

Report By:

National TAB
1329 E. KEMPER ROAD
SUITE 4210
CINCINNATI, OH 45246



Report: TAB REPORT
Function: Test, Adjust, & Balance
Date: 06/04/2025
Completed By: National TAB

PROJECT
CW 3300- Amenity Center (Dallas, TX)

3300 Olympus

Dallas, TX 75019

Client

Billingsley

National TAB

Project: CW 3300- Amenity Center (Dallas, TX)

Table Of Contents

Section	Page #
Certification	3
Equipment Calibrations	4
Abbreviations	5
GRD Layout	6
Fan Coil	7



CERTIFICATION

PROJECT: CW 3300- Amenity Center (Dallas, TX)

The data presented in this report is a record of system measurements and final adjustments that have been obtained in accordance with the current edition of the NEBB *Procedural Standards for Testing, Adjusting, and Balancing of Environmental Systems*. Any variances from design quantities, which exceed NEBB tolerances, are noted in the Test-Adjust-Balance Report Project Summary.

The air distribution system has been tested and balanced and final adjustments have been made in accordance with NEBB standards and the project specifications.

NEBB TAB FIRM: National TAB-Southeast

REGISTRATION NO: 3755

CERTIFIED BY: J. Scott Springer 23312

DATE: 6/4/2025

The hydronic distribution system has been tested and balanced and final adjustments have been made in accordance with NEBB standards and the project specifications.

NEBB TAB FIRM: National TAB-Southeast

REGISTRATION NO: 3755

CERTIFIED BY: J. Scott Springer 23312

DATE: _____

Submitted and Certified by:

NEBB TAB FIRM: National TAB-Southeast

TAB PROFESSIONAL: J. Scott Springer

SIGNATURE: 

REGISTRATION NO: 3755 (NTAB) / 23312

CERTIFICATION EXP: 12/31/2025





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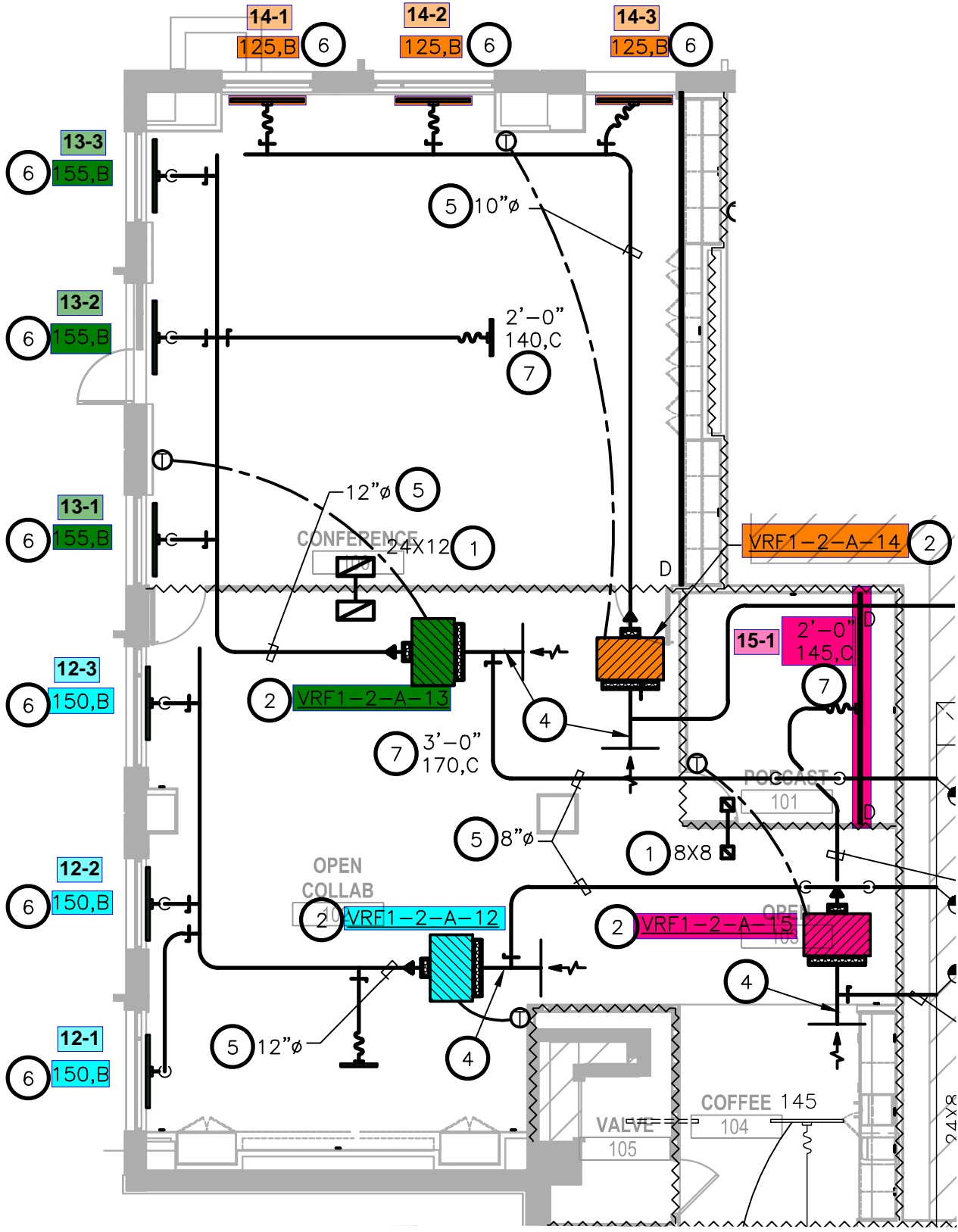


