

**Report By:**

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



**Report: TAB REPORT**  
**Function: Test, Adjust, & Balance**  
**Date: 03/17/2025**  
**Completed By: National TAB**

# PROJECT

## Formica 2nd Floor Fitouts (Cincinnati, OH)

120 E 4th Street

Cincinnati, OH 45202

### Client

Mechanical Services & Design (MSD)  
4401 Springfield St  
Dayton, OH 45431

# National TAB

Project: Formica 2nd Floor Fitouts (Cincinnati, OH)

## Table Of Contents

<b>Section</b>	<b>Page #</b>
Certification	3
Equipment Calibrations	4
Abbreviations	5
GRD	6
Fan Coil	7
FAN - Exhaust	27



# CERTIFICATION



**PROJECT:** Formica 2nd Floor Fitouts (Cincinnati, OH)

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

**REGISTRATION NO:** 3629

**CERTIFIED BY:** Joe Hertenstein

**DATE:** 3/17/2025

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

**REGISTRATION NO:** 3629


**CERTIFIED BY:** Joe Hertenstein

**DATE:** \_\_\_\_\_

### Submitted and Certified by:

**NEBB TAB FIRM:** National TAB

**TAB PROFESSIONAL:** Joe Hertenstein

**SIGNATURE:** 

**REGISTRATION NO:** 3629

**CERTIFICATION EXP:** 12/31/2025





# National TAB



Testing, Adjusting, and Balancing Equipment

INTELLIGENCE

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	Evergreen S-PVF-1 S/N 24D-00271	4/9/2024	4/9/2025
	AIR VELOCITY INSTRUMENT	50 fpm to 3900 fpm	+/- 5 % +/- 7 fpm	Evergreen S-PVF-1 S/N 24D-00271	4/9/2024	4/9/2025
	DIRECT HOOD READING	100 cfm to 2000 cfm	+/- 5 % +/- 7 cfm	Evergreen S-PVF-1 S/N 24D-00271	4/9/2024	4/9/2025
TEMPERATURE	AIR METER	-20 F to 240 F	+/- .5 % 2 F	Cooper ATKINS - SRH77A S/N 071118034	7/12/2024	7/12/2025
	AIR PROBE	-20 F to 240 F	+/- .5 % 2 F	Cooper ATKINS - PD1388 7-6 S/N 5028	7/12/2024	7/12/2025
	IMMERSION METER	-20 F to 240 F	+/- .5 % 2 F	Cooper ATKINS - SRH77A S/N 071118034	7/12/2024	7/12/2025
	IMMERSION PROBE	-20 F to 240 F	+/- .5 % 2 F	Cooper ATKINS - PD1388 7-6 S/N 1075	7/12/2024	7/12/2025
	CONTACT METER	-20 F to 240 F	+/- .5 % 2 F	Cooper ATKINS - SRH77A S/N 071118034	7/12/2024	7/12/2025
	CONTACT PROBE	-20 F to 240 F	+/- .5 % 2 F	Cooper ATKINS - PD1388 7-6 S/N 4011	7/12/2024	7/12/2025
HUMIDITY	HUMIDITY PROBE	10 % RH to 90 % RH	3% of reading	Cooper ATKINS - SRH77A S/N 071118034	7/12/2024	7/12/2025
ELECTRICAL	VOLTAGE MEASUREMENT	0 VAC to 600 VAC	2 % reading +/- 5 digits	Fluke 373 True RMS, S/N: 33290686	7/12/2024	7/12/2025
	AMPERAGE MEASUREMENT	0 Amperes to 100 Amperes	2 % reading +/- 5 digits	Fluke 373 True RMS, S/N: 33290686	7/12/2024	7/12/2025
ROTATION	ROTATION MEASUREMENT	60 rpm to 5000 rpm	2 % reading 2 rpm	SHIMPO DT-207LR S/N: D1530081R	7/12/2024	7/12/2025
HYDRONIC	PRESSURE MEASUREMENT	-30 in Hg to 200 psi	±2% of reading +/- 1 psi	Alnor HM675 S/N: 72214041	5/2024	5/2025
	DIFFERENTIAL PRESSURE MEASUREMENT	0 psi - 80 psi	±2% of reading +/- 1 psi	Alnor HM675 S/N: 72214041	5/2024	5/2025

