

Residential System Sizing Calculation

Summary

Parrish Builders Group - 1803 Model
TBD SE CR 349
Lake City, FL

Project Title:
PBG spec 2

2/15/2026

NV5

PRIVATE PROVIDER
Plans reviewed in accordance with
Florida Statutes 553.791

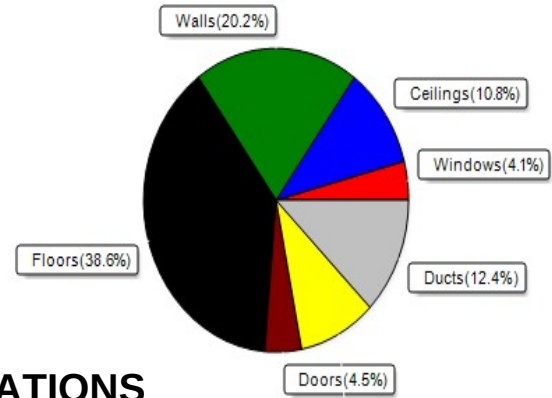
Printed copy of this document is not considered signed, and the signature must be verified on any electronic copies.
I hereby certify that, to the best of my knowledge and belief, the plans submitted comply with the Florida Building Code and all local amendments in effect on the date of the final permit application. Review for code compliance does not release the Contractor from errors and omissions nor is it to be held to permit or approve any violation of City, County, State or Federal regulation, ordinance, or code of law.

Location for weather data: Gainesville, FL - Defaults: Latitude(29.7) Altitude(152 ft.) Temp Range(M)					
Humidity data: Interior RH (50%) Outdoor wet bulb (77F) Humidity difference(51gr.)					
Winter design temperature(TMY3 99%)	30	F	Summer design temperature(TMY3 99%)	94	F
Winter setpoint	70	F	Summer setpoint	75	F
Winter temperature difference	40	F	Summer temperature difference	19	F
Total heating load calculation	21264	Btuh	Total cooling load calculation	17683	Btuh
Submitted heating capacity	% of calc	Btuh	Submitted cooling capacity	% of calc	Btuh
Total (Electric Heat Pump)	169.3	36000	Sensible (SHR = 0.85)	204.3	30600
Heat Pump + Auxiliary(0.0kW)	169.3	36000	Latent	199.5	5400
			Total (Electric Heat Pump)	203.6	36000

WINTER CALCULATIONS

Winter Heating Load (for 1803 sqft)

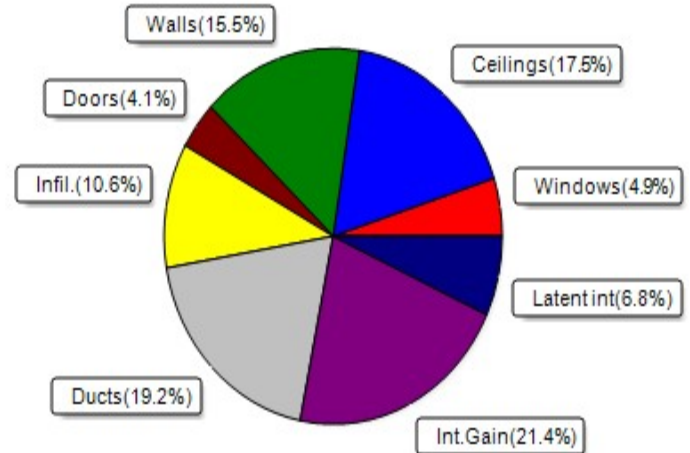
Load component	Load
Window total 84 sqft	874 Btuh
Wall total 1248 sqft	4304 Btuh
Door total 60 sqft	960 Btuh
Ceiling total 1803 sqft	2297 Btuh
Floor total 1803 sqft	8213 Btuh
Infiltration 45 cfm	1980 Btuh
Duct loss	2637 Btuh
Subtotal	21264 Btuh
Ventilation Ex:0 cfm; Sup:0 cfm	0 Btuh
TOTAL HEAT LOSS	21264 Btuh



SUMMER CALCULATIONS

Summer Cooling Load (for 1803 sqft)

Load component	Load
Window total 84 sqft	874 Btuh
Wall total 1248 sqft	2744 Btuh
Door total 60 sqft	720 Btuh
Ceiling total 1803 sqft	3101 Btuh
Floor total	0 Btuh
Infiltration 34 cfm	705 Btuh
Internal gain	3780 Btuh
Duct gain	3053 Btuh
Sens.Ventilation Ex:0 cfm; Sup:0 cfm	0 Btuh
Blower Load	0 Btuh
Total sensible gain	14977 Btuh
Latent gain(ducts)	336 Btuh
Latent gain(infiltration)	1171 Btuh
Latent gain(ventilation)	0 Btuh
Latent gain(internal/occupants/other)	1200 Btuh
Total latent gain	2706 Btuh
TOTAL HEAT GAIN	17683 Btuh



8th Edition

EnergyGauge® System Sizing

PREPARED BY: _____

DATE: _____ 2-15-26

System Sizing Calculations - Summer

Residential Load - Whole House Component Details

Parrish Builders Group - 1803 Model

Project Title:
PBG spec 2

TBD SE CR 349 Lake City, FL
Reference City: Gainesville, FL (Default)
Humidity difference: 51gr.

