4" wood frm, 16" o.c. stud	e	52	0.091	13.0	3.18	166	2.14	111
	s	24	0.091	13.0	3.19	76	2.14	51
	all	76	0.091	13.0	3.18	242	2.14	163
Partitions (none)								
Windows								
4A5-2ov: 2 glazing, clr low-e outr, air gas, insulated vinyl frm mat, clr innr, 1/4" gap, 1/4" thk; NFRC rated (SHGC=0.23); 50% blinds 45°, light; 50% outdoor insect screen; 1.6 ft overhang (6 ft window ht, 1 ft sep.); 6.67 ft head ht	e	36	0.300	0	10.5	378	20.1	724
Doors (none)								
Ceilings								
16B-30ad: Attic ceiling, asphalt shingles roof mat, r-2 roof ins, r-30 ceil ins, 1/2" gypsum board int fnsh		198	0.032	30.0	1.12	222	1.66	329
Floors								
22A-tpl: Bg floor, light dry soil, on grade depth, carp 80% flr fnsh		14	0.989	0	34.6	485	0	0



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Component Constructions

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Latitude: 30°N			Relative humidity (%)	30	50
Outdoor:			Moisture difference (gr/lb)	8.4	45.4
			Infiltration:		
Heating			Method	Simplified	
Cooling			Construction quality	Average	
			Fireplaces	0	
Dry bulb (°F)					
Daily range (°F)					
Wet bulb (°F)					
Wind speed (mph)					

Construction descriptions

Walls

12C-0sw: Frm wall, stucco 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	56	0.091	13.0	3.18	178	2.14	120
e	70	0.091	13.0	3.18	223	2.14	150
all	126	0.091	13.0	3.18	401	2.14	269

Partitions

(none)

Windows

4A5-2ov: 2 glazing, clr low-e outr, air gas, insulated vinyl frm mat, clr innr, 1/4" gap, 1/4" thk; NFRC rated (SHGC=0.23); 50% blinds 45°, light; 50% outdoor insect screen; 1.6 ft overhang (6 ft window ht, 1 ft sep.); 6.67 ft head ht

e	18	0.300	0	10.5	189	20.1	362
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Doors

(none)

Ceilings

16B-30ad: Attic ceiling, asphalt shingles roof mat, r-2 roof ins, r-30 ceil ins, 1/2" gypsum board int fnsh

	132	0.032	30.0	1.12	148	1.66	220
--	-----	-------	------	------	-----	------	-----

Floors

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

	18	0.989	0	34.6	623	0	0
--	----	-------	---	------	-----	---	---



Component Constructions

mwic

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Wet bulb (°F)	-	76	Fireplaces	0	
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Construction descriptions

Walls
(none)

Partitions
(none)

Windows
(none)

Doors
(none)

Ceilings
16B-30ad: Attic ceiling, asphalt shingles roof mat, r-2 roof ins, r-30 ceil
ins, 1/2" gypsum board int fnsh

Floors
(none)

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
	52	0.032	30.0	1.12	58	1.66	87



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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, stucco ext, 3/8" wood shth, r-13 cav ins, 1/2" gypsum board int fnsh, 2"x4" wood frm, 16" o.c. stud	n	143	0.091	13.0	3.18	455	2.14	306
	e	10	0.091	13.0	3.18	32	2.14	21
	s	14	0.091	13.0	3.18	45	2.14	30
	w	92	0.091	13.0	3.18	293	2.14	197
	all	259	0.091	13.0	3.19	825	2.14	554
Partitions (none)								
Windows								
4A5-2ov: 2 glazing, clr low-e outr, air gas, insulated vinyl frm mat, clr innr, 1/4" gap, 1/4" thk; NFRC rated (SHGC=0.23); 50% blinds 45°, light; 50% outdoor insect screen; 1.6 ft overhang (5 ft window ht, 1 ft sep.); 6.67 ft head ht	n	15	0.300	0	10.5	158	7.65	115
	w	30	0.300	0	10.5	315	20.0	599
	all	45	0.300	0	10.5	472	15.9	714
Doors (none)								
Ceilings								
16B-30ad: Attic ceiling, asphalt shingles roof mat, r-2 roof ins, r-30 ceil ins, 1/2" gypsum board int fnsh		112	0.032	30.0	1.12	125	1.66	186
17B-6al: Rf/clg ceiling, asphalt shingles roof mat, wd cons, r-6 deck ins, 1" thkns		140	0.105	6.0	3.67	514	4.51	632
Floors								
22A-tpl: Bg floor, light dry soil, on grade depth, carp 80% flr fnsh		32	0.989	0	34.6	1108	0	0



Component Constructions

foyer

DL Williams Heating & Cooling LLC

Job: 1
Date: 04/01/2025
By: DL Williams Heating and...
Plan: 2117

PO Box 2156, Lake City, FL 32056 Phone: 386-754-1987 Email: Office@DLWilliamsHeatingandCooling.com

Project Information

For: Preserve at Laurel Lake lot 12, Adams Homes plan 2117
Lake City, FL 32055

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 (%)	30	50
Outdoor:			Moisture difference (gr/lb)	8.4	45.4
Heating	Cooling		Infiltration:		
Dry bulb (°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, stucco ext, 3/8" wood shth, r-13 cav ins, 1/2" gypsum board int fnsh, 2"x4" wood frm, 16" o.c. stud	e	13	0.091	13.0	3.18	41	2.14	28
Partitions (none)								
Windows								
4B5-2fv: 2 glazing, clr low-e outr, air gas, insulated vinyl frm mat, clr innr, 1/4" gap, 1/4" thk; NFRC rated (SHGC=0.23); 8 ft overhang (7 ft window ht, 1 ft sep.); 6.67 ft head ht	e	7	0.300	0	10.5	74	13.2	93
4B5-2fv: 2 glazing, clr low-e outr, air gas, insulated vinyl frm mat, clr innr, 1/4" gap, 1/4" thk; NFRC rated (SHGC=0.23); 50% outdoor insect screen; 8 ft overhang (7 ft window ht, 1 ft sep.); 6.67 ft head ht	e	7	0.300	0	10.5	74	11.9	83
Doors								
11J0: Door, mtl fbrgl type	e	21	0.600	6.3	21.0	441	17.1	359
Ceilings								
16B-30ad: Attic ceiling, asphalt shingles roof mat, r-2 roof ins, r-30 ceil ins, 1/2" gypsum board int fnsh		108	0.032	30.0	1.12	121	1.66	180
Floors								
22A-tp1: Bg floor, light dry soil, on grade depth, carp 80% flr fnsh		6	0.989	0	34.6	208	0	0



Component Constructions

wic
DL Williams Heating & Cooling LLC

Job: 1
Date: 04/01/2025
By: DL Williams Heating and...
Plan: 2117

PO Box 2156, Lake City, FL 32056 Phone: 386-754-1987 Email: Office@DLWilliamsHeatingandCooling.com

Project Information

For: Preserve at Laurel Lake lot 12, Adams Homes plan 2117
Lake City, FL 32055

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 (%)	30	50
Outdoor:			Moisture difference (gr/lb)	8.4	45.4
Heating	Cooling		Infiltration:		
Dry bulb (°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, stucco ext, 3/8" wood shth, r-13 cav ins, 1/2" gypsum board int fnsh, 2"x4" wood frm, 16" o.c. stud	e	48	0.091	13.0	3.19	153	2.14	103
	s	40	0.091	13.0	3.18	127	2.14	86
	all	88	0.091	13.0	3.18	280	2.14	188
Partitions (none)								
Windows (none)								
Doors (none)								
Ceilings								
16B-30ad: Attic ceiling, asphalt shingles roof mat, r-2 roof ins, r-30 ceil ins, 1/2" gypsum board int fnsh		30	0.032	30.0	1.12	34	1.66	50
Floors								
22A-tp1: Bg floor, light dry soil, on grade depth, carp 80% flr fnsh		11	0.989	0	34.6	381	0	0



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...Trane\Adams Home Preserve lot 94 plan 2117.rup Calc = MJ8 Front Door faces: N



Component Constructions

bath2

DL Williams Heating & Cooling LLC

Job: 1
Date: 04/01/2025
By: DL Williams Heating and...
Plan: 2117

PO Box 2156, Lake City, FL 32056 Phone: 386-754-1987 Email: Office@DLWilliamsHeatingandCooling.com

Project Information

For: Preserve at Laurel Lake lot 12, Adams Homes plan 2117
Lake City, FL 32055

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 (%)	30	50
			Moisture difference (gr/lb)	8.4	45.4
Outdoor:	Heating	Cooling	Infiltration:		
Dry bulb (°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, stucco ext, 3/8" wood shth, r-13 cav ins, 1/2" gypsum board int fnsh, 2"x4" wood frm, 16" o.c. stud	s	74	0.091	13.0	3.18	236	2.14	158
Partitions								
(none)								
Windows								
4A5-2ov: 2 glazing, clr low-e outr, air gas, insulated vinyl frm mat, clr innr, 1/4" gap, 1/4" thk; NFRC rated (SHGC=0.23); 50% blinds 45°, light; 50% outdoor insect screen; 1.6 ft overhang (3 ft window ht, 1 ft sep.); 6.67 ft head ht	s	6	0.300	0	10.5	63	7.65	46
Doors								
(none)								
Ceilings								
16B-30ad: Attic ceiling, asphalt shingles roof mat, r-2 roof ins, r-30 ceil ins, 1/2" gypsum board int fnsh		60	0.032	30.0	1.12	67	1.66	100
Floors								
22A-tp1: Bg floor, light dry soil, on grade depth, carp 80% flr fnsh		10	0.989	0	34.6	346	0	0



