

Prepared By: Harry Moselle

TOTAL HEATING AND COOLING REQUIREMENTS

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For: Glen Woodring
 Name: Northside Baptist Church
 Address: US417
 City: Lake

(✓) Check Constr. Type	ITEM	AREA SQUARE FEET	DESIGN TEMPERATURE DIFFERENCE					HEATING (BTUH LOSS)	DESIGN TEMP		COOLING MULT. (CIRCLE)	COOLING (BTUH GAIN)
			30°	35°	40°	45°	50°		90°	95°		
	Gross Wall Area	1080										
	Glass Area (From page 1)											
	Partitions, Frame											
	Finished 1 side, No Insulation		17	19	22	25	28				6.5	10.0
	Finished 2 sides, No Insulation		9	11	12	14	16				4.5	6.0
	Finished 2 sides, R-5		4	5	5.5	6	7				2.5	3.5
	Finished 2 sides, R-11		2	3	3	4	4				2.0	2.5
	Other											
	Doors (Excluding glass)											
	No weatherstripping		135	160	180	200	225				10.0	13.0
	Weatherstripped	18	70	85	95	110	120	1710			10.0	13.0
	R-5 Insulation, No weatherstripping		123	144	164	185	205				4.3	5.5
	R-5 Insulation, weatherstripping		68	79	90	101	113				4.0	5.0
	Other											
	Net Exterior Walls											
	CBS Furred, No Insulation		9	10	12	13	14				4.5	6.0
	CBS Furred, R-3 Insulation		5	6	7	8	8				3.0	4.2
	CBS Furred, R-4 Insulation		4	5	6	6	7				2.7	3.8
	CBS Furred, R-5 Insulation		4	5	5	6	6				2.5	3.5
	Frame, No Insulation		8	9	10	11	13				5.5	7.0
	Frame, R-11 Insulation	1070	2	2	3	3	4	3210			2.5	3.0
	Frame, R-14 Insulation		1.5	1.7	2	2.5	3				2	2.8
	Other											
	Ceiling under attic											
	No Insulation	Roof										
	R-11 Insulation	DK LT	18	21	24	27	30				9	7
	R-19 Insulation	DK LT	2.4	2.8	3.2	3.5	3.9				2.5	2
	R-22 Insulation	DK LT	1.5	1.7	1.9	2.2	2.4	2128			1.5	1.5
	R-26 Insulation	DK LT	1.2	1.5	1.7	1.9	2.1				1.5	1.0
	R-30 Insulation	DK LT	1.1	1.3	1.4	1.6	1.8				1.3	1
	Other		1	1.1	1.3	1.4	1.6				1.1	.9
	Floor, Concrete Slab											
	No Edge Insulation	Perimeter Ft.	35	40	40	45	45				0	0
	Other											
	Subtotal							7048				
	People @ 300 & Appl. @ 1200											5684
	Sensible BTUH Gain											5700
	Duct BTUH Loss & Gain											11384
	2 In. Flex. or 1 In. Rigid											
	1½ In. Rigid							.10			.10	1139
	Total BTUH Loss							.075			.075	
	Subtotal BTUH Gain							7753				
	x 1.3 = Total BTUH Gain											12523
												16280

Calculated Heating Requirements 7753
 Size of Unit Chosen 18,000
 % Oversized _____
 % Undersized _____

BTUH Calculated Cooling Requirements 16280
 BTUH Size of Unit Chosen 18,000
 % Oversized _____
 % Undersized _____