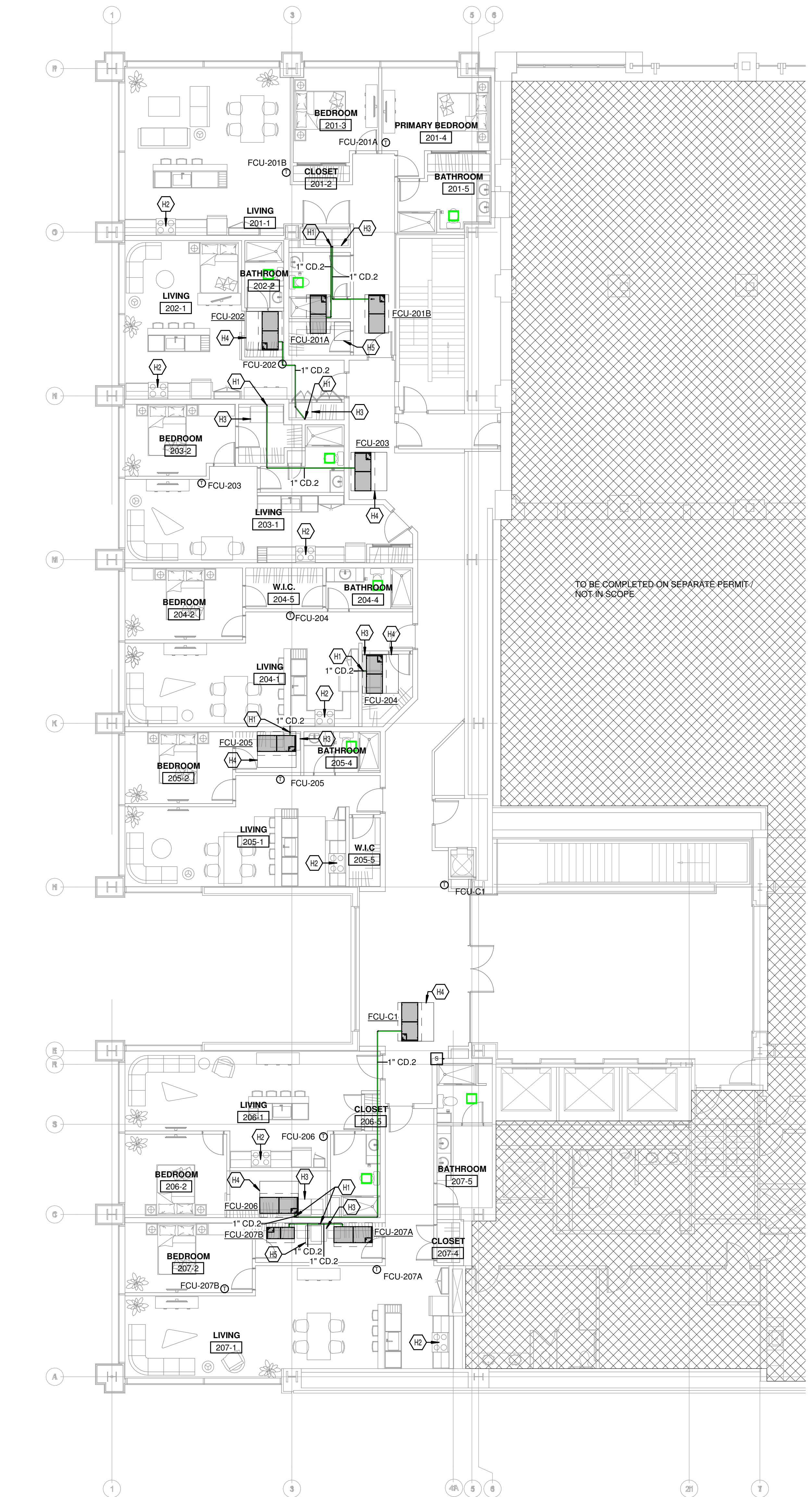


## Abbreviation List

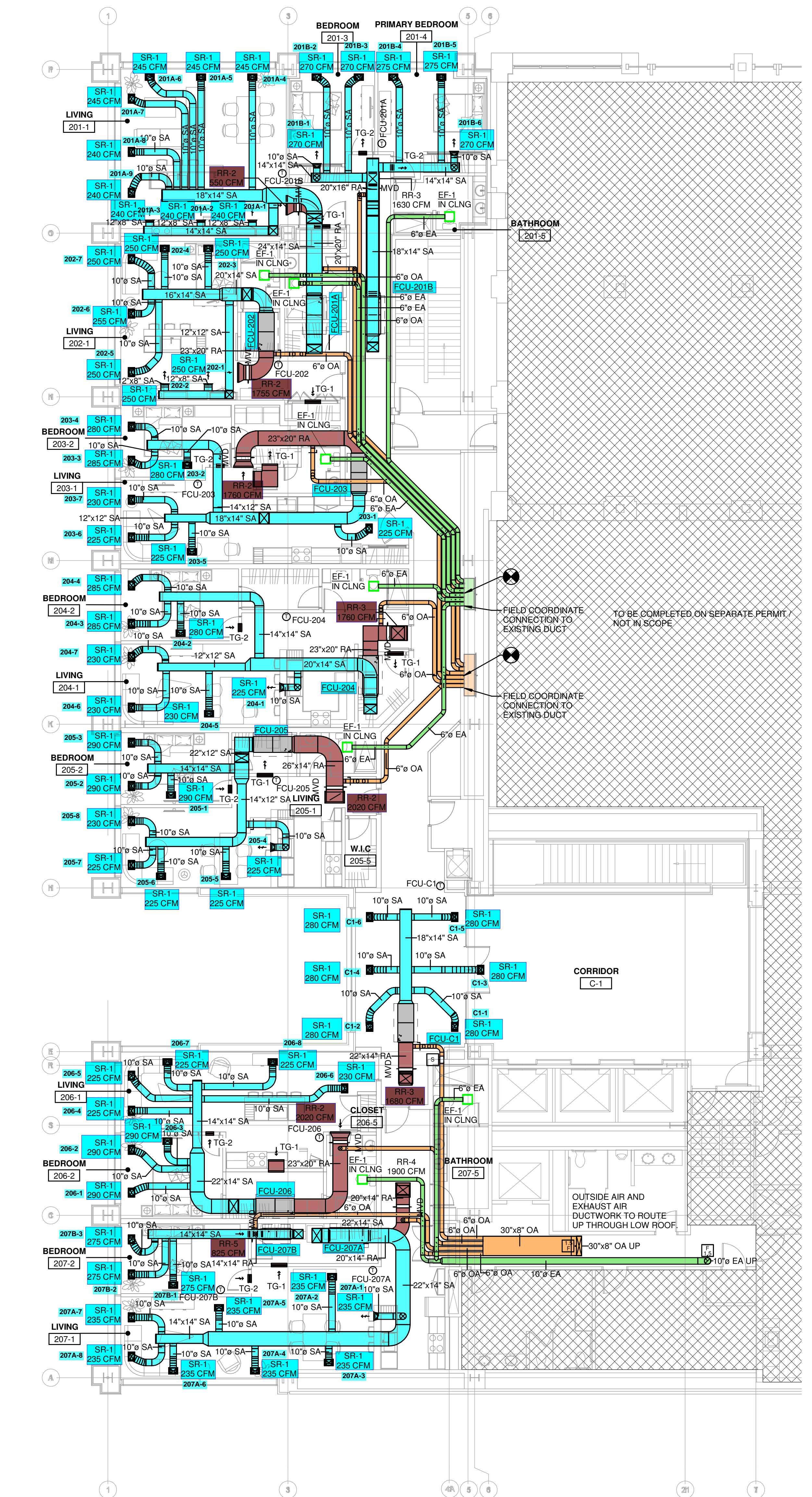
A = Area (ft <sup>2</sup> )	S.F. = Service Factor
AHU = Air Handling Unit	SF = Supply Fan
A <sub>k</sub> = Effective Area	SP = Static Pressure
BHP = Brake Horsepower (IP) HP	SR = Supply Register
Btu = British Thermal Unit	T = Temperature
Btu/h = Btuh = BTUH = BTU/Hour	T <sub>ma</sub> = Mixed Air Temperature
CL = Center Distance (used in belt formula)	T <sub>oa</sub> = Outside Air Temperature
CD = Ceiling Diffuser	T <sub>ra</sub> = Return Air Temperature
CF = Correction Factor	H = Head (in wc, ft wc, psi)
CFM = Volumetric Flow: Cubic Feet Per Minute	h = Enthalpy
CO <sub>2</sub> = Carbon Dioxide	HP = Horsepower
CO = Carbon Monoxide	hr = Hour
C <sub>v</sub> = Flow Constant	K <sub>v</sub> = 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 <sub>ra</sub> = Return Air Temperature
psid = PSI Differential	TS = Tip Speed (fpm) IP, (m/s) SI
r = Radius (in)	TSP = Total Static Pressure
% <sub>ra</sub> = % 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