Component Constructions

br3

DL Williams Heating & Cooling LLC

Job: 1
Date: 04/01/2025
By: DL Williams Heating and...
Plan: 2117

PO Box 2156, Lake City, FL 32056 Phone: 386-754-1987 Email: Office@DLWilliamsHeatingandCooling.com

Project Information

For: Preserve at Laurel Lake lot 12, Adams Homes plan 2117
Lake City, FL 32055

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 (%)	30	50
			Moisture difference (gr/lb)	8.4	45.4
Outdoor:	Heating	Cooling	Infiltration:		
Dry bulb (°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, stucco ext, 3/8" wood shth, r-13 cav ins, 1/2" gypsum board int fnsh, 2"x4" wood frm, 16" o.c. stud	s	81	0.091	13.0	3.18	258	2.14	173
Partitions								
(none)								
Windows								
4A5-2ov: 2 glazing, clr low-e outr, air gas, insulated vinyl frm mat, clr innr, 1/4" gap, 1/4" thk; NFRC rated (SHGC=0.23); 50% blinds 45°, light; 50% outdoor insect screen; 1.6 ft overhang (5 ft window ht, 1 ft sep.); 6.67 ft head ht	s	15	0.300	0	10.5	158	7.65	115
Doors								
(none)								
Ceilings								
16B-30ad: Attic ceiling, asphalt shingles roof mat, r-2 roof ins, r-30 ceil ins, 1/2" gypsum board int fnsh		129	0.032	30.0	1.12	144	1.66	215
Floors								
22A-tpl: Bg floor, light dry soil, on grade depth, carp 80% flr fnsh		12	0.989	0	34.6	415	0	0



Component Constructions

bath3

DL Williams Heating & Cooling LLC

Job: 1
Date: 04/01/2025
By: DL Williams Heating and...
Plan: 2117

PO Box 2156, Lake City, FL 32056 Phone: 386-754-1987 Email: Office@DLWilliamsHeatingandCooling.com

Project Information

For: Preserve at Laurel Lake lot 12, Adams Homes plan 2117
Lake City, FL 32055

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 (%)	30	50
Outdoor:			Moisture difference (gr/lb)	8.4	45.4
			Infiltration:		
Heating			Method	Simplified	
Cooling			Construction quality	Average	
			Fireplaces	0	
Dry bulb (°F)	33	92			
Daily range (°F)	-	20 (M)			
Wet bulb (°F)	-	76			
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, stucco ext, 3/8" wood shth, r-13 cav ins, 1/2" gypsum board int fnsh, 2"x4" wood frm, 16" o.c. stud	s	48	0.091	13.0	3.19	153	2.14	103
Partitions								
(none)								
Windows								
(none)								
Doors								
(none)								
Ceilings								
16B-30ad: Attic ceiling, asphalt shingles roof mat, r-2 roof ins, r-30 ceil ins, 1/2" gypsum board int fnsh		48	0.032	30.0	1.12	54	1.66	80
Floors								
22A-tpl: Bg floor, light dry soil, on grade depth, carp 80% flr fnsh		6	0.989	0	34.6	208	0	0



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Component Constructions

br2

DL Williams Heating & Cooling LLC

Job: 1
Date: 04/01/2025
By: DL Williams Heating and...
Plan: 2117

PO Box 2156, Lake City, FL 32056 Phone: 386-754-1987 Email: Office@DLWilliamsHeatingandCooling.com

Project Information

For: Preserve at Laurel Lake lot 12, Adams Homes plan 2117
Lake City, FL 32055

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 (%)		30	50
		Moisture difference (gr/lb)		8.4	45.4
Outdoor:		Heating	Cooling		
Dry bulb (°F)		33	92		
Daily range (°F)		-	20 (M)		
Wet bulb (°F)		-	76		
Wind speed (mph)		15.0	7.5		
		Infiltration:		Heating	Cooling
		Method		Simplified	
		Construction quality		Average	
		Fireplaces		0	

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, stucco ext, 3/8" wood shth, r-13 cav ins, 1/2" gypsum board int fnsh, 2"x4" wood frm, 16" o.c. stud	s	96	0.091	13.0	3.19	306	2.14	205
	w	97	0.091	13.0	3.19	309	2.14	207
	all	193	0.091	13.0	3.19	615	2.14	413

Partitions

(none)

Windows

4A5-2ov: 2 glazing, clr low-e outr, air gas, insulated vinyl frm mat, clr innr, 1/4" gap, 1/4" thk; NFRC rated (SHGC=0.23); 50% blinds 45°, light; 50% outdoor insect screen; 1.6 ft overhang (5 ft window ht, 1 ft sep.); 6.67 ft head ht	w	15	0.300	0	10.5	158	20.0	299
--	---	----	-------	---	------	-----	------	-----

Doors

(none)

Ceilings

16B-30ad: Attic ceiling, asphalt shingles roof mat, r-2 roof ins, r-30 ceil ins, 1/2" gypsum board int fnsh		168	0.032	30.0	1.12	188	1.66	280
---	--	-----	-------	------	------	-----	------	-----

Floors

22A-tpl: Bg floor, light dry soil, on grade depth, carp 80% flr fnsh		26	0.989	0	34.6	900	0	0
--	--	----	-------	---	------	-----	---	---



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Component Constructions
hall
DL Williams Heating & Cooling LLC

Job: 1
Date: 04/01/2025
By: DL Williams Heating and...
Plan: 2117

PO Box 2156, Lake City, FL 32056 Phone: 386-754-1987 Email: Office@DLWilliamsHeatingandCooling.com

Project Information

For: Preserve at Laurel Lake lot 12, Adams Homes plan 2117
Lake City, FL 32055

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 (%)	30	50
Outdoor:			Moisture difference (gr/lb)	8.4	45.4
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

Walls
(none)

Partitions
(none)

Windows
(none)

Doors
(none)

Ceilings
16B-30ad: Attic ceiling, asphalt shingles roof mat, r-2 roof ins, r-30 ceil
ins, 1/2" gypsum board int fnsh

Floors
(none)

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
	98	0.032	30.0	1.12	110	1.66	163





Component Constructions

Ah

DL Williams Heating & Cooling LLC

Job: 1
Date: 04/01/2025
By: DL Williams Heating and...
Plan: 2117

PO Box 2156, Lake City, FL 32056 Phone: 386-754-1987 Email: Office@DLWilliamsHeatingandCooling.com

Project Information

For: Preserve at Laurel Lake lot 12, Adams Homes plan 2117
Lake City, FL 32055

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 (%)	30	50
Outdoor:			Moisture difference (gr/lb)	8.4	45.4
			Infiltration:		
Heating			Method	Simplified	
Cooling			Construction quality	Average	
			Fireplaces	0	
Drybulb (°F)	33	92			
Daily range (°F)	-	20 (M)			
Wet bulb (°F)	-	76			
Wind speed (mph)	15.0	7.5			

Construction descriptions

Walls
(none)

Partitions
(none)

Windows
(none)

Doors
(none)

Ceilings
16B-30ad: Attic ceiling, asphalt shingles roof mat, r-2 roof ins, r-30 ceil
ins, 1/2" gypsum board int fnsh

Floors
(none)

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
	13	0.032	30.0	1.12	15	1.66	22



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Component Constructions

living

DL Williams Heating & Cooling LLC

Job: 1
Date: 04/01/2025
By: DL Williams Heating and...
Plan: 2117

PO Box 2156, Lake City, FL 32056 Phone: 386-754-1987 Email: Office@DLWilliamsHeatingandCooling.com

Project Information

For: Preserve at Laurel Lake lot 12, Adams Homes plan 2117
Lake City, FL 32055

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 (%)		30	50
		Moisture difference (gr/lb)		8.4	45.4
Outdoor:		Heating	Cooling		
Dry bulb (°F)		33	92		
Daily range (°F)		-	20 (M)		
Wet bulb (°F)		-	76		
Wind speed (mph)		15.0	7.5		
		Infiltration:		Heating	Cooling
		Method		Simplified	
		Construction quality		Average	
		Fireplaces		0	

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, stucco ext, 3/8" wood shth, r-13 cav ins, 1/2" gypsum board int fnsh, 2"x4" wood frm, 16" o.c. stud	s	46	0.091	13.0	3.18	147	2.14	98
	w	77	0.091	13.0	3.18	245	2.14	165
	all	123	0.091	13.0	3.18	392	2.14	263
Partitions (none)								
Windows								
4A5-2ov: 2 glazing, clr low-e outr, air gas, insulated vinyl frm mat, clr innr, 1/4" gap, 1/4" thk; NFRC rated (SHGC=0.23); 50% blinds 45°, light; 50% outdoor insect screen; 10 ft overhang (5 ft window ht, 1 ft sep.); 6.67 ft head ht	w	30	0.300	0	10.5	315	7.65	230
Doors								
11J0: Door, mtl fbrgl type	w	21	0.600	6.3	21.0	441	17.1	359
Ceilings								
17B-6al: Rf/clg ceiling, asphalt shingles roof mat, wd cons, r-6 deck ins, 1" thkns		390	0.105	6.0	3.67	1432	4.51	1759
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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...Trane\Adams Home Preserve lot 94 plan 2117.rup Calc = MJ8 Front Door faces: N

