

TEST AND BALANCE REPORT

Mountain View Campus

Project Type	TestAndBalance
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Test and Balance Report

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Project General Information

Documents and Specifications

Project Name	Mountain View Campus
Blueprint Drawings	M-101 Mechanical Floor Plan – First Floor M-103 Mechanical Roof Plan M-601 Mechanical Schedules M-602 HVAC Control Diagrams
Fan Submittals	Fan Schedule Supply Fan Schedule Exhaust Fan Schedule Fan Equipment Submittal Fan Performance Data
AHU Drawings	Air Handling Unit Schedule AHU Schedule Air Handling Unit Details Air Handling Unit Submittal AHU Performance Data
Grille Schedules	M-601 Air Distribution Schedule M-602 Grille, Register and Diffuser Schedule Grille and Diffuser Schedule Air Device Schedule
K Factor Data	Air Device K-Factor Data Grille and Diffuser K-Factors Terminal Device Performance Data Manufacturer Air Device Data
Degree of Accuracy	10%

Balancing Requirements

Balance Season	Summer
Operating Mode	Cooling On
Outside Air Damper Position	Open
Required Instruments	Velometer Anemometer Manometer Voltmeter Flow Hood Magnehelics Tachometer
Required Procedures	
Certification Required	Yes
Certification By	Contractor
Building Occupied	Yes
New Filters Required	No
Temperature Readings Required	No

System Description

Pressure Class	LowPressure
Air Volume Type	VariableAirVolume
Zone Type	SingleZone
System Type	Rooftop
Grille Manufacturer	
Diffuser Manufacturer	Thomas
Terminal Box Manufacturer	Price

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Fan Test Reports

Mountain View - System S-1

General

Report Name	Mountain View
Job Number	423-001
Date	2026-06-29
Location	MyTown USA
System	S-1
Equipment Location	Mezzanine
Serves	Cafeteria
Tested By	BAB
Include In Air Systems Recap	Yes
System Ready For Balancing	Yes
Equipment Checked Out	Yes
System Balanced	Yes

Fan Type

Equipment Type	Air Handling Unit
Pressure Class	Low Pressure
Volume Control	Variable Air Volume

Fan Data

Fan Manufacturer	Trane
Fan Model / Size	10200 CFM
Fan Construction Type	Centrifugal
Wheel Type	Air Foil
Wheel Alignment OK	Yes
Wheel Gap OK	Yes
Wheel Fastened	Yes
Wheel Clean	Yes
Belt Size	B60
Center-to-Center Distance	24
Fan Pulley Diameter	12
Motor Pulley Diameter	6.75
Motor Movement	1.25

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Belts Notes	Two matched B60 installed.
Bearings Notes	Bearings inspected and lubricated.
Cut Off Plate OK	No

Motor

Motor Manufacturer	Baldor
Motor Serial Number	G120226
Motor Frame Number	254T
Motor Type Frame	TEFC
Service Factor	1.15

	Rated / Nameplate	Actual
HP	15	
BHP	13.5	
Amps L1 L2 L3	19.2	15.3
Voltage L1 L2 L3	460	462
RPM	1750	1746
Phase	3	3

Starter

Starter Manufacturer	GE
Starter Model	141R
Starter Size	
Class	1
Overload Required Size	CR 15.4
Overload Actual Size	CR 15.4

Fan Performance

	Design	Actual
Fan CFM	10160	9800
Outlet CFM Total	9800	9756
Fan RPM	985	992
Fan S.P.	1.5	1.6

Static Pressure Drops

Component	Upstream	Downstream	Total Drop
Filter	0.2	0.4	0.2

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Heating Coil	0.4	0.6	0.2
Cooling Coil	0.6	1	0.4

Component	Static Pressure
Fan Inlet	1
Fan Discharge	0.6
Total Fan S.P.	1.6

Conditions

Outside Air Damper Setting	4000 CFM
Return Air Damper Setting	6160 CFM
Filter Condition	Clean
Coil Condition	Clean

Temperature Conditions

Location	DB	WB	RH
Outside Air	40		40
Return Air	70		
Mixed Air			
Discharge			
Space			
Duct Temp Drop			

Problems

Problems Selected	
Other Problem	
Remarks	

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Outlet Air Balance Reports

Mountain View - System S-1

Date	2026-06-29
Location	Cafeteria
System	S-1
Remarks	

Branch: B1

Outlet	Room	Design CFM	Actual CFM	% Design
4	NE	600	600	100%
2	NE	600	612	102%
3	NE	600	582	97%
1	NE	600	600	100%

