

Project Information

For: Refuge Church of our Lord Jesus Christ
729 NW Wilson Street, Lake City, FL

		Htg	Clg			Htg	Clg
Outside db	(°F)	33	94	Inside db	(°F)	70	74
Outside RH	(%)	-	45	Inside RH	(%)	-	50
Outside wb	(°F)	-	76	Inside wb	(°F)	-	62
Daily range	(°F)	-	19	Design TD	(°F)	37	20
Moisture diff.	(gr/lb)	-	44				

Heating Equipment

Make	3.5 Ton Unit Needed
Model	
Type	Split ASHP
Efficiency	0 HSPF
Heating Input	
Heating Output	0 MBtuh @ 47°F
Humidifier	9.0 gpd
Leaving Air Temp	70.0 °F
Actual Heating Fan	1320 cfm

Cooling Equipment

Make	3.5 Ton Unit Needed
Model	
Type	Split ASHP
COP / EER / SEER	0
Sensible Cooling	0 MBtuh
Latent Cooling	0 MBtuh
Total Cooling	0 MBtuh
Leaving Air Temp	55.0 °F
Actual Cooling Fan	1320 cfm

Equipment Location	Unit 1
System Type	PEAKCV
Fan Motor Heat Type	PACKAGE
Fan & Motor Combined Efficiency	0 %
Static Pressure Across Fan	0 in H2O

NAME	Area ft²	Heat Loss	Sensible Gain	Latent Gain	Htg cfm	Clg cfm	Time
Fellowship	306	7098	9912	2090	476	414	Jun 1700 LDT
Office	80	1097	2347	546	36	97	Jun 1700 LDT
Bath	44	1267	1426	300	97	60	Jun 1700 LDT
Maintenance	102	1896	3208	697	104	134	Jun 1700 LDT
Foyer	196	3351	5900	1338	166	244	Jun 1700 LDT
Womens	136	2528	4278	929	139	178	Jun 1700 LDT
Mens	136	3938	4595	929	303	196	Jun 1700 LDT
Unit 1	1000	21175	31666	6829	1320	1320	Jun 1700 LDT

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		Htg	Clg			Htg	Clg
Outside db	(°F)	33	94	Inside db	(°F)	70	74
Outside RH	(%)	-	45	Inside RH	(%)	-	50
Outside wb	(°F)	-	76	Inside wb	(°F)	-	62
Daily range	(°F)	-	19	Design TD	(°F)	37	20
Moisture diff.	(gr/lb)	-	44				

Heating Equipment

Make	(2) 5 Ton Units Needed
Model	
Type	Split ASHP
Efficiency	0 HSPF
Heating Input	
Heating Output	0 MBtuh @ 47°F
Humidifier	26.2 gpd
Leaving Air Temp	70.0 °F
Actual Heating Fan	3425 cfm

Cooling Equipment

Make	(2) 5 Ton Units Needed
Model	
Type	Split ASHP
COP / EER / SEER	0
Sensible Cooling	0 MBtuh
Latent Cooling	0 MBtuh
Total Cooling	0 MBtuh
Leaving Air Temp	55.0 °F
Actual Cooling Fan	3425 cfm

Equipment Location	Unit 2 & 3
System Type	PEAKCV
Fan Motor Heat Type	PACKAGE
Fan & Motor Combined Efficiency	0 %
Static Pressure Across Fan	0 in H2O

NAME	Area ft²	Heat Loss	Sensible Gain	Latent Gain	Htg cfm	Clg cfm	Time
M Dressing	108	3222	3544	738	306	153	Jun 1700 LDT
W Dressing	108	2227	3337	738	165	140	Jun 1700 LDT
P Bath	72	2480	2421	492	251	104	Jun 1700 LDT
Pastor	144	2970	4427	983	220	184	Jun 1700 LDT
Sanctuary	2168	42177	69632	17747	2483	2847	Jun 1700 LDT
Unit 2 & 3	2600	53076	83361	20698	3425	3425	Jun 1700 LDT