OWNERSHIP OF INSTRUMENTS OF SERVICE  
 All data, notes and other documents and instruments prepared by the Consultant as instruments of service shall remain the property of the Consultant. The Consultant shall retain all common law, statutory and other reserved rights, including, without limitation, the copyright therein.

10/31/2023 5:56:56C:\Users\mthum\Documents\Revit\24166.04 - 23 - Mechanical-Formica 2nd Fl\_Apt Fit\_Out\_mthum.rvt



2 MECHANICAL PIPING PLAN - LEVEL 2  
 1/8" = 1'-0"

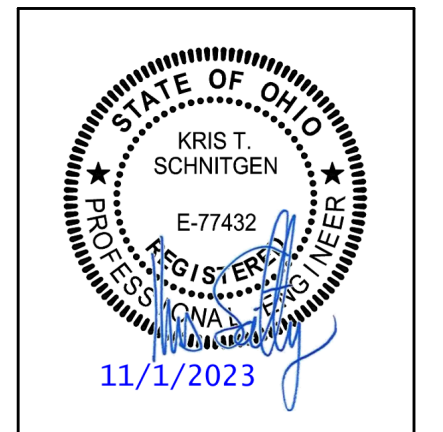


1 MECHANICAL PLAN - LEVEL 2  
 1/8" = 1'-0"

KEYED NOTES	
H1	CONDENSATE PIPING TO BE INDIRECTLY CONNECTED TO WASHER BOX
H2	RECIRCULATING KITCHEN HOOD BY OTHERS
H3	DUCTLESS DRYER BY OTHERS
H4	PROVIDE ACCESS PANEL EQUAL TO THE SIZE OF THE UNIT
H5	PROVIDE ACCESS PANEL TO MAINTENANCE PLATFORM FOR SERVICING FAN COILS

MECHANICAL ELECTRICAL ENGINEERS  
 WWW.KLHENGINEERS.COM  
**KLH ENGINEERS**  
 KOHRS LOHMEYER HELL ENGINEERS, INC.  
 1558 ALEXANDRIA PIKE, SUITE 11  
 LOUISVILLE, KENTUCKY 40240  
 FT. THOMAS, KENTUCKY 40125  
 502-446-8558 FAX  
 502-446-8558 FAX

**Formica Building - Second Floor Apartments**  
 120 E 4th Street  
 Cincinnati OH 45202



REVISIONS	

DWN: MAT    CHK: RAL  
 DATE: 10/31/2023  
 PROJECT #: 24166.04  
 MECHANICAL  
 LEVEL 2 PLAN

**M3-102**  
 1" REFERENCE  
 KLH PROJECT #  
 24166.04

# National TAB

Project: Formica 2nd Floor Fitouts (Cincinnati, OH)

System/Unit: Fan Coil



Asset: FCU-202

AREA:202

Unit Data		
	Design	Actual
MFG	NA	CARRIER
Model Num	NA	FT4BNBD60
Serial Num	-	0924F01548
Configuration	-	HORIZONTAL

Motor Data		
	Design	Actual
Horsepower	-	3/4
Phase	1	1
Voltage (rated)	208	208
Amperage (rated)	-	5.7

Test Data		
	Design	Actual
SFAN CFM	1775	1818
Motor Speed SetPt	-	NOM
RL Voltage	-	212
RL Amperage	-	2.6
RA CFM	-	1767
OA CFM	48	51

Performance Data		
	Design	Actual
Suction ESP	-	-0.70"
Discharge ESP	-	0.16"
Total ESP	0.5	0.86

Completed By: Cody Collett on 02/10/2025

Notes:  
Filters clogged; Removed for testing.