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Component Constructions

kitchen

DL Williams Heating & Cooling LLC

Job: 1
Date: 04/01/2025
By: DL Williams Heating and...
Plan: 2117

PO Box 2156, Lake City, FL 32056 Phone: 386-754-1987 Email: Office@DLWilliamsHeatingandCooling.com

Project Information

For: Preserve at Laurel Lake lot 12, Adams Homes plan 2117
Lake City, FL 32055

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 (%)	30	50
Outdoor:			Moisture difference (gr/lb)	8.4	45.4
			Infiltration:		
Heating			Method	Simplified	
Cooling			Construction quality	Average	
			Fireplaces	0	
Dry bulb (°F)	33	92			
Daily range (°F)	-	20 (M)			
Wet bulb (°F)	-	76			
Wind speed (mph)	15.0	7.5			

Construction descriptions

Walls

12C-0sw: Frm wall, stucco 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	46	0.091	13.0	3.18	147	2.14	98
w	58	0.091	13.0	3.18	185	2.14	124
all	104	0.091	13.0	3.18	331	2.14	222

Partitions

(none)

Windows

4A5-2ov: 2 glazing, clr low-e outr, air gas, insulated vinyl frm mat, clr innr, 1/4" gap, 1/4" thk; NFRC rated (SHGC=0.23); 50% blinds 45°, light; 50% outdoor insect screen; 1.6 ft overhang (5 ft window ht, 1 ft sep.); 6.67 ft head ht

w	30	0.300	0	10.5	315	20.0	599
---	----	-------	---	------	-----	------	-----

Doors

(none)

Ceilings

17B-6al: Rf/clg ceiling, asphalt shingles roof mat, wd cons, r-6 deck ins, 1" thkns

	268	0.105	6.0	3.68	984	4.51	1209
--	-----	-------	-----	------	-----	------	------

Floors

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

	11	0.989	0	34.6	381	0	0
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Project Summary

Entire House

DL Williams Heating & Cooling LLC

Job: 1
Date: 04/01/2025
By: DL Williams Heating and...
Plan: 2117

PO Box 2156, Lake City, FL 32056 Phone: 386-754-1987 Email: Office@DLWilliamsHeatingandCooling.com

Project Information

For: Preserve at Laurel Lake lot 12, Adams Homes plan 2117
Lake City, FL 32055

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 21529 Btuh
Ducts (R-6.0) 6689 Btuh
Central vent (0 cfm) 0 Btuh

Humidification 0 Btuh
Piping 0 Btuh
Equipment load 28219 Btuh

Infiltration

Method Simplified
Construction quality Average
Fireplaces 0

	Heating	Cooling
Area (ft ²)	2116	2116
Volume (ft ³)	18310	18310
Air changes/hour	0.32	0.16
Equiv. AVF (cfm)	98	49

Heating Equipment Summary

Make Trane
Trade TRANE
Model 4TWR5036H1
AHRI ref 9126462

Efficiency 9.5 HSPF2
Heating input
Heating output 33000 Btuh @ 47°F
Temperature rise 29 °F
Actual air flow 1050 cfm
Air flow factor 0.037 cfm/Btuh
Static pressure 0.50 in H2O
Space thermostat
Capacity balance point = 30 °F

Backup:
Input = 8 kW, Output = 28188 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 18072 Btuh
Ducts (R-6.0) 8321 Btuh
Central vent (0 cfm) 0 Btuh

Blower 0 Btuh

Use manufacturer's data n
Rate/swing multiplier 0.97
Equipment sensible load 25601 Btuh

Latent Cooling Equipment Load Sizing

Structure 2500 Btuh
Ducts 1712 Btuh
Central vent (0 cfm) 0 Btuh

Equipment latent load 4212 Btuh

Equipment Total Load (Sen+Lat) 29813 Btuh
Req. total capacity at 0.70 SHR 3.0 ton

Cooling Equipment Summary

Make Trane
Trade TRANE
Cond 4TWR5036H1
Coil TEM6A0C36H31++TDR
AHRI ref 9126462

Efficiency 12.5 EER2, 15 SEER2
Sensible cooling 24360 Btuh
Latent cooling 10440 Btuh
Total cooling 34800 Btuh
Actual air flow 1050 cfm
Air flow factor 0.040 cfm/Btuh
Static pressure 0.50 in H2O
Load sensible heat ratio 0.86

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



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...\\Trane\\Adams Home Preserve lot 94 plan 2117.rup Calc = MJ8 Front Door faces: N



AED Assessment
Entire House
DL Williams Heating & Cooling LLC

Job: 1
Date: 04/01/2025
By: DL Williams Heating and...
Plan: 2117

PO Box 2156, Lake City, FL 32056 Phone: 386-754-1987 Email: Office@DLWilliamsHeatingandCooling.com

Project Information

For: Preserve at Laurel Lake lot 12, Adams Homes plan 2117
Lake City, FL 32055

Design Conditions

Location:

Gainesville 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
30
8.4

Cooling

75
17
50
45.4

Outdoor:

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

Heating

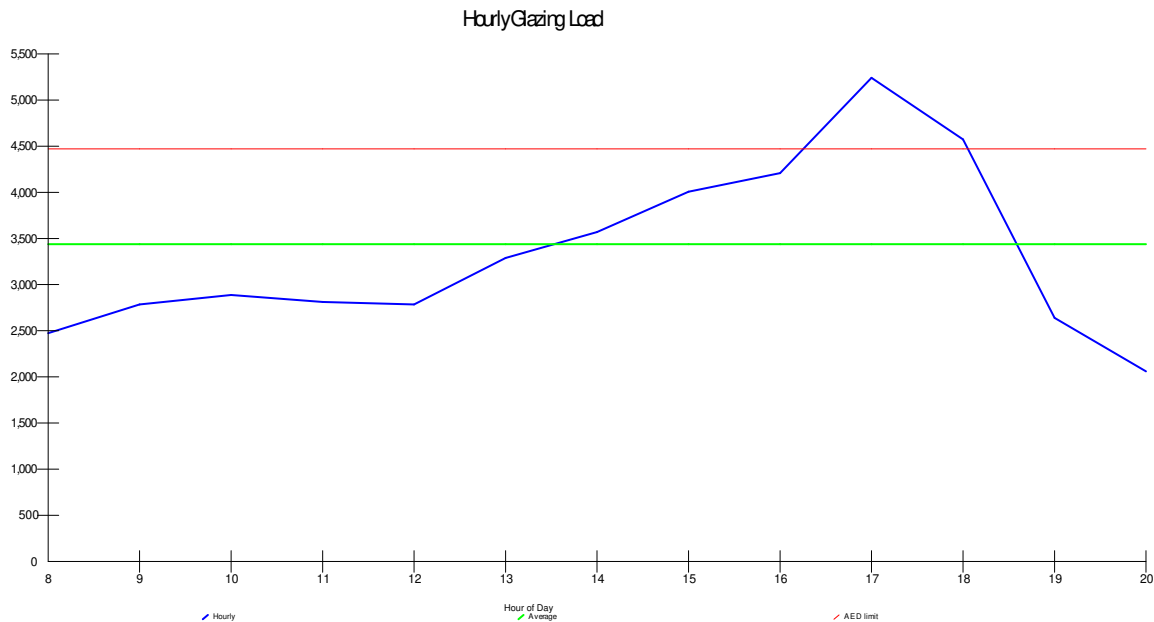
33
-
-
15.0

Cooling

92
20 (M)
76
7.5

Infiltration:

Test for Adequate Exposure Diversity



Maximum hourly glazing load exceeds average by 52.4%.