2/15/2026

Temperature Difference: 19.0F(TMY3 99%)
Summer Setpoint: 75 °F (Required Manual J default)

Component Loads for Whole House

Window	Type*						Overhang		Window Area(sqft)			HTM		Load				
	Panes	SHGC	U	InSh	IS	Ornt	Len	Hgt	Gross	Shaded	Unshaded	Shaded	Unshaded					
1	2 NFRC	0.20, 0.26	No	No	N		1.5ft.	2.3ft.	15.0	0.0	15.0	9	9	137	Btuh			
2	2 NFRC	0.20, 0.26	No	No	N		1.5ft.	2.3ft.	18.0	0.0	18.0	9	9	165	Btuh			
3	2 NFRC	0.20, 0.26	No	No	E		1.5ft.	2.3ft.	6.0	0.0	6.0	9	24	145	Btuh			
4	2 NFRC	0.20, 0.26	No	No	S		1.5ft.	2.3ft.	45.0	45.0	0.0	9	11	412	Btuh			
	Excursion AE																	
	Window Total								84 (sqft)						874 Btuh			
Walls	Type					U-Value	R-Value		Area(sqft)			HTM		Load				
							Cav/Sheath											
1	Frame - Wood - Ext					0.09	13.0/0.6		367.0			2.2		807 Btuh				
2	Frame - Wood - Ext					0.09	13.0/0.6		250.0			2.2		550 Btuh				
3	Frame - Wood - Ext					0.09	13.0/0.6		375.0			2.2		824 Btuh				
4	Frame - Wood - Ext					0.09	13.0/0.6		256.0			2.2		563 Btuh				
	Wall Total								1248 (sqft)					2744 Btuh				
Doors	Type								Area (sqft)			HTM		Load				
1	Insulated - Exterior								40.0			12.0		480 Btuh				
2	Insulated - Exterior								20.0			12.0		240 Btuh				
	Door Total								60 (sqft)					720 Btuh				
Ceilings	Type/Color/Surface					U-Value	R-Value		Area(sqft)			HTM		Load				
1	Vented Attic/DarkShingle					0.032	30.0/0.0		1803.0			1.72		3101 Btuh				
	Ceiling Total								1803 (sqft)					3101 Btuh				
Floors	Type					R-Value		Size			HTM		Load					
1	Slab On Grade					0.0		1803 (ft-perimeter)			0.0		0 Btuh					
	Floor Total								1803.0 (sqft)					0 Btuh				
	Envelope Subtotal:														7439 Btuh			
Infiltration	Type					Average ACH		Volume(cuft)		Wall Ratio		CFM=		Load				
	Natural					0.14		14424		1		33.9		705 Btuh				
Internal gain					Occupants		Btuh/occupant		Appliance		Load							
					6		X 230		+		2400		3780 Btuh					
	Sensible Envelope Load:														11924 Btuh			
Duct load	Extremelysealed, Supply(R6.0-Attic), Return(R6.0-Attic)														(DGM of 0.256)		3053 Btuh	
	Sensible Load All Zones														14977 Btuh			

Manual J Summer Calculations

Residential Load - Component Details (continued)

Parrish Builders Group - 1803 Model
TBD SE CR 349 Lake City, FL

Project Title:
PBG spec 2

Climate:FL_GAINESVILLE_REGIONAL_A

2/15/2026

WHOLE HOUSE TOTALS

Whole House Totals for Cooling	Sensible Envelope Load All Zones	11924 Btuh
	Sensible Duct Load	3053 Btuh
	Total Sensible Zone Loads	14977 Btuh
	Sensible ventilation (Ex:0 cfm; Sup:0 cfm)	0 Btuh
	Blower	0 Btuh
	Total sensible gain	14977 Btuh
	Latent infiltration gain (for 51 gr. humidity difference)	1171 Btuh
	Latent ventilation gain	0 Btuh
	Latent duct gain	336 Btuh
	Latent occupant gain (6.0 people @ 200 Btuh per person)	1200 Btuh
	Latent other gain	0 Btuh
	Latent total gain	2706 Btuh
	TOTAL GAIN	17683 Btuh

