Air System Sizing Summary for AHU-3

Project Name: 6300 SW 98ST PINECREST (MARK REARDON) 12/30/2025
Prepared by: AA 11:16AM

Air System Information

Air System Name	**AHU-3**	Number of zones	**1**
Equipment Class	**SPLT AHU**	Floor Area	**1858.0** ft²
Air System Type	**SZCAV**	Location	**Miami IAP, Florida**

Sizing Calculation Information

Zone and Space Sizing Method:

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

Central Cooling Coil Sizing Data

Total coil load	**3.5**	Tons	Load occurs at	**Sep 1500**	
Total coil load	**42.6**	MBH	OA DB / WB	**89.0 / 76.0**	°F
Sensible coil load	**37.2**	MBH	Entering DB / WB	**76.3 / 64.5**	°F
Coil CFM at Sep 1500	**1896**	CFM	Leaving DB / WB	**58.2 / 57.0**	°F
Max block CFM	**1896**	CFM	Coil ADP	**56.1**	°F
Sum of peak zone CFM	**1896**	CFM	Bypass Factor	**0.100**	
Sensible heat ratio	**0.874**		Resulting RH	**53**	%
ft²/Ton	**523.4**		Design supply temp.	**55.0**	°F
BTU/(hr-ft²)	**22.9**		Zone T-stat Check	**1 of 1**	OK
Water flow @ 10.0 °F rise	**N/A**		Max zone temperature deviation	**0.0**	°F

Central Heating Coil Sizing Data

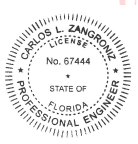
Max coil load	**18.1**	MBH	Load occurs at	**Des Htg**	
Coil CFM at Des Htg	**1896**	CFM	BTU/(hr-ft²)	**9.7**	
Max coil CFM	**1896**	CFM	Ent. DB / Lvg DB	**69.0 / 77.9**	°F
Water flow @ 20.0 °F drop	**N/A**				

Supply Fan Sizing Data

Actual max CFM	**1896**	CFM	Fan motor BHP	**0.00**	BHP
Standard CFM	**1895**	CFM	Fan motor kW	**0.00**	kW
Actual max CFM/ft²	**1.02**	CFM/ft²	Fan static	**0.00**	in wg

Outdoor Ventilation Air Data

Design airflow CFM	**45**	CFM	CFM/person	**15.00**	CFM/person
CFM/ft²	**0.02**	CFM/ft²			



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Date: 2026.01.09 11:49:53 -05'00'

Zone Sizing Summary for AHU-3

Project Name: 6300 SW 98ST PINECREST (MARK REARDON) 12/30/2025
Prepared by: AA 11:16AM

Air System Information

Air System Name **AHU-3**
Equipment Class ..... **SPLT AHU**
Air System Type ..... **SZCAV**
Number of zones **1**
Floor Area ..... **1858.0** ft²
Location ..... **Miami IAP, Florida**

Sizing Calculation Information

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

Zone Sizing Data

Zone Name	Maximum Cooling Sensible (MBH)	Design Air Flow (CFM)	Minimum Air Flow (CFM)	Time of Peak Load	Maximum Heating Load (MBH)	Zone Floor Area (ft²)	Zone CFM/ft²
Zone 1	37.5	1896	1896	Oct 1500	16.9	1858.0	1.02

Zone Terminal Sizing Data

No Zone Terminal Sizing Data required for this system.

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (MBH)	Time of Load	Air Flow (CFM)	Heating Load (MBH)	Floor Area (ft²)	Space CFM/ft²
Zone 1							
2-BATH 1	1	1.2	Nov 1400	56	0.6	53.0	1.05
2-BATH 2	1	1.2	Nov 1400	56	0.6	53.0	1.05
2-BATH 3	1	1.8	Jun 1600	84	1.4	77.0	1.09
2-BEDROOM 1	1	6.7	Nov 1400	310	2.2	232.0	1.34
2-BEDROOM 1 CLOSET	1	0.4	Jul 1400	19	0.2	54.0	0.35
2-BEDROOM 2	1	6.7	Nov 1400	310	2.2	232.0	1.34
2-BEDROOM 2 CLOSET	1	0.4	Jul 1400	19	0.1	53.0	0.35
2-BEDROOM 3	1	5.2	Jun 1600	243	2.2	213.0	1.14
2-BEDROOM 3 CLOSET	1	0.4	Jul 1400	21	0.2	59.0	0.35
2-COMMON	1	7.7	Oct 1500	357	3.7	324.0	1.10
2-CORRIDOR	1	5.0	Jul 1500	232	2.4	433.0	0.54
2-LAUNDRY	1	4.1	Jun 1700	189	1.1	75.0	2.53

Air System Design Load Summary for AHU-3

Project Name: 6300 SW 98ST PINECREST (MARK REARDON) 12/30/2025
Prepared by: AA 11:16AM