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

AED excursion: 770 Btuh (PFG - 1.3*AFG)



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

Job: 1
Date: 04/01/2025
By: DL Williams Heating and Co...
Plan: 2117

PO Box 2156, Lake City, FL 32056 Phone: 386-754-1987 Email: Office@DLWilliamsHeatingandCooling.com

1	Room name					Entire House					utility			
2	Exposed wall					176.0 ft					0 ft			
3	Room height					8.7 ft					8.0 ft			
4	Room dimensions										6.0 x 9.0 ft			
5	Room area					2116.0 ft²					54.0 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	372	351	1118	751	0	0	0	0
.	G	4A5-2ov	0.300	n	10.50	7.65	6	0	63	46	0	0	0	0
.	G	4A5-2ov	0.300	n	10.50	7.65	15	0	158	115	0	0	0	0
11	W	12C-0sw	0.091	e	3.18	2.14	282	193	615	413	0	0	0	0
	G	4A5-2ov	0.300	e	10.50	20.11	54	6	567	1086	0	0	0	0
	G	4B5-2fv	0.300	e	10.50	13.24	7	11	74	93	0	0	0	0
	G	4B5-2fv	0.300	e	10.50	11.91	7	11	74	83	0	0	0	0
	D	11J0	0.600	e	21.00	17.10	21	21	441	359	0	0	0	0
	W	12C-0sw	0.091	s	3.18	2.14	444	423	1347	905	0	0	0	0
	G	4A5-2ov	0.300	s	10.50	7.65	6	12	63	46	0	0	0	0
	G	4A5-2ov	0.300	s	10.50	7.65	15	30	158	115	0	0	0	0
	W	12C-0sw	0.091	w	3.18	2.14	450	324	1032	693	0	0	0	0
	G	4A5-2ov	0.300	w	10.50	19.97	75	10	788	1497	0	0	0	0
	G	4A5-2ov	0.300	w	10.50	7.65	30	60	315	230	0	0	0	0
D	11J0	0.600	w	21.00	17.10	21	21	441	359	0	0	0	0	
C	16B-30ad	0.032	-	1.12	1.66	1355	1355	1518	2255	54	54	60	90	
C	17B-6al	0.105	-	3.67	4.51	797	797	2931	3601	0	0	0	0	
F	22A-tpl	0.989	-	34.62	0.00	2116	176	6092	0	54	0	0	0	

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



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

Job: 1
Date: 04/01/2025
By: DL Williams Heating and Co...
Plan: 2117

PO Box 2156, Lake City, FL 32056 Phone: 386-754-1987 Email: Office@DLWilliamsHeatingandCooling.com

1	Room name					lav					mbath				
2	Exposed wall					0 ft					14.0 ft				
3	Room height					8.0 ft					8.0 ft				
4	Room dimensions					5.0 x 7.0 ft					1.0 x 118.0 ft				
5	Room area					35.0 ft²					118.0 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	0	0	0	0	112	106	338	227	
.	G	4A5-2ov	0.300	n	10.50	7.65	0	0	0	0	6	0	63	46	
.	G	4A5-2ov	0.300	n	10.50	7.65	0	0	0	0	0	0	0	0	
11	W	12C-0sw	0.091	e	3.18	2.14	0	0	0	0	0	0	0	0	
	G	4A5-2ov	0.300	e	10.50	20.11	0	0	0	0	0	0	0	0	
	G	4B5-2fv	0.300	e	10.50	13.24	0	0	0	0	0	0	0	0	
	G	4B5-2fv	0.300	e	10.50	11.91	0	0	0	0	0	0	0	0	
	D	11J0	0.600	e	21.00	17.10	0	0	0	0	0	0	0	0	
	W	12C-0sw	0.091	s	3.18	2.14	0	0	0	0	0	0	0	0	
	G	4A5-2ov	0.300	s	10.50	7.65	0	0	0	0	0	0	0	0	
	G	4A5-2ov	0.300	s	10.50	7.65	0	0	0	0	0	0	0	0	
	W	12C-0sw	0.091	w	3.18	2.14	0	0	0	0	0	0	0	0	
	G	4A5-2ov	0.300	w	10.50	19.97	0	0	0	0	0	0	0	0	
	G	4A5-2ov	0.300	w	10.50	7.65	0	0	0	0	0	0	0	0	
.	D	11J0	0.600	w	21.00	17.10	0	0	0	0	0	0	0	0	
C	16B-30ad	0.032	-	1.12	1.66	35	35	39	58	118	118	132	196		
C	17B-6al	0.105	-	3.67	4.51	0	0	0	0	0	0	0	0		
F	22A-tpl	0.989	-	34.62	0.00	35	0	0	0	118	14	485	0		
												</			

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

Job: 1
Date: 04/01/2025
By: DL Williams Heating and Co...
Plan: 2117

PO Box 2156, Lake City, FL 32056 Phone: 386-754-1987 Email: Office@DLWilliamsHeatingandCooling.com

1	Room name					dining					br4				
2	Exposed wall					14.0 ft					18.0 ft				
3	Room height					8.0 ft					8.0 ft				
4	Room dimensions					11.0 x 18.0 ft					11.0 x 12.0 ft				
5	Room area					198.0 ft²					132.0 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	0	0	0	0	56	56	178	120	
	G	4A5-2ov	0.300	n	10.50	7.65	0	0	0	0	0	0	0	0	
	G	4A5-2ov	0.300	n	10.50	7.65	0	0	0	0	0	0	0	0	
11	W	12C-0sw	0.091	e	3.18	2.14	88	52	166	111	88	70	223	150	
	G	4A5-2ov	0.300	e	10.50	20.11	36	2	378	724	18	1	189	362	
	G	4B5-2fv	0.300	e	10.50	13.24	0	0	0	0	0	0	0	0	
	G	4B5-2fv	0.300	e	10.50	11.91	0	0	0	0	0	0	0	0	
	D	11J0	0.600	e	21.00	17.10	0	0	0	0	0	0	0	0	
	W	12C-0sw	0.091	s	3.18	2.14	24	24	76	51	0	0	0	0	
	G	4A5-2ov	0.300	s	10.50	7.65	0	0	0	0	0	0	0	0	
	G	4A5-2ov	0.300	s	10.50	7.65	0	0	0	0	0	0	0	0	
	W	12C-0sw	0.091	w	3.18	2.14	0	0	0	0	0	0	0	0	
	G	4A5-2ov	0.300	w	10.50	19.97	0	0	0	0	0	0	0	0	
	G	4A5-2ov	0.300	w	10.50	7.65	0	0	0	0	0	0	0	0	
	D	11J0	0.600	w	21.00	17.10	0	0	0	0	0	0	0	0	
	C	16B-30ad	0.032	-	1.12	1.66	198	198	222	329	132	132	148	220	
	C	17B-6al	0.105	-	3.67	4.51	0	0	0	0	0	0	0	0	
	F	22A-tpl	0.989	-	34.62	0.00	198	14	485	0	132	18	623	0	
6	c) AED excursion									133				50	
	Envelope loss/gain								1326	1349			1361	901	
12	a) Infiltration								270	66			348	84	
	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)								1597	1414			1709	986	
	Less external load								0	0			0	0	
	Less transfer								0	0			0	0	
	Redistribution								0	0			9	13	
14	Subtotal								1597	1414			1718	999	
15	Duct loads						31%	46%	496	651	31%	46%	534	460	
	Total room load								2093	2066			2252	1458	
	Air required (cfm)								78	82			84	58	

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



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

Job: 1
Date: 04/01/2025
By: DL Williams Heating and Co...
Plan: 2117

PO Box 2156, Lake City, FL 32056 Phone: 386-754-1987 Email: Office@DLWilliamsHeatingandCooling.com

1	Room name					mwic 0 ft					mbed 32.0 ft				
2	Exposed wall					8.0 ft					8.6 ft				
3	Room height					1.0					14.0				
4	Room dimensions					52.0 ft					252.0 ft				
5	Room area					52.0 ft²					252.0 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	0	0	0	0	158	143	455	306	
.	G	4A5-2ov	0.300	n	10.50	7.65	0	0	0	0	0	0	0	0	
.	G	4A5-2ov	0.300	n	10.50	7.65	0	0	0	0	15	0	158	115	
11	W	12C-0sw	0.091	e	3.18	2.14	0	0	0	0	10	10	32	21	
	G	4A5-2ov	0.300	e	10.50	20.11	0	0	0	0	0	0	0	0	
	G	4B5-2fv	0.300	e	10.50	13.24	0	0	0	0	0	0	0	0	
	G	4B5-2fv	0.300	e	10.50	11.91	0	0	0	0	0	0	0	0	
	D	11J0	0.600	e	21.00	17.10	0	0	0	0	0	0	0	0	
	W	12C-0sw	0.091	s	3.18	2.14	0	0	0	0	14	14	45	30	
	G	4A5-2ov	0.300	s	10.50	7.65	0	0	0	0	0	0	0	0	
	G	4A5-2ov	0.300	s	10.50	7.65	0	0	0	0	0	0	0	0	
	W	12C-0sw	0.091	w	3.18	2.14	0	0	0	0	122	92	293	197	
	G	4A5-2ov	0.300	w	10.50	19.97	0	0	0	0	30	2	315	599	
	G	4A5-2ov	0.300	w	10.50	7.65	0	0	0	0	0	0	0	0	
.	D	11J0	0.600	w	21.00	17.10	0	0	0	0	0	0	0	0	
.	C	16B-30ad	0.032	-	1.12	1.66	52	52	58	87	112	112	125	186	
.	C	17B-6al	0.105	-	3.67	4.51	0	0	0	0	140	140	514	632	
.	F	22A-tpl	0.989	-	34.62	0.00	52	0	0	0	252	32	1108	0	

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



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

Job: 1
Date: 04/01/2025
By: DL Williams Heating and Co...
Plan: 2117

PO Box 2156, Lake City, FL 32056 Phone: 386-754-1987 Email: Office@DLWilliamsHeatingandCooling.com