Written By: Cody Collett on 02/10/2025

# National TAB

Project: Formica 2nd Floor Fitouts (Cincinnati, OH)

## Fan Coil



**Diffuser Supply (GRD)**

**FCU-202/202**

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
FCU-202-SGRD1	202	SR	10	250	269	269	107.6
FCU-202-SGRD2	202	SR	10	250	254	254	101.6
FCU-202-SGRD3	202	SR	10	250	249	249	99.6
FCU-202-SGRD4	202	SR	10	250	262	262	104.8
FCU-202-SGRD5	202	SR	10	250	239	239	95.6
FCU-202-SGRD6	202	SR	10	255	271	271	106.3
FCU-202-SGRD7	202	SR	10	250	274	274	109.6
Total				1755	1818	1818	103.59%

**Diffuser Ret/Exh (GRD)**

**FCU-202/202**

Asset								
Asset Name	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
FCU-202-EGRD1	RR	23X20	1755		1767	1767	1767	100.7
Total			1755		1767	1767	1767	100.68%

Completed By: Cody Collett on 02/10/2025

# National TAB

Project: Formica 2nd Floor Fitouts (Cincinnati, OH)

System/Unit: Fan Coil



Asset: FCU-203

AREA:203

Unit Data		
	Design	Actual
MFG	NA	CARRIER
Model Num	NA	FT4BNBD60
Serial Num	-	0824F08864
Configuration	-	HORIZONTAL

Motor Data		
	Design	Actual
Horsepower	-	3/4
Phase	1	1
Voltage (rated)	208	208
Amperage (rated)	-	5.7

Test Data		
	Design	Actual
SFAN CFM	1775	1889
Motor Speed SetPt	-	NOM
RL Voltage	-	212
RL Amperage	-	3.7
RA CFM	-	1838
OA CFM	48	511838

Performance Data		
	Design	Actual
Suction ESP	-	-0.28"
Discharge ESP	-	0.13"
Total ESP	0.5	0.41"

Completed By: Cody Collett on 02/10/2025

Notes:  
Filter clogged; removed for testing.

Written By: Cody Collett on 02/10/2025

# National TAB

Project: Formica 2nd Floor Fitouts (Cincinnati, OH)

## Fan Coil



### Diffuser Supply (GRD)

#### FCU-203/203

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
FCU-203-SGRD1	203	SR	10	225	247	247	109.8
FCU-203-SGRD2	203	SR	10	280	294	294	105.0
FCU-203-SGRD3	203	SR	10	285	310	310	108.8
FCU-203-SGRD4	203	SR	10	280	305	305	108.9
FCU-203-SGRD5	203	SR	10	225	247	247	109.8
FCU-203-SGRD6	203	SR	10	225	239	239	106.2
FCU-203-SGRD7	203	SR	10	230	245	245	106.5
Total				1750	1887	1887	107.83%

### Diffuser Ret/Exh (GRD)

#### FCU-203/203

Asset								
Asset Name	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
FCU-203-EGRD1	RR	23X20	1760		1838	1838	1838	104.4
Total			1760		1838	1838	1838	104.43%

Completed By: Cody Collett on 02/10/2025

# National TAB

Project: Formica 2nd Floor Fitouts (Cincinnati, OH)

System/Unit: Fan Coil



Asset: FCU-204

AREA:204

Unit Data		
	Design	Actual
MFG	NA	CARRIER
Model Num	NA	FT4BNBD60
Serial Num	-	0924F01549
Configuration	-	HOTIZONTAL

Motor Data		
	Design	Actual
Horsepower	-	3/4
Phase	1	1
Voltage (rated)	208	208
Amperage (rated)	-	5.7

Test Data		
	Design	Actual
SFAN CFM	1795	1892
Motor Speed SetPt	-	NOM
RL Voltage	-	213
RL Amperage	-	5.7
RA CFM	-	1839
OA CFM	55	53

Performance Data		
	Design	Actual
Suction ESP	-	-1.52"
Discharge ESP	-	0.20"
Total ESP	0.5	1.72"

Completed By: Cody Collett on 02/10/2025

# National TAB

Project: Formica 2nd Floor Fitouts (Cincinnati, OH)

## Fan Coil



**Diffuser Supply (GRD)**

**FCU-204/204**