Air System Sizing Summary for AHU-1

Project Name: 2023-0419 storage building
Prepared by:

10/04/2023
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Air System Information

Air System Name	**AHU-1**		Number of zones	**1**	
Equipment Class	**SPLT AHU**		Floor Area	**165.0**	ft²
Air System Type	**SZCAV**		Location	**Miami IAP, Florida**	

Sizing Calculation Information

Calculation Months	**Jan to Dec**	Zone CFM Sizing	**Sum of space airflow rates**
Sizing Data	**Calculated**	Space CFM Sizing	**Individual peak space loads**

Central Cooling Coil Sizing Data

Total coil load	**0.8**	Tons	Load occurs at	**Aug 1500**	
Total coil load	**9.9**	MBH	OA DB / WB	**91.0 / 77.0**	°F
Sensible coil load	**9.1**	MBH	Entering DB / WB	**76.4 / 63.0**	°F
Coil CFM at Aug 1500	**414**	CFM	Leaving DB / WB	**56.1 / 54.8**	°F
Max block CFM	**414**	CFM	Coil ADP	**53.8**	°F
Sum of peak zone CFM	**414**	CFM	Bypass Factor	**0.100**	
Sensible heat ratio	**0.921**		Resulting RH	**47**	%
CFM/Ton	**504.7**		Design supply temp.	**55.0**	°F
ft²/Ton	**201.0**		Zone T-stat Check	**1 of 1**	OK
BTU/(hr·ft²)	**59.7**		Max zone temperature deviation	**0.0**	°F
Water flow @ 10.0 °F rise	**N/A**				

Central Heating Coil Sizing Data

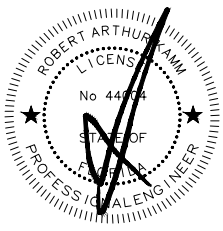
Max coil load	**6.7**	MBH	Load occurs at	**Des Htg**	
Coil CFM at Des Htg	**414**	CFM	BTU/(hr·ft²)	**40.5**	
Max coil CFM	**414**	CFM	Ent. DB / Lvg DB	**68.7 / 83.7**	°F
Water flow @ 20.0 °F drop	**N/A**				

Supply Fan Sizing Data

Actual max CFM	**414**	CFM	Fan motor BHP	**0.07**	BHP
Standard CFM	**414**	CFM	Fan motor kW	**0.06**	kW
Actual max CFM/ft²	**2.51**	CFM/ft²	Fan static	**1.00**	in wg

Outdoor Ventilation Air Data

Design airflow CFM	**15**	CFM	CFM/person	**14.90**	CFM/person
CFM/ft²	**0.09**	CFM/ft²			



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