1	Room name					foyer 6.0 ft					wic 11.0 ft				
2	Exposed wall					8.0 ft					8.0 ft				
3	Room height					1.0					6.0				
4	Room dimensions					108.0 ft					30.0 ft				
5	Room area					108.0 ft²					30.0 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	0	0	0	0	0	0	0	0	
.	G	4A5-2ov	0.300	n	10.50	7.65	0	0	0	0	0	0	0	0	
.	G	4A5-2ov	0.300	n	10.50	7.65	0	0	0	0	0	0	0	0	
11	W	12C-0sw	0.091	e	3.18	2.14	48	13	41	28	48	48	153	103	
	G	4A5-2ov	0.300	e	10.50	20.11	0	0	0	0	0	0	0	0	
	G	4B5-2fv	0.300	e	10.50	13.24	7	6	74	93	0	0	0	0	
	G	4B5-2fv	0.300	e	10.50	11.91	7	6	74	83	0	0	0	0	
	D	11J0	0.600	e	21.00	17.10	21	21	441	359	0	0	0	0	
	W	12C-0sw	0.091	s	3.18	2.14	0	0	0	0	40	40	127	86	
	G	4A5-2ov	0.300	s	10.50	7.65	0	0	0	0	0	0	0	0	
	G	4A5-2ov	0.300	s	10.50	7.65	0	0	0	0	0	0	0	0	
	W	12C-0sw	0.091	w	3.18	2.14	0	0	0	0	0	0	0	0	
	G	4A5-2ov	0.300	w	10.50	19.97	0	0	0	0	0	0	0	0	
	G	4A5-2ov	0.300	w	10.50	7.65	0	0	0	0	0	0	0	0	
D	11J0	0.600	w	21.00	17.10	0	0	0	0	0	0	0	0		
C	16B-30ad	0.032	-	1.12	1.66	108	108	121	180	30	30	34	50		
C	17B-6al	0.105	-	3.67	4.51	0	0	0	0	0	0	0	0		
F	22A-tpl	0.989	-	34.62	0.00	108	6	208	0	30	11	381	0		

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



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...Trane\Adams Home Preserve lot 94 plan 2117.rup Calc = MJ8 Front Door faces: N

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

Job: 1
Date: 04/01/2025
By: DL Williams Heating and Co...
Plan: 2117

PO Box 2156, Lake City, FL 32056 Phone: 386-754-1987 Email: Office@DLWilliamsHeatingandCooling.com

1	Room name					bath2					br3				
2	Exposed wall					10.0 ft					12.0 ft				
3	Room height					8.0 ft					8.0 ft				
4	Room dimensions					6.0 x 10.0 ft					1.0 x 129.0 ft				
5	Room area					60.0 ft²					129.0 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	0	0	0	0	0	0	0	0	
.	G	4A5-2ov	0.300	n	10.50	7.65	0	0	0	0	0	0	0	0	
.	G	4A5-2ov	0.300	n	10.50	7.65	0	0	0	0	0	0	0	0	
11	W	12C-0sw	0.091	e	3.18	2.14	0	0	0	0	0	0	0	0	
.	G	4A5-2ov	0.300	e	10.50	20.11	0	0	0	0	0	0	0	0	
.	G	4B5-2fv	0.300	e	10.50	13.24	0	0	0	0	0	0	0	0	
.	G	4B5-2fv	0.300	e	10.50	11.91	0	0	0	0	0	0	0	0	
.	D	11J0	0.600	e	21.00	17.10	0	0	0	0	0	0	0	0	
.	W	12C-0sw	0.091	s	3.18	2.14	80	74	236	158	96	81	258	173	
.	G	4A5-2ov	0.300	s	10.50	7.65	6	6	63	46	0	0	0	0	
.	G	4A5-2ov	0.300	s	10.50	7.65	0	0	0	0	15	15	158	115	
.	W	12C-0sw	0.091	w	3.18	2.14	0	0	0	0	0	0	0	0	
.	G	4A5-2ov	0.300	w	10.50	19.97	0	0	0	0	0	0	0	0	
.	G	4A5-2ov	0.300	w	10.50	7.65	0	0	0	0	0	0	0	0	
.	D	11J0	0.600	w	21.00	17.10	0	0	0	0	0	0	0	0	
.	C	16B-30ad	0.032	-	1.12	1.66	60	60	67	100	129	129	144	215	
.	C	17B-6al	0.105	-	3.67	4.51	0	0	0	0	0	0	0	0	
.	F	22A-tpl	0.989	-	34.62	0.00	60	10	346	0	129	12	415	0	
6	c) AED excursion									-19				-31	
	Envelope loss/gain								712	285			975	472	
12	a) Infiltration								193	47			232	56	
	b) Room ventilation								0	0			0	0	
13	Internal gains: Occupants @ 230 Appliances/other						0			0	0			0	0
	Subtotal (lines 6 to 13)								905	332			1207	528	
	Less external load								0	0			0	0	
	Less transfer								0	0			0	0	
	Redistribution								0	0			35	49	
14	Subtotal								905	332			1242	578	
15	Duct loads						31%	46%	281	153	31%	46%	386	266	
	Total room load								1186	484			1628	844	
	Air required (cfm)								44	19			61	34	

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



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...\\Trane\\Adams Home Preserve lot 94 plan 2117.rup Calc = MJ8 Front Door faces: N

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

Job: 1
Date: 04/01/2025
By: DL Williams Heating and Co...
Plan: 2117

PO Box 2156, Lake City, FL 32056 Phone: 386-754-1987 Email: Office@DLWilliamsHeatingandCooling.com

1	Room name					bath3					br2				
2	Exposed wall					6.0 ft					26.0 ft				
3	Room height					8.0 ft					8.0 ft				
4	Room dimensions					8.0 ft x 6.0 ft					14.0 ft x 12.0 ft				
5	Room area					48.0 ft²					168.0 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	0	0	0	0	0	0	0	0	
.	G	4A5-2ov	0.300	n	10.50	7.65	0	0	0	0	0	0	0	0	
.	G	4A5-2ov	0.300	n	10.50	7.65	0	0	0	0	0	0	0	0	
11	W	12C-0sw	0.091	e	3.18	2.14	0	0	0	0	0	0	0	0	
	G	4A5-2ov	0.300	e	10.50	20.11	0	0	0	0	0	0	0	0	
	G	4B5-2fv	0.300	e	10.50	13.24	0	0	0	0	0	0	0	0	
	G	4B5-2fv	0.300	e	10.50	11.91	0	0	0	0	0	0	0	0	
	D	11J0	0.600	e	21.00	17.10	0	0	0	0	0	0	0	0	
	W	12C-0sw	0.091	s	3.18	2.14	48	48	153	103	96	96	306	205	
	G	4A5-2ov	0.300	s	10.50	7.65	0	0	0	0	0	0	0	0	
	G	4A5-2ov	0.300	s	10.50	7.65	0	0	0	0	0	0	0	0	
	W	12C-0sw	0.091	w	3.18	2.14	0	0	0	0	112	97	309	207	
	G	4A5-2ov	0.300	w	10.50	19.97	0	0	0	0	15	1	158	299	
	G	4A5-2ov	0.300	w	10.50	7.65	0	0	0	0	0	0	0	0	
.	D	11J0	0.600	w	21.00	17.10	0	0	0	0	0	0	0	0	
.	C	16B-30ad	0.032	-	1.12	1.66	48	48	54	80	168	168	188	280	
.	C	17B-6al	0.105	-	3.67	4.51	0	0	0	0	0	0	0	0	
.	F	22A-tpl	0.989	-	34.62	0.00	48	6	208	0	168	26	900	0	

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



Right-Suite® Universal 2025 25.0.01 RSU02245

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...\\Trane\\Adams Home Preserve lot 94 plan 2117.rup Calc = MJ8 Front Door faces: N

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

Job: 1
Date: 04/01/2025
By: DL Williams Heating and Co...
Plan: 2117

PO Box 2156, Lake City, FL 32056 Phone: 386-754-1987 Email: Office@DLWilliamsHeatingandCooling.com

1	Room name					hall					Ah				
2	Exposed wall					0 ft					0 ft				
3	Room height					8.0 ft					8.0 ft				
4	Room dimensions					1.0 x 98.0 ft					1.0 x 13.0 ft				
5	Room area					98.0 ft²					13.0 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	0	0	0	0	0	0	0	0	
.	G	4A5-2ov	0.300	n	10.50	7.65	0	0	0	0	0	0	0	0	
.	G	4A5-2ov	0.300	n	10.50	7.65	0	0	0	0	0	0	0	0	
11	W	12C-0sw	0.091	e	3.18	2.14	0	0	0	0	0	0	0	0	
	G	4A5-2ov	0.300	e	10.50	20.11	0	0	0	0	0	0	0	0	
	G	4B5-2fv	0.300	e	10.50	13.24	0	0	0	0	0	0	0	0	
	G	4B5-2fv	0.300	e	10.50	11.91	0	0	0	0	0	0	0	0	
	D	11J0	0.600	e	21.00	17.10	0	0	0	0	0	0	0	0	
	W	12C-0sw	0.091	s	3.18	2.14	0	0	0	0	0	0	0	0	
	G	4A5-2ov	0.300	s	10.50	7.65	0	0	0	0	0	0	0	0	
	G	4A5-2ov	0.300	s	10.50	7.65	0	0	0	0	0	0	0	0	
	W	12C-0sw	0.091	w	3.18	2.14	0	0	0	0	0	0	0	0	
	G	4A5-2ov	0.300	w	10.50	19.97	0	0	0	0	0	0	0	0	
	G	4A5-2ov	0.300	w	10.50	7.65	0	0	0	0	0	0	0	0	
D	11J0	0.600	w	21.00	17.10	0	0	0	0	0	0	0	0		
C	16B-30ad	0.032	-	1.12	1.66	98	98	110	163	13	13	15	22		
C	17B-6al	0.105	-	3.67	4.51	0	0	0	0	0	0	0	0		
F	22A-tpl	0.989	-	34.62	0.00	98	0	0	0	13	0	0	0		