Testing, Adjusting, and Balancing Equipment

Function		Range	Minimum Accuracy	Instrument Information	Calibration Date	Date Due
AIR	AIR PRESSURE	0 in wg to 10 in wg	2% +/- 0.001 in wg	Shortridge ADM-880C S/N M05066	10/15/2024	10/15/2025
	AIR VELOCITY INSTRUMENT	50 fpm to 3900 fpm	+/- 5 % +/- 7 fpm	Shortridge ADM-880C S/N M05066	10/15/2024	10/15/2025
	DIRECT HOOD READING	100 cfm to 2000 cfm	+/- 3 % +/- 7 cfm	Shortridge Flow Hood	10/15/2024	10/15/2025
TEMPERATURE	AIR METER	-20 F to 240 F	+/- .5 % 2 F	Cooper ATKINS - SRH77A S/N 081820093	10/15/2024	10/15/2025
	AIR PROBE	-20 F to 240 F	+/- .5 % 2 F	Cooper ATKINS - PD1388 7-6 S/N 5028	10/15/2024	10/15/2025
	IMMERSION METER	-20 F to 240 F	+/- .5 % 2 F	Cooper ATKINS - SRH77A S/N 081820093	10/15/2024	10/15/2025
	IMMERSION PROBE	-20 F to 240 F	+/- .5 % 2 F	Cooper ATKINS - PD1388 7-6 S/N 1075	10/15/2024	10/15/2025
	CONTACT METER	-20 F to 240 F	+/- .5 % 2 F	Cooper ATKINS - SRH77A S/N 081820093	10/15/2024	10/15/2025
	CONTACT PROBE	-20 F to 240 F	+/- .5 % 2 F	Cooper ATKINS - PD1388 7-6 S/N 4011	10/15/2024	10/15/2025
HUMIDITY	HUMIDITY PROBE	10 % RH to 90 % RH	3% of reading	Cooper ATKINS - SRH77A S/N 090315046	10/15/2024	10/15/2025
ELECTRICAL	VOLTAGE MEASUREMENT	0 VAC to 600 VAC	2 % reading +/- 5 digits	Dwyer CM-1 - S/N 190800099	10/15/2024	10/15/2025
	AMPERAGE MEASUREMENT	0 Amperers to 100 Amperes	2 % reading +/- 5 digits	Dwyer CM-1 - S/N 190800099	10/15/2024	10/15/2025
ROTATION	ROTATION MEASUREMENT	60 rpm to 5000 rpm	2 % reading 2 rpm	Dwyer TAC-L - S/N S1100123	10/15/2024	10/15/2025
HYDRONIC	PRESSURE MEASUREMENT	-30 in Hg to 200 psi	±2% of reading +/- 1 psi	Dwyer 490W-6 - S/N 01L6NK	6/3/2024	6/3/2025
	DIFFERENTIAL PRESSURE MEASUREMENT	0 psi - 80 psi	±2% of reading +/- 1 psi	Dwyer 490W-6 - S/N 01L6NK	6/3/2024	6/3/2025
DALT	DUCT LEAKAGE	-10" - +10" wc	±1% of reading +/- .0004" wc	Kanomax DALT 6900 S/N: 080439	3/2025	3/1/2026