Branch: B2

Outlet	Room	Design CFM	Actual CFM	% Design
1	SE	800	816	102%
4	SE	800	808	101%
2	SE	800	784	98%
3	SE	800	792	99%

Branch: B3

Outlet	Room	Design CFM	Actual CFM	% Design
2	NE	700	700	100%
3	NE	700	721	103%
4	NE	700	707	101%
1	NE	700	672	96%

Branch: B4

Outlet	Room	Design CFM	Actual CFM	% Design
4	Staff Area	400	388	97%
1	Staff Area	500	490	98%
2	Staff Area	100	96	96%
3	Staff Area	400	388	97%

Branch: B5

Outlet	Room	Design CFM	Actual CFM	% Design
2		3000	3060	102%
1		3000	3100	103.3%

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Rectangular Duct Traverse Reports

Mountain View - System S-1

General and Airflow Summary

Report Name	Mountain View
Job Number	
Date	2026-06-29
Location	Mezzanine
System	S-1
Duct Location	
Area Served	Cafeteria
Duct Temperature °F	
External Static Pressure	
Duct Width Inches	48
Duct Height Inches	24
Duct Area Square Feet	8
Required FPM	1225
Required CFM	9800
Actual FPM	1270.71
Actual CFM	10165.67
% of Design	103.7%
Reading Type	Final
Total FPM	30497
Active Point Count	24

Traverse Point Spacing

Spacing Type	Number	Spacing Inches
Bottom Column	1	
Bottom Column	2	
Bottom Column	3	
Bottom Column	4	
Bottom Column	5	
Bottom Column	6	
Bottom Column	7	
Bottom Column	8	

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Right Row	1	
Right Row	2	
Right Row	3	
Right Row	4	
Right Row	5	
Right Row	6	

Traverse Readings

Row	Column	Use	VP	FPM
1	1	Yes	0.06	981
1	2	Yes	0.08	1133
1	3	Yes	0.1	1266
1	4	Yes	0.11	1328
1	5	Yes	0.12	1387
1	6	Yes	0.13	1444
1	7	No		
1	8	No		
2	1	Yes	0.07	1060
2	2	Yes	0.07	1060
2	3	Yes	0.09	1201
2	4	Yes	0.11	1328
2	5	Yes	0.13	1444
2	6	Yes		1498
2	7	No		
2	8	No		
3	1	Yes	0.07	1060
3	2	Yes	0.08	1133
3	3	Yes	0.1	1266
3	4	Yes	0.12	1387
3	5	Yes	0.14	1498
3	6	Yes	0.12	1387
3	7	No		
3	8	No		
4	1	Yes	0.06	981
4	2	Yes	0.07	1060

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4	3	Yes	0.1	1266
4	4	Yes	0.13	1444
4	5	Yes	0.12	1387
4	6	Yes	0.14	1498
4	7	No		
4	8	No		
5	1	No		
5	2	No		
5	3	No		
5	4	No		
5	5	No		
5	6	No		
5	7	No		
5	8	No		
6	1	No		
6	2	No		
6	3	No		
6	4	No		
6	5	No		
6	6	No		
6	7	No		
6	8	No		

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Large Round Duct Traverse Reports

Mountain View - System S-1

Report Name	Mountain View
Job Number	
Date	2026-06-29
Location	Mezzanine
System	S-1
Duct Location	
Area Served	Cafeteria
Duct Temperature °F	55
External Static Pressure	
Duct Diameter Inches	28
Duct Area Square Feet	4.28
Required FPM	2432.15
Required CFM	10400
Actual FPM	2389.2
Actual CFM	10216.35
% of Design	98.2%
Startup Readings Included	No
Final Readings Included	Yes

Large Round Duct Traverse Diagram

Round Duct Traverse 10 horizontal points and 10 vertical points H-axis and V-axis readings are listed in the table below.