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Zone: Unit 1

COOLING LOAD

1. DESIGN CONDITIONS		at Jun 1700 LDT	Peak load at Jun 1700 LDT		
Inside:	74 °F	Outside:	94 °F	TD:	20 °F
OutRH:	45 %	MoistDiff:	43.7 gr/lb	Mult:	1.0
				Ins.wb	62 °F
				Sensible	Latent
2. SOLAR RADIATION THROUGH GLASS				0	-
3. TRANSMISSION GAINS		Sensible		6553	-
Walls:		2155		-	-
Glass:		0		-	-
Doors:		0		-	-
Partitions:		0		-	-
Floors:		0		-	-
Ceilings:		4398		-	-
4. INTERNAL HEAT GAIN		Sensible		19588	2100
Occupants:		4500	Latent	2100	-
Lights:		15088	-	-	-
Motors:		0	-	-	-
Appliances:		0	0	-	-
5. INFILTRATION:		Outside air cfm:	0	0	0
6. SUBTOTAL:	Space load	Sensible	Latent	26141	2100
Envelope		26141	2100	-	-
Less external		0	-	-	-
Redistribution		0	0	-	-
7. SUPPLY DUCT				1307	-
8. SUBTOTAL:	Space load + supply duct			27448	-
Actual cfm:	1320	at supply TD:	19	-	-
9. VENTILATION:		Make-up air cfm:	160	3434	4729
10. RETURN AIR LOAD:		Lighting + plenum (net)		0	-
11. RETURN DUCT				784	-
12. TOTAL LOADS ON EQUIPMENT				31666	6829

HEATING LOAD

13. DESIGN CONDITIONS			Mult:	1.0	
Inside:	70 °F	Outside:	33 °F	TD:	37 °F
14. TRANSMISSION LOSSES					8893
Walls:		3636		-	-
Glass:		0		-	-
Doors:		0		-	-
Partitions:		0		-	-
Floors:		3276		-	-
Ceilings:		1982		-	-
15. INFILTRATION:		Outside air cfm:	40	1612	
16. SUBTOTAL:	Space load			10505	
Envelope		10505		-	-
Less external		0		-	-
Less transfer		0		-	-
Redistribution		0		-	-
17. SUPPLY DUCT:				525	
18. VENTILATION:		Make-up air cfm:	160	6448	
19. HUMIDIFICATION				3381	
Piping				0	
20. RETURN DUCT				315	
21. TOTAL HEATING LOAD ON EQUIPMENT				21175	

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729 NW Wilson Street, Lake City, FL