Abbreviation List

A = Area (ft ²)	S.F. = Service Factor
AHU = Air Handling Unit	SF = Supply Fan
A _k = Effective Area	SP = Static Pressure
BHP = Brake Horsepower (IP) HP	SR = Supply Register
Btu = British Thermal Unit	T = Temperature
Btu/h = Btuh = BTUH = BTU/Hour	T _{ma} = Mixed Air Temperature
CL = Center Distance (used in belt formula)	T _{oa} = Outside Air Temperature
CD = Ceiling Diffuser	T _{ra} = Return Air Temperature
CF = Correction Factor	H = Head (in wc, ft wc, psi)
CFM = Volumetric Flow: Cubic Feet Per Minute	h = Enthalpy
CO ₂ = Carbon Dioxide	HP = Horsepower
CO = Carbon Monoxide	hr = Hour
C _v = Flow Constant	K _v = Flow constant (SI)
d = Diameter (in.) IP	kW = Kilowatt = 1000 Watts
Δ = Difference or Change (Final - Initial)	LAT = Leaving Air Temperature
DB = Dry Bulb	lb = Pounds
EA = Exhaust Air	LWT = Leaving Water Temperature
EAT = Entering Air Temperature	ma = Mixed Air
EF = Exhaust Fan	MIN = Minimum
Eff = Efficiency	MAX = Maximum
EG = Exhaust Grille	N/A = Not Applicable
ESP = External Static Pressure	NA = No Access
EWT = Entering Water Temperature	NL = Not Listed
°F = Degrees Fahrenheit, °F	NPSHA = Net Positive Suction Head Available
FPB = Fan Powered Box	NS = Not Specified
FLA = Full Load Amps	OA = Outside Air
fpm = Feet per Minute (fpm)	OAT = Outside Air Temperature
ft = Foot	PD = Sheave Pitch Diameter
gal = Gallons	P.D. = Pressure Drop
GPM = Gallons Per Minute (GPM)	PF = Power Factor
h = Enthalpy (BTU/lb dry air)	SG = Supply Grille
P = Pressure	SR = Supply Register
ppm = parts per million	TP = Total Pressure
psi = Pounds Per Square Inch	T _{ra} = Return Air Temperature
psid = PSI Differential	TS = Tip Speed (fpm) IP, (m/s) SI
r = Radius (in)	TSP = Total Static Pressure
% _{ra} = % of Return Air	V = Velocity
RA = Return Air	VAV = Variable Air Volume
RAT = Return Air Temperature	VD = Volume Damper
RF = Return Fan	VFD = Variable Frequency Drive
RG = Return Grille	W = Watt
RH = Relative Humidity	WB = Wet Bulb
RPM = Revolutions Per Minute	wg = wc = water gauge = water column
RTU = Roof Top Unit	WHP = Water Horsepower (IP)
SA = Supply Air	ω = Humidity Ratio



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Project: CW 3300- Amenity Center (Dallas, TX)

System/Unit: Fan Coil



Asset: VRF 1-2-A-12

AREA:102

Unit Data		
	Design	Actual
MFG	NA	MITSUBISHI
Model Num	NA	TPEFY018MA145A
Serial Num	-	4XR0089630P30E
Configuration	HORIZONTAL	HORIZONTAL

Motor Data		
	Design	Actual
Horsepower	-	0.162
Phase	1	1
Voltage (rated)	208	208
Amperage (rated)	-	2.03

Test Data		
	Design	Actual
SFAN CFM	620	639
Motor Speed SetPt	-	MEDIUM-HIGH
RL Voltage	208	213
RL Amperage	2.03	1.2
RA CFM	499	512
OA CFM	140	127

Performance Data		
	Design	Actual
Suction ESP	-	-0.04
Discharge ESP	-	0.13
Total ESP	0.6	0.17

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Project: CW 3300- Amenity Center (Dallas, TX)

Fan Coil



Diffuser Supply (GRD)

VRF 1-2-A-12/102

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
VRF 1-2-A-12-SGRD1	102	LD	12	150	128	161	107.3
VRF 1-2-A-12-SGRD2	102	LD	12	150	122	153	102.0
VRF 1-2-A-12-SGRD3	102	LD	12	150	116	146	97.3
VRF 1-2-A-12-SGRD4	102	LD	12	170	143	179	105.3
Total				620	509	639	103.06%