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



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

Job: 1
Date: 04/01/2025
By: DL Williams Heating and Co...
Plan: 2117

PO Box 2156, Lake City, FL 32056 Phone: 386-754-1987 Email: Office@DLWilliamsHeatingandCooling.com

1	Room name					living 16.0 ft					kitchen 11.0 ft				
2	Exposed wall					10.0 ft					10.0 ft				
3	Room height					heat/cool					heat/cool				
4	Room dimensions					16.0 x 23.0 ft					11.0 x 23.0 ft				
5	Room area					368.0 ft²					253.0 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	0	0	0	0	46	46	147	98	
.	G	4A5-2ov	0.300	n	10.50	7.65	0	0	0	0	0	0	0	0	
.	G	4A5-2ov	0.300	n	10.50	7.65	0	0	0	0	0	0	0	0	
11	W	12C-0sw	0.091	e	3.18	2.14	0	0	0	0	0	0	0	0	
.	G	4A5-2ov	0.300	e	10.50	20.11	0	0	0	0	0	0	0	0	
.	G	4B5-2fv	0.300	e	10.50	13.24	0	0	0	0	0	0	0	0	
.	G	4B5-2fv	0.300	e	10.50	11.91	0	0	0	0	0	0	0	0	
.	D	11J0	0.600	e	21.00	17.10	0	0	0	0	0	0	0	0	
.	W	12C-0sw	0.091	s	3.18	2.14	46	46	147	98	0	0	0	0	
.	G	4A5-2ov	0.300	s	10.50	7.65	0	0	0	0	0	0	0	0	
.	G	4A5-2ov	0.300	s	10.50	7.65	0	0	0	0	0	0	0	0	
.	W	12C-0sw	0.091	w	3.18	2.14	128	77	245	165	88	58	185	124	
.	G	4A5-2ov	0.300	w	10.50	19.97	0	0	0	0	30	2	315	599	
.	G	4A5-2ov	0.300	w	10.50	7.65	30	30	315	230	0	0	0	0	
.	D	11J0	0.600	w	21.00	17.10	21	21	441	359	0	0	0	0	
.	C	16B-30ad	0.032	-	1.12	1.66	0	0	0	0	0	0	0	0	
.	C	17B-6al	0.105	-	3.67	4.51	390	390	1432	1759	268	268	984	1209	
.	F	22A-tpl	0.989	-	34.62	0.00	368	16	554	0	253	11	381	0	
6	c) AED excursion									291				171	
	Envelope loss/gain								3133	2902			2011	2202	
12	a) Infiltration								420	102			324	79	
	b) Room ventilation								0	0			0	0	
13	Internal gains: Occupants @ 230 Appliances/other						3			690 900	1			230 1200	
	Subtotal (lines 6 to 13)								3554	4594			2335	3710	
	Less external load								0	0			0	0	
	Less transfer								0	0			0	0	
	Redistribution								25	35			0	0	
14	Subtotal								3579	4629			2335	3710	
15	Duct loads						31%	46%	1112	2131	31%	46%	725	1708	
	Total room load								4691	6761			3060	5419	
	Air required (cfm)								175	269			114	216	

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

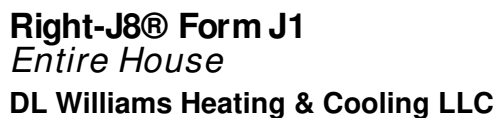


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Job: 1
Date: 04/01/2025
By: DL Williams Heating and Co...
Plan: 2117

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Loads for Multiple Orientations

Entire House

DL Williams Heating & Cooling LLC

Job: 1
Date: 04/01/2025
By: DL Williams Heating and...
Plan: 2117

PO Box 2156, Lake City, FL 32056 Phone: 386-754-1987 Email: Office@DLWilliamsHeatingandCooling.com

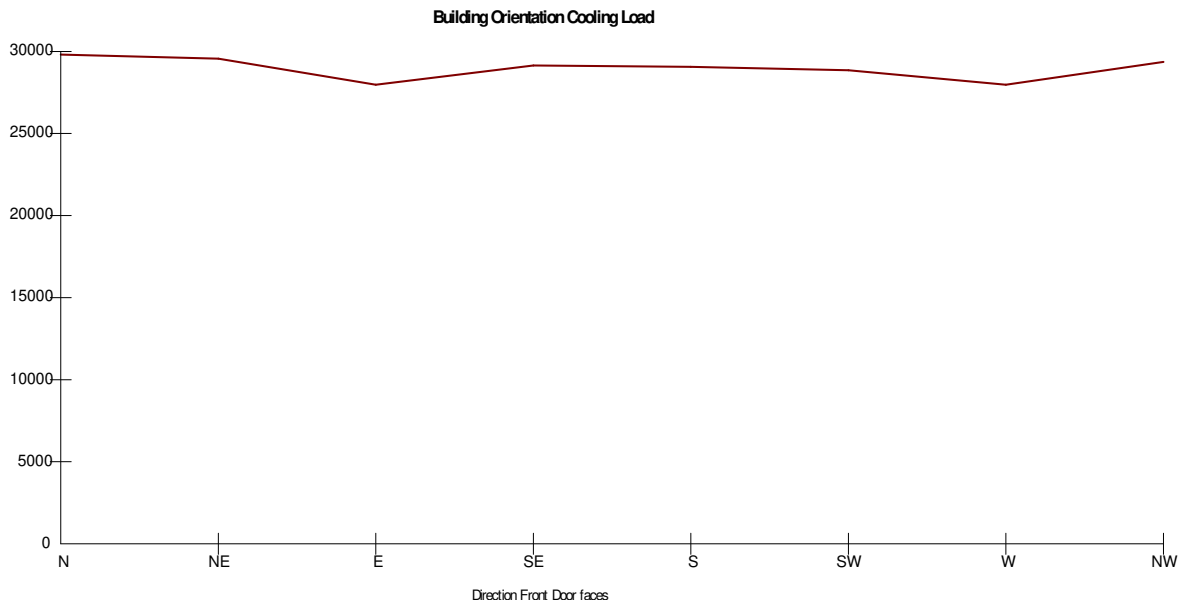
Project Information

For: Preserve at Laurel Lake lot 12, Adams Homes plan 2117
Lake City, FL 32055

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 (%)		30	50
		Moisture difference (gr/lb)		8.4	45.4
Outdoor:	Heating	Cooling	Infiltration:		
Dry bulb (°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)	25601	25343	23758	24928	24854	24638	23758	25150
Latent Load (Btuh)	4212	4212	4212	4212	4212	4212	4212	4212
Total Load (Btuh)	29813	29554	27970	29140	29066	28850	27970	29362
Heating AVF (cfm)	1050	1050	1050	1050	1050	1050	1050	1050
Cooling AVF (cfm)	1050	1050	1050	1050	1050	1050	1050	1050



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.



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...Trane\Adams Home Preserve lot 94 plan 2117.rup Calc = MJ8 Front Door faces: N



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

Job: 1
Date: 04/01/2025
By: DL Williams Heating and...
Plan: 2117

PO Box 2156, Lake City, FL 32056 Phone: 386-754-1987 Email: Office@DLWilliamsHeatingandCooling.com

Supporting Detail	
Project Name: Adams Home Preserve lot 94 plan 2117	Date: 04/01/2025
Address: Lake City, FL 32055	
Phone:	Job ID: 1