EQUIPMENT

1. Central Unit	Goodman #GSZM403610A	36000 Btuh
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*Key: Window types (Panels - Number and type of panes of glass)
(SHGC - Shading coefficient of glass as SHGC numerical value)
(U - Window U-Factor)
(InSh - Interior shading device: none(No), Blinds(B), Draperies(D) or Roller Shades(R))
- For Blinds: Assume medium color, half closed
For Draperies: Assume medium weave, half closed
For Roller shades: Assume translucent, half closed
(IS - Insect screen: none(N), Full(F) or Half(½))
(Ornt - compass orientation)



Version 8

System Sizing Calculations - Winter

Residential Load - Whole House Component Details

Parrish Builders Group - 1803 Model
TBD SE CR 349 Lake City, FL

Project Title:
PBG spec 2
Building Type: User

2/15/2026

Reference City: Gainesville, FL (Defaults) Winter Temperature Difference: 40.0 °F (TMY3 99%)
Winter Setpoint: 70 °F (Required Manual J default)

Component Loads for Whole House								
Window	Panes/Type	Frame	U	Orientation	Area(sqft)	X	HTM=	Load
1	2, NFRC 0.20	Vinyl	0.26	N	15.0		10.4	156 Btuh
2	2, NFRC 0.20	Vinyl	0.26	N	18.0		10.4	187 Btuh
3	2, NFRC 0.20	Vinyl	0.26	E	6.0		10.4	62 Btuh
4	2, NFRC 0.20	Vinyl	0.26	S	45.0		10.4	468 Btuh
	Window Total				84.0(sqft)			874 Btuh
Walls	Type	Ornt.	Ueff.	R-Value (Cav/Sh)	Area	X	HTM=	Load
1	Frame - Wood	- Ext	(0.086)	13.0/0.6	367		3.45	1266 Btuh
2	Frame - Wood	- Ext	(0.086)	13.0/0.6	250		3.45	862 Btuh
3	Frame - Wood	- Ext	(0.086)	13.0/0.6	375		3.45	1293 Btuh
4	Frame - Wood	- Ext	(0.086)	13.0/0.6	256		3.45	883 Btuh
	Wall Total				1248(sqft)			4304 Btuh
Doors	Type	Storm	Ueff.		Area	X	HTM=	Load
1	Insulated - Exterior, n		(0.400)		40		16.0	640 Btuh
2	Insulated - Exterior, n		(0.400)		20		16.0	320 Btuh
	Door Total				60(sqft)			960Btuh
Ceilings	Type/Color/Surface		Ueff.	R-Value	Area	X	HTM=	Load
1	Flat ceil/D/Shing		(0.032)	30.0/0.0	1803		1.3	2297 Btuh
	Ceiling Total				1803(sqft)			2297Btuh
Floors	Type		Ueff.	R-Value	Size	X	HTM=	Load
1	Slab On Grade		(1.180)	0.0	174.0 ft(perim.)		47.2	8213 Btuh
	Floor Total				1803 sqft			8213 Btuh
	Envelope Subtotal:							16647 Btuh
Infiltration	Type	Wholehouse	ACH	Volume(cuft)	Wall Ratio	CFM=		
	Natural		0.19	14424	1.00	45.2		1980 Btuh
Duct load	Extremely sealed, R6.0, Supply(Att), Return(Att) (DLM of 0.142)							2637 Btuh
All Zones	Sensible Subtotal All Zones							21264 Btuh

Manual J Winter Calculations

Residential Load - Component Details (continued)

Parrish Builders Group - 1803 Model
TBD SE CR 349 Lake City, FL

Project Title:
PBG spec 2
Building Type: User

2/15/2026

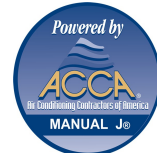
WHOLE HOUSE TOTALS

Totals for Heating	Subtotal Sensible Heat Loss	21264 Btuh
	Ventilation Sens. Heat Loss (Ex:0 cfm; Sup:0 cfm)	0 Btuh
	Total Heat Loss	21264 Btuh

EQUIPMENT

1. Electric Heat Pump	Goodman #GSZM403610A	36000 Btuh
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Key: Window types - NFRC (Requires U-Factor and Shading coefficient(SHGC) of glass as numerical values)
or - Glass as 'Clear' or 'Tint' (Uses U-Factor and SHGC defaults)
U - (Window U-Factor)
HTM - (ManualJ Heat Transfer Multiplier)



Version 8