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Project: CW 3300- Amenity Center (Dallas, TX)

System/Unit: Fan Coil



Asset: VRF 1-2-A-13

AREA:100

Unit Data		
	Design	Actual
MFG	NA	MITSUBISHI
Model Num	NA	TPEFYP018MA145A
Serial Num	-	4YR0101630P30E
Configuration	HORIZONTAL	HORIZONTAL

Motor Data		
	Design	Actual
Horsepower	-	0.162
Phase	1	1
Voltage (rated)	208	208
Amperage (rated)	-	2.03

Test Data		
	Design	Actual
SFAN CFM	600	626
Motor Speed SetPt	-	LOW SPEED
RL Voltage	208	213
RL Amperage	2.03	0.6
RA CFM	496	505
OA CFM	130	121

Performance Data		
	Design	Actual
Suction ESP	-	-0.03
Discharge ESP	-	0.11
Total ESP	0.6	0.14

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 Project: CW 3300- Amenity Center (Dallas, TX)
Fan Coil



Diffuser Supply (GRD)

VRF 1-2-A-13/100

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
VRF 1-2-A-13-SGRD1	100	LD	12	155	176	160	103.2
VRF 1-2-A-13-SGRD2	100	LD	12	155	177	161	103.9
VRF 1-2-A-13-SGRD3	100	LD	12	155	182	166	107.1
VRF 1-2-A-13-SGRD4	100	LD	12	135	153	139	103.0
Total				600	688	626	104.33%

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Project: CW 3300- Amenity Center (Dallas, TX)

System/Unit: Fan Coil



Asset: VRF 1-2-A-14

AREA:100

Unit Data		
	Design	Actual
MFG	NA	MITSUBISHI
Model Num	NA	TPEFY012MA144A
Serial Num	-	46R0648530P90W
Configuration	HORIZONTAL	HORIZONTAL

Motor Data		
	Design	Actual
Horsepower	-	0.114
Phase	1	1
Voltage (rated)	208	208
Amperage (rated)	-	0.89

Test Data		
	Design	Actual
SFAN CFM	375	373
Motor Speed SetPt	-	MEDIUM
RL Voltage	208	212
RL Amperage	0.89	0.4
RA CFM	298	301
OA CFM	75	72

Performance Data		
	Design	Actual
Suction ESP	-	-0.03
Discharge ESP	-	0.20
Total ESP	0.6	0.23

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Project: CW 3300- Amenity Center (Dallas, TX)

Fan Coil



Diffuser Supply (GRD)

VRF 1-2-A-14/100

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
VRF 1-2-A-14-SGRD1	100	LD	10	125	126	136	108.8
VRF 1-2-A-14-SGRD2	100	LD	10	125	112	121	96.8
VRF 1-2-A-14-SGRD3	100	LD	10	125	107	116	92.8
Total				375	345	373	99.47%

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Project: CW 3300- Amenity Center (Dallas, TX)

System/Unit: Fan Coil



Asset: VRF 1-2-A-15

AREA:102

Unit Data		
	Design	Actual
MFG	NA	MITSUBISHI
Model Num	NA	TPEFYP006MA144A
Serial Num	-	48R0309530P90U
Configuration	HORIZONTAL	HORIZONTAL

Motor Data		
	Design	Actual
Horsepower	-	0.114
Phase	1	1
Voltage (rated)	208	208
Amperage (rated)	-	0.70

Test Data		
	Design	Actual
SFAN CFM	145	215
Motor Speed SetPt	-	LOW SPEED
RL Voltage	208	213
RL Amperage	0.70	0.2
RA CFM	165	161
OA CFM	50	54

Performance Data		
	Design	Actual
Suction ESP	-	-0.02
Discharge ESP	-	0.11
Total ESP	0.6	0.13

Notes:
UNIT IS OPERATING AT LOWEST POSSIBLE SPEED.

Written By: Bayley Morvant on 05/07/2025

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Project: CW 3300- Amenity Center (Dallas, TX)

Fan Coil



Diffuser Supply (GRD)

VRF 1-2-A-15/102

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
VRF 1-2-A-15-SGRD1	101	LD	8	145	246	215	148.3
Total				145	246	215	148.28%