Traverse Point Readings

Axis	Point	Distance	Position	Startup VP	Startup FPM	Final VP	Final FPM
Horizontal	1	0.5	Near Side	0.22			1879
Horizontal	2	2.13	Near Side	0.3			2193
Horizontal	3	4.25	Near Side	0.4			2523
Horizontal	4	6.13	Near Side	0.55			2970
Horizontal	5	10.13	Near Side	0.41			2563
Horizontal	6	17.88	Far Side	0.36		-9	2403
Horizontal	7	21.88	Far Side	0.36			2403

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Horizontal	8	23.75	Far Side	0.37			2436
Horizontal	9	25.88	Far Side	0.36			2403
Horizontal	10	27.5	Far Side	0.28			2119
Vertical	1	0.5	Near Side	0.28			2119
Vertical	2	2.13	Near Side	0.22			1879
Vertical	3	4.25	Near Side	0.36			2403
Vertical	4	6.13	Near Side	0.3			2193
Vertical	5	10.13	Near Side	0.37			2436
Vertical	6	17.88	Far Side	0.4			2523
Vertical	7	21.88	Far Side	0.55			2970
Vertical	8	23.75	Far Side	0.41			2563
Vertical	9	25.88	Far Side	0.36			2403
Vertical	10	27.5	Far Side	0.36			2403

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Hydronic Pump Test Reports

Mountain View

General

Report Name	Mountain View
Job Number	
Date	2026-09-15
Location	Mech. Room 101A
System	
Equipment Location	
Area Served	Bldgs. 1,2,3
Tested By	BAB

Pump Data

Pump Manufacturer	Bell & Gosset
Pump Model / Size	4"
Pump Type	Centrifugal
Impeller Size	9.5"

Item	Rated	Actual	% of Rated
GPM	480	454	94.6%
Total Head Ft.	78	82	105.1%
Pump RPM	1750	1750	100%

Pump Pressures

Condition	Discharge Head Ft.	Suction Head Ft.	Total Head Ft.
Static Head – Pump Off	90	30	60
Block Off – Running, No Flow	150	45	105
Running	100	18	82

Motor

Motor Manufacturer	Bell & Gosset
Motor Serial Number	G2875
Motor Frame Number	254T
Motor Service Factor	1.15

Item	Rated	Actual
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Horsepower		
Amps L1		
Amps L2		
Amps L3		
Voltage L1		
Voltage L2		
Voltage L3		
Motor RPM		
Phase	3	3

Starter

Starter Manufacturer	General Electric
Starter Model	
Starter Size	2
Starter Class	
Overload Required Size	
Overload Actual Size	

Energy and Calculations

Average Volts	
Average Amps	
Pump Efficiency %	
Motor Power Factor	
Water Horsepower	9.4
Brake Horsepower	
Calculated kW	
Yearly Hours of Operation	
kWh Per Year	

Remarks

Remarks	
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Chiller Test Reports

Mountain View

Header

Report Name	Mountain View
Job Number	
Date	2026-06-30
Location	
System	
Equipment Location	Central Plant
Serves	
Tested By	

Compressor Data

Manufacturer	York
Model / Size	PE
Type	
Capacity Tons	200
Capacity GPM	480
Refrigerant	R410A
Refrigerant Pounds	700
KW	152
KW / Ton	0.6
Serial Number	YCV M220710

Compressor Readings

Reading	Design	Actual
Suction Pressure	2	
Suction Temperature		
Discharge Pressure		
Discharge Temperature		
Oil Temperature / Pressure		

Compressor Motor

Manufacturer	
Serial Number	

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Frame Number	
Type Frame	
Motor Enclosure	
Service Factor	

Motor Reading	Rated	Actual
HP Nameplate		
OHP		
Amps L1		
Amps L2		
Amps L3		
Voltage L1-L2		
Voltage L2-L3		
Voltage L1-L3		
RPM		
Phase		

Starter

Manufacturer	
Model	
Size	
Class	
Overload Required Size	
Overload Actual Size	

Evaporator

Reading	Design	Actual
Refrigerant Pressure	37	
Refrigerant Temperature	40	
Entering Water Pressure		
Leaving Water Pressure		
Entering Water Temperature	54	
Leaving Water Temperature	44	
Flow GPM		

Condenser

Reading	Design	Actual
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Liquid Line Pressure		
Liquid Line Temperature		
Entering Water Pressure		
Leaving Water Pressure		
Entering Water Temperature	85	
Leaving Water Temperature	95	
Flow GPM		

Conditions

Refrigerant Level Checked	Yes
Oil Level Checked	Yes
Percent Cylinders Unloaded	
Chilled Water Control Setting	
Condenser Water Control Setting	
Low Water Cutout Temperature Setting	
Low Pressure Cutout Setting	
High Pressure Cutout Setting	

Energy

Volts	
Average Amps	
Yearly Hours of Operation	
Calculated KWH / Year	

Remarks / Checks

Purge Operation Checked	Yes
Crankcase Heater Checked	No
Remarks	