	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Sep 1500 COOLING OA DB / WB 89.0 °F / 76.0 °F			HEATING DATA AT DES HTG HEATING OA DB / WB 46.0 °F / 38.6 °F		
ZONE LOADS	**Details**	**Sensible (BTU/hr)**	**Latent (BTU/hr)**	**Details**	**Sensible (BTU/hr)**	**Latent (BTU/hr)**
Window & Skylight Solar Loads	288 ft²	6594	-	288 ft²	-	-
Wall Transmission	1208 ft²	2882	-	1208 ft²	4147	-
Roof Transmission	1858 ft²	5009	-	1858 ft²	1976	-
Window Transmission	288 ft²	3788	-	288 ft²	7603	-
Skylight Transmission	0 ft²	0	-	0 ft²	0	-
Door Loads	0 ft²	0	-	0 ft²	0	-
Floor Transmission	0 ft²	0	-	0 ft²	0	-
Partitions	0 ft²	0	-	0 ft²	0	-
Ceiling	0 ft²	0	-	0 ft²	0	-
Overhead Lighting	1890 W	6450	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	2700 W	9212	-	0	0	-
People	3	840	810	0	0	0
Infiltration	-	1638	3211	-	3209	0
Miscellaneous	-	1000	0	-	0	0
Safety Factor	0% / 0%	0	0	0%	0	0
>> Total Zone Loads	**-**	**37413**	**4021**	**-**	**16935**	**0**
Zone Conditioning	-	36615	4021	-	16908	0
Plenum Wall Load	0%	0	-	0	0	-
Plenum Roof Load	0%	0	-	0	0	-
Plenum Lighting Load	0%	0	-	0	0	-
Return Fan Load	1896 CFM	0	-	1896 CFM	0	-
Ventilation Load	45 CFM	629	1333	45 CFM	1147	0
Supply Fan Load	1896 CFM	0	-	1896 CFM	0	-
Space Fan Coil Fans	-	0	-	-	0	-
Duct Heat Gain / Loss	0%	0	-	0%	0	-
>> Total System Loads	**-**	**37244**	**5354**	**-**	**18055**	**0**
Central Cooling Coil	-	37244	5355	-	0	0
Central Heating Coil	-	0	-	-	18055	-
>> Total Conditioning	**-**	**37244**	**5355**	**-**	**18055**	**0**
Key:	**Positive values are clg loads Negative values are htg loads**			**Positive values are htg loads Negative values are clg loads**		

System Psychrometrics for AHU-3

Project Name: 6300 SW 98ST PINECREST (MARK REARDON) 12/30/2025
Prepared by: AA 11:16AM

September DESIGN COOLING DAY, 1500

TABLE 1: SYSTEM DATA

Component	Location	Dry-Bulb Temp (°F)	Specific Humidity (lb/lb)	Airflow (CFM)	CO2 Level (ppm)	Sensible Heat (BTU/hr)	Latent Heat (BTU/hr)
Ventilation Air	Inlet	89.0	0.01634	45	400	629	1333
Vent - Return Mixing	Outlet	76.3	0.01025	1896	791	-	-
Central Cooling Coil	Outlet	58.2	0.00965	1896	791	37244	5355
Central Heating Coil	Outlet	58.2	0.00965	1896	791	0	-
Supply Fan	Outlet	58.2	0.00965	1896	791	0	-
Cold Supply Duct	Outlet	58.2	0.00965	1896	791	-	-
Zone Air	-	76.0	0.01010	1896	800	36615	4021
Return Plenum	Outlet	76.0	0.01010	1896	800	0	-

Air Density x Heat Capacity x Conversion Factor: At sea level = 1.080; At site altitude = 1.079 BTU/(hr-CFM-F)
Air Density x Heat of Vaporization x Conversion Factor: At sea level = 4746.6; At site altitude = 4744.4 BTU/(hr-CFM)
Site Altitude = 13.0 ft

TABLE 2: ZONE DATA

Zone Name	Zone Sensible Load (BTU/hr)	T-stat Mode	Zone Cond (BTU/hr)	Zone Temp (°F)	Zone Airflow (CFM)	CO2 Level (ppm)	Terminal Heating Coil (BTU/hr)	Zone Heating Unit (BTU/hr)
Zone 1	37413	Cooling	36615	76.0	1896	800	0	0

System Psychrometrics for AHU-3

Project Name: 6300 SW 98ST PINECREST (MARK REARDON) 12/30/2025
Prepared by: AA 11:16AM

WINTER DESIGN HEATING

TABLE 1: SYSTEM DATA

Component	Location	Dry-Bulb Temp (°F)	Specific Humidity (lb/lb)	Airflow (CFM)	CO2 Level (ppm)	Sensible Heat (BTU/hr)	Latent Heat (BTU/hr)
Ventilation Air	Inlet	46.0	0.00325	45	400	-1147	0
Vent - Return Mixing	Outlet	69.0	0.00325	1896	791	-	-
Central Cooling Coil	Outlet	69.0	0.00325	1896	791	0	0
Central Heating Coil	Outlet	77.9	0.00325	1896	791	18055	-
Supply Fan	Outlet	77.9	0.00325	1896	791	0	-
Cold Supply Duct	Outlet	77.9	0.00325	1896	791	-	-
Zone Air	-	69.6	0.00325	1896	800	-16908	0
Return Plenum	Outlet	69.6	0.00325	1896	800	0	-

Air Density x Heat Capacity x Conversion Factor: At sea level = 1.080; At site altitude = 1.079 BTU/(hr-CFM-F)
Air Density x Heat of Vaporization x Conversion Factor: At sea level = 4746.6; At site altitude = 4744.4 BTU/(hr-CFM)
Site Altitude = 13.0 ft

TABLE 2: ZONE DATA

Zone Name	Zone Sensible Load (BTU/hr)	T-stat Mode	Zone Cond (BTU/hr)	Zone Temp (°F)	Zone Airflow (CFM)	CO2 Level (ppm)	Terminal Heating Coil (BTU/hr)	Zone Heating Unit (BTU/hr)
Zone 1	-16935	Heating	-16908	69.6	1896	800	0	0

Location: Miami IAP, Florida
Altitude: 13.0 ft.
Data for: September DESIGN COOLING DAY, 1500