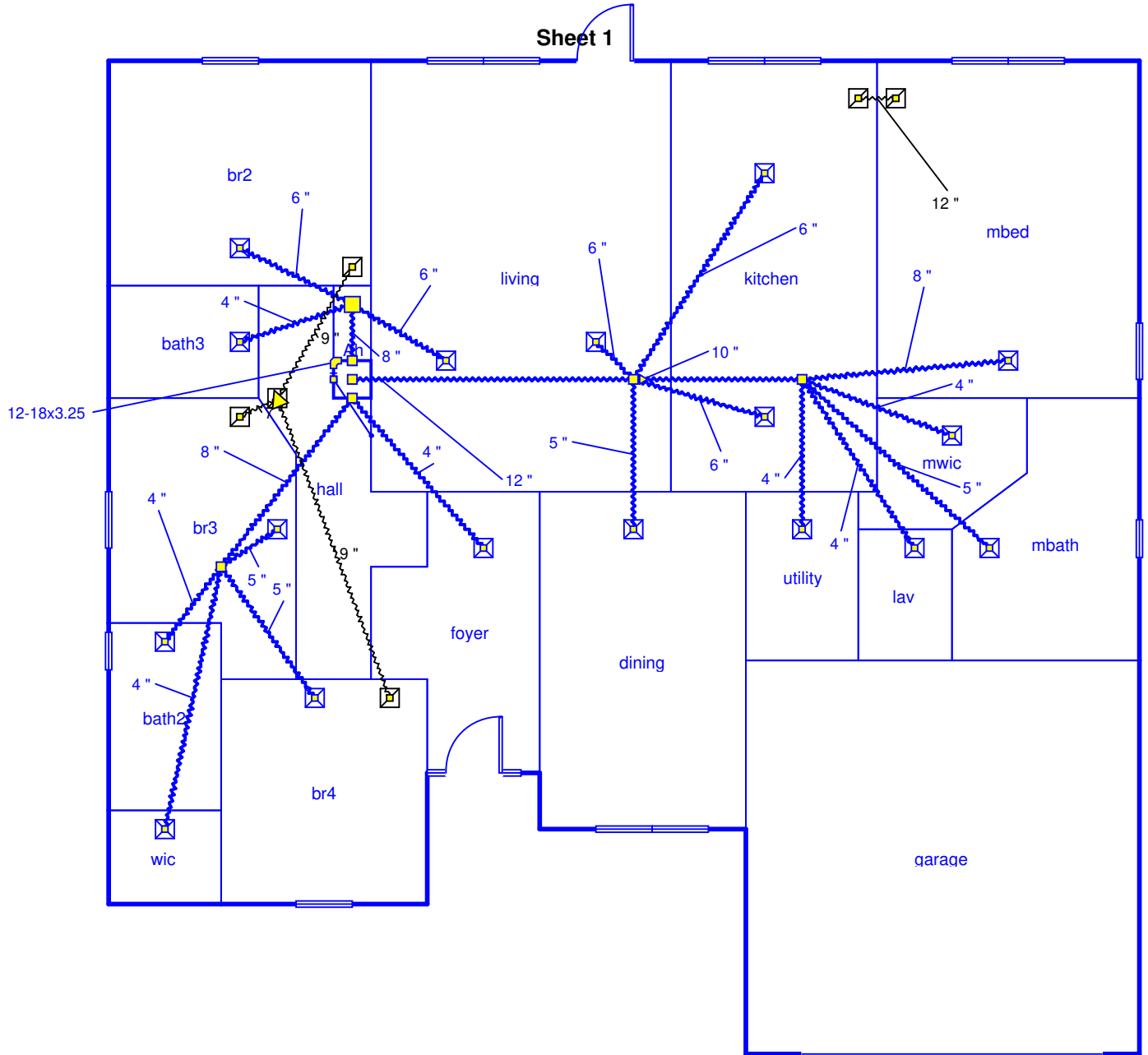
Worksheet A Location and Design Conditions	
Weather Location: Gainesville Regional AP, FL, US	Elevation = 164 Latitude = 30
Indoor Conditions, Heating: DB = 68 °F RH = 30 % Indoor Conditions, Cooling: DB = 75 °F RH = 50 %	
Table 1 Conditions 99% DB = 33 °F 1% DB = 92 °F Grains Difference = 45 gr/lb Daily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

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





Sheet 1



Job #: 1
Performed by DL Williams Heating and Co.
Preserve at Laurel Lake lot 12
Lake City, FL 32055

DL Williams Heating & Cooling LLC
PO Box 2156
Lake City, FL 32056
Phone: 386-754-1987
Office@DLWilliamsHeatingandCooling.com

Scale: 1 : 101
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Duct System Summary

Entire House

DL Williams Heating & Cooling LLC

Job: 1
Date: 04/01/2025
By: DL Williams Heating and...
Plan: 2117

PO Box 2156, Lake City, FL 32056 Phone: 386-754-1987 Email: Office@DLWilliamsHeatingandCooling.com

Project Information

For: Preserve at Laurel Lake lot 12, Adams Homes plan 2117
Lake City, FL 32055

	Heating	Cooling
External static pressure	0.50 in H ₂ O	0.50 in H ₂ O
Pressure losses	0 in H ₂ O	0 in H ₂ O
Available static pressure	0.50 in H ₂ O	0.50 in H ₂ O
Supply / return available pressure	0.359 / 0.141 in H ₂ O	0.359 / 0.141 in H ₂ O
Lowest friction rate	0.196 in/100ft	0.196 in/100ft
Actual air flow	1050 cfm	1050 cfm
Total effective length (TEL)	254 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
bath2	h 1186	44	19	0.273	4.0	0x0	VIFx	16.4	115.0	st2
bath3	h 713	27	13	0.288	4.0	0x0	VIFx	9.3	115.0	st1
br2	h 3112	116	73	0.287	6.0	0x0	VIFx	9.7	115.0	st1
br3	h 1628	61	34	0.276	5.0	0x0	VIFx	15.0	115.0	st2
br4	h 2252	84	58	0.266	5.0	0x0	VIFx	20.0	115.0	st2
dining	c 2066	78	82	0.260	5.0	0x0	VIFx	23.0	115.0	st3
foyer	h 1446	54	45	0.339	4.0	0x0	VIFx	10.6	95.0	
kitchen	c 2709	57	108	0.261	6.0	0x0	VIFx	22.3	115.0	st3
kitchen-A	c 2709	57	108	0.251	6.0	0x0	VIFx	28.0	115.0	st3
lav	c 80	2	3	0.199	4.0	0x0	VIFx	34.8	145.0	st3A
living	c 3380	87	134	0.270	6.0	0x0	VIFx	17.8	115.0	st3
living-A	c 3380	87	134	0.290	6.0	0x0	VIFx	8.8	115.0	st1
mbath	h 1688	63	29	0.196	5.0	0x0	VIFx	37.5	145.0	st3A
mbed	h 4953	184	157	0.199	8.0	0x0	VIFx	35.0	145.0	st3A
mwic	c 119	3	5	0.202	4.0	0x0	VIFx	32.5	145.0	st3A
utility	c 814	3	32	0.203	4.0	0x0	VIFx	32.0	145.0	st3A
wic	h 1189	44	16	0.255	4.0	0x0	VIFx	25.7	115.0	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
st1	Peak AVF	230	220	0.287	658	8.0	0 x 0	VinIFlx	st3
st3A	Peak AVF	255	226	0.196	467	10.0	0 x 0	VinIFlx	
st3	Peak AVF	534	659	0.196	839	12.0	0 x 0	VinIFlx	
st2	Peak AVF	233	127	0.255	667	8.0	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
rb1	0x0	1050	1050	72.0	0.196	215	24.0	12-3.25x18	12-10x140	SJSp	





Duct system multi orientation report

Entire House

DL Williams Heating & Cooling LLC

Job: 1
Date: 04/01/2025
By: DL Williams Heating and...
Plan: 2117

PO Box 2156, Lake City, FL 32056 Phone: 386-754-1987 Email: Office@DLWilliamsHeatingandCooling.com

Project Information

For: Preserve at Laurel Lake lot 12, Adams Homes plan 2117
Lake City, FL 32055

Group 1: (N, NE, E, SE, S) Group 2: (SW, NW) Group 3: (W)

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												
bath2	44 h	12x12	4	44 h	12x12	4	44 h	12x12	4	44 h	12x12	4
bath3	27 h	12x12	4	27 h	12x12	4	27 h	12x12	4	27 h	12x12	4
br2	116 h	12x12	6	116 h	12x12	6	116 h	12x12	6	116 h	12x12	6
br3	63 c	12x12	5	61 h	12x12	5	61 h	12x12	5	61 h	12x12	5
br4	84 h	12x12	5	84 h	12x12	5	84 h	12x12	5	84 h	12x12	5
dining	78 h	12x12	5	78 h	12x12	5	82 c	12x12	5	78 h	12x12	5
foyer	54 h	12x12	4	54 h	12x12	4	54 h	12x12	4	54 h	12x12	4
kitchen	101 c	12x12	6	104 c	12x12	6	108 c	12x12	6	103 c	12x12	6
kitchen-A	101 c	12x12	6	104 c	12x12	6	108 c	12x12	6	103 c	12x12	6
lav	4 c	12x12	4	3 c	12x12	4	3 c	12x12	4	3 c	12x12	4
living	138 c	12x12	6	138 c	12x12	6	134 c	12x12	6	134 c	12x12	6
living-A	138 c	12x12	6	138 c	12x12	6	134 c	12x12	6	134 c	12x12	6
mbath	63 h	12x12	5	63 h	12x12	5	63 h	12x12	5	63 h	12x12	5
mbed	184 h	12x12	8	184 h	12x12	8	184 h	12x12	8	184 h	12x12	8
mwic	6 c	12x12	4	5 c	12x12	4	5 c	12x12	4	5 c	12x12	4
utility	38 c	12x12	4	33 c	12x12	4	32 c	12x12	4	34 c	12x12	4
wic	44 h	12x12	4	44 h	12x12	4	44 h	12x12	4	44 h	12x12	4
Supply Trunks												
st1	230 h		8	230 h		8	230 h		8	230 h		8
st3A	255 h		10	255 h		10	255 h		10	255 h		10
st3	628 c		12	647 c		12	659 c		12	646 c		12
st2	233 h		8	233 h		8	233 h		8	233 h		8
Return Branches												
rb1	1050 c	24x18	0x0	1050 c	24x18	0x0	1050 c	24x18	0x0	1050 c	24x18	0x0
Friction Rates												
Heating FR	0.196			0.196			0.196			0.196		
Cooling FR	0.196			0.196			0.196			0.196		