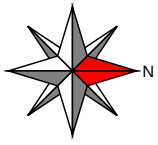
Zone: Unit 2 & 3

COOLING LOAD

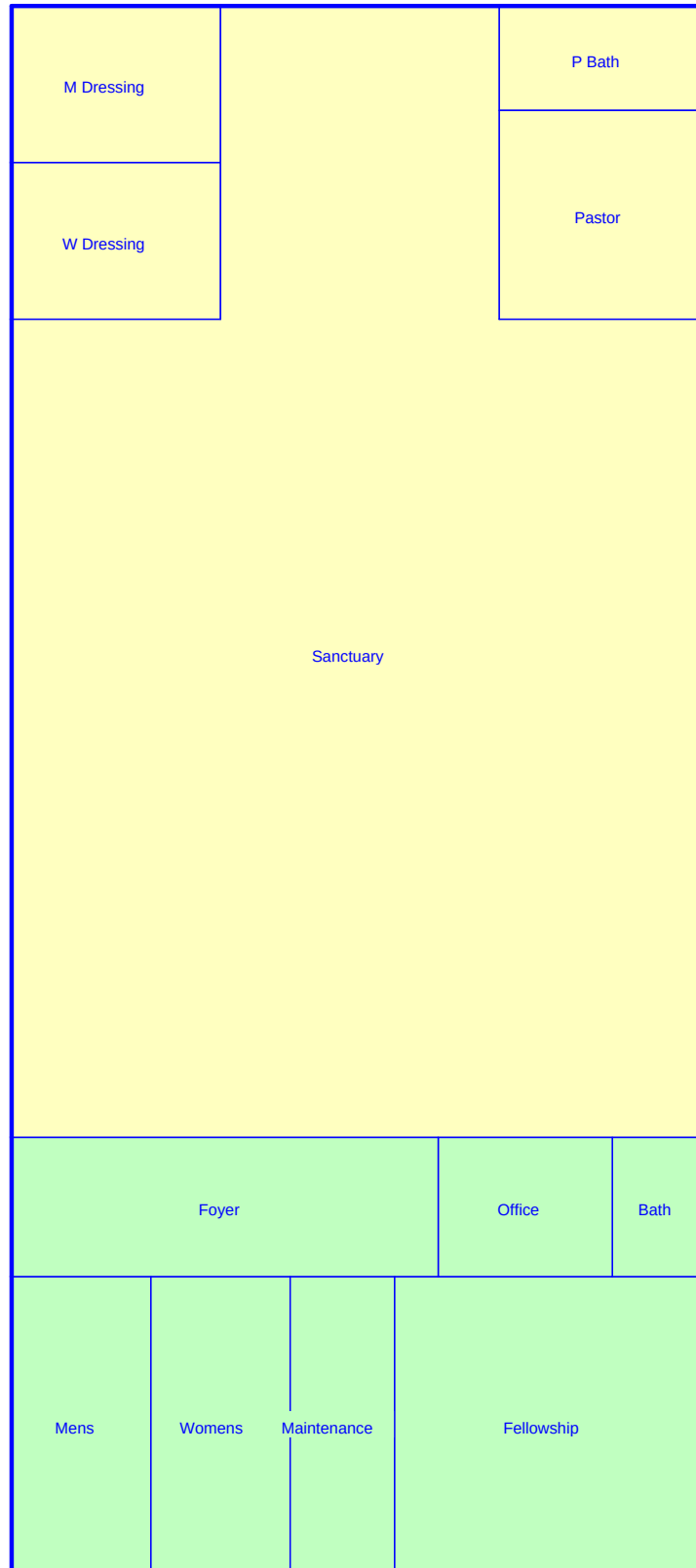
1. DESIGN CONDITIONS		at Jun 1700 LDT	Peak load at Jun 1700 LDT		
Inside:	74 °F	Outside:	94 °F	TD:	20 °F
OutRH:	45 %	MoistDiff:	43.7 gr/lb	Mult:	1.0
				Ins.wb	62 °F
				Sensible	Latent
2. SOLAR RADIATION THROUGH GLASS				0	-
3. TRANSMISSION GAINS		Sensible		14214	-
Walls:		2778		-	-
Glass:		0		-	-
Doors:		0		-	-
Partitions:		0		-	-
Floors:		0		-	-
Ceilings:		11436		-	-
4. INTERNAL HEAT GAIN		Sensible		53548	6682
Occupants:		14319	Latent	6682	-
Lights:		39229		-	-
Motors:		0		-	-
Appliances:		0		-	-
5. INFILTRATION:	Outside air cfm:		0	0	0
6. SUBTOTAL:	Space load	Sensible	Latent	67761	6682
Envelope		67761		6682	-
Less external		0		-	-
Redistribution		0		0	-
7. SUPPLY DUCT				3388	-
8. SUBTOTAL:	Space load + supply duct			71149	-
Actual cfm:	3425	at supply TD:	19	-	-
9. VENTILATION:	Make-up air cfm:		474	10178	14015
10. RETURN AIR LOAD:	Lighting + plenum (net)			0	-
11. RETURN DUCT				2033	-
12. TOTAL LOADS ON EQUIPMENT				83361	20698

HEATING LOAD

13. DESIGN CONDITIONS			Mult:	1.0	
Inside:	70 °F	Outside:	33 °F	TD:	37 °F
14. TRANSMISSION LOSSES					18208
Walls:		6867		-	-
Glass:		0		-	-
Doors:		0		-	-
Partitions:		0		-	-
Floors:		6187		-	-
Ceilings:		5153		-	-
15. INFILTRATION:	Outside air cfm:		104	4191	
16. SUBTOTAL:	Space load			22399	
Envelope		22399		-	-
Less external		0		-	-
Less transfer		0		-	-
Redistribution		0		-	-
17. SUPPLY DUCT:				1120	
18. VENTILATION:	Make-up air cfm:		474	19110	
19. HUMIDIFICATION				9775	
Piping				0	
20. RETURN DUCT				672	
21. TOTAL HEATING LOAD ON EQUIPMENT				53076	



Sheet 1



Job #: Church
Performed by David Marrs for:

Refuge Church of our Lord Jesus Christ
729 NW Wilson Street
Lake City, FL

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