Project Information

For: Preserve at Laurel Lake lot 12, Adams Homes plan 2117
Lake City, FL 32055

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												
bath2	44 h	12x12	4	44 h	12x12	4	44 h	12x12	4	44 h	12x12	4
bath3	27 h	12x12	4	27 h	12x12	4	27 h	12x12	4	27 h	12x12	4
br2	116 h	12x12	6	116 h	12x12	6	116 h	12x12	6	116 h	12x12	6
br3	61 h	12x12	5	61 h	12x12	5	61 h	12x12	5	61 h	12x12	5
br4	84 h	12x12	5	84 h	12x12	5	84 h	12x12	5	84 h	12x12	5
dining	78 h	12x12	5	84 c	12x12	5	98 c	12x12	6	78 c	12x12	5
foyer	54 h	12x12	4	60 c	12x12	5	60 c	12x12	5	55 c	12x12	5
kitchen	101 c	12x12	6	104 c	12x12	6	105 c	12x12	6	99 c	12x12	6
kitchen-A	101 c	12x12	6	104 c	12x12	6	105 c	12x12	6	99 c	12x12	6
lav	4 c	12x12	4	3 c	12x12	4	3 c	12x12	4	3 c	12x12	4
living	138 c	12x12	6	126 c	12x12	6	123 c	12x12	6	133 c	12x12	6
living-A	138 c	12x12	6	126 c	12x12	6	123 c	12x12	6	133 c	12x12	6
mbath	63 h	12x12	5	63 h	12x12	5	63 h	12x12	5	63 h	12x12	5
mbed	184 h	12x12	8	184 h	12x12	8	184 h	12x12	8	184 h	12x12	8
mwic	6 c	12x12	4	5 c	12x12	4	5 c	12x12	4	5 c	12x12	4
utility	38 c	12x12	4	34 c	12x12	4	33 c	12x12	4	34 c	12x12	4
wic	44 h	12x12	4	44 h	12x12	4	44 h	12x12	4	44 h	12x12	4
Supply Trunks												
st1	230 h		8	230 h		8	230 h		8	230 h		8
st3A	255 h		10	255 h		10	255 h		10	255 h		10
st3	638 c		12	640 c		12	648 c		12	634 c		12
st2	233 h		8	233 h		8	233 h		8	233 h		8
Return Branches												
rb1	1050 c	24x18	0x0	1050 c	24x18	0x0	1050 c	24x18	0x0	1050 c	24x18	0x0
Friction Rates												
Heating FR	0.196			0.196			0.196			0.196		
Cooling FR	0.196			0.196			0.196			0.196		

Project Information

For: Preserve at Laurel Lake lot 12, Adams Homes plan 2117
Lake City, FL 32055

Duct Name	Largest			Smallest		
	Reg CFM	Reg Size	Duct Size	Reg CFM	Reg Size	Duct Size
Supply Branches						
bath2	44 h	12x12	4	44 h	12x12	4
bath3	27 h	12x12	4	27 h	12x12	4
br2	116 h	12x12	6	116 h	12x12	6
br3	63 c	12x12	5	61 h	12x12	5
br4	84 h	12x12	5	84 h	12x12	5
dining	98 c	12x12	6	78 h	12x12	5
foyer	60 c	12x12	5	54 h	12x12	4
kitchen	108 c	12x12	6	99 c	12x12	6
kitchen-A	108 c	12x12	6	99 c	12x12	6
lav	4 c	12x12	4	3 c	12x12	4
living	138 c	12x12	6	123 c	12x12	6
living-A	138 c	12x12	6	123 c	12x12	6
mbath	63 h	12x12	5	63 h	12x12	5
mbed	184 h	12x12	8	184 h	12x12	8
mwic	6 c	12x12	4	5 c	12x12	4
utility	38 c	12x12	4	32 c	12x12	4
wic	44 h	12x12	4	44 h	12x12	4
Supply Trunks						
st1	230 h		8	230 h		8
st3A	255 h		10	255 h		10
st3	659 c		12	628 c		12
st2	233 h		8	233 h		8
Return Branches						
rb1	1050 c	24x18	0x0	1050 c	24x18	0x0
Friction Rates						
Heating FR	0.196			0.196		
Cooling FR	0.196			0.196		

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



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

Job: 1
Date: 04/01/2025
By: DL Williams Heating and...
Plan: 2117

PO Box 2156, Lake City, FL 32056 Phone: 386-754-1987 Email: Office@DLWilliamsHeatingandCooling.com

Project Information

For: Preserve at Laurel Lake lot 12, Adams Homes plan 2117
Lake City, FL 32055

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	13	2
Measured length of trunk	24	0
Equivalent length of fittings	145	70
Total length	182	72
Total effective length		254

Friction Rate

	Heating (in/100ft)	Cooling (in/100ft)
Supply Ducts	0.196 > 0.18	0.196 > 0.18
Return Ducts	0.196 > 0.18	0.196 > 0.18

Fitting Equivalent Length Details

Supply	4AD=60, 11A=20, 11A=20, 12J1=10, 1A=35: TotalEL=145
Return	6M=20, 11I=10, 5A=40: TotalEL=70





Manual S Compliance Report

Entire House

DL Williams Heating & Cooling LLC

Job: 1
Date: 04/01/2025
By: DL Williams Heating and...
Plan: 2117

PO Box 2156, Lake City, FL 32056 Phone: 386-754-1987 Email: Office@DLWilliamsHeatingandCooling.com

Project Information

For: Preserve at Laurel Lake lot 12, Adams Homes plan 2117
Lake City, FL 32055

Cooling Equipment

Design Conditions

Outdoor design DB:	92.0°F	Sensible gain:	26393	Btuh	Entering coil DB:	77.5°F
Outdoor design WB:	76.0°F	Latent gain:	4212	Btuh	Entering coil WB:	63.7°F
Indoor design DB:	75.0°F	Total gain:	30605	Btuh		
Indoor RH:	50%	Estimated airflow:	1050	cfm		

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split ASHP		
Manufacturer:	Trane	Model:	4TWR5036H1+TEM6A0C36H31++TDR
Actual airflow:	1050	cfm	
Sensible capacity:	29119	Btuh	110% of load
Latent capacity:	4382	Btuh	104% of load
Total capacity:	33501	Btuh	109% of load SHR: 87%

Heating Equipment

Design Conditions

Outdoor design DB:	33.0°F	Heat loss:	28219	Btuh	Entering coil DB:	66.9°F
Indoor design DB:	68.0°F					

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split ASHP		
Manufacturer:	Trane	Model:	4TWR5036H1+TEM6A0C36H31++TDR
Actual airflow:	1050	cfm	
Output capacity:	25220	Btuh	89% of load
Supplemental heat required:	2998	Btuh	
Capacity balance:	30	°F	
Economic balance:	-99	°F	

Backup equipment type:	Elec strip		
Manufacturer:		Model:	
Actual airflow:	1050	cfm	
Output capacity:	8.3	kW	100% of load Temp. rise: 50 °F

Meets all requirements of ACCA Manual S.



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...TraneAdams Home Preserve lot 94 plan 2117.rup Calc = MJ8 Front Door faces: N



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

Form
RPER 2.0

Columbia Header Information

Contractor DL Williams Heating & Cooling LLC
Mechanical license# Derrick Williams
Building plan # 2117
Home address (Street or Lot#, Block, Subdivision) , 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

Elevation 164 ft
Altitude Correction Factor 0.99
Latitude 30 °N

Summer Design Conditions

Outdoor Cooling Temp 92 °F
Indoor Cooling Temp 75 °F
Cooling Temp Diff 17 °F
Indoor Summer Design RH 50 %
Coincident Wet Bulb Temp 76 °F

Manual J Loads

Total Heat Loss 28219 Btuh
Sensible Heat Gain 26393 Btuh
Latent Heat Gain 4212 Btuh
Total Heat Gain 30605 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

Model

Output 25220 Btuh Sizing Value 28219 Btuh
Supplemental 2998 Btuh Sizing Limit 175.0 %
Heat Load: Capacity 99.9 %

Size Factor is within Manual S Size Limit?

Y ☒ N ☐

Cooling Equipment

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

Model 4TWR5036H1+TEM6A0C36H31++TDR

Sensible 29119 Btuh Sizing Value 30605 Btuh
Latent 4382 Btuh Sizing Limit 115.0 %
Total 33501 Btuh Load: Capacity 109.5 %

Size Factor is within Manual S Size Limit?

Y ☒ N ☐

HVAC DUCT DISTRIBUTION DESIGN

(IRC M1601.1)

Design airflow 1050 cfm Longest Supply Duct 182 ft Duct Materials Used
External Static Pressure (ESP) 0.50 in H2O Longest Return Duct 72.0 ft Trunk Duct: ☐ Duct Board ☐ Sheet Metal
Component Pressure Loss (CPL) 0 in H2O Total Effective Length (TEL) 254 ft ☒ Flex ☐ Lined Sheet Metal ☐ Other
Available static pressure (ASP) 0.50 in H2O Friction Rate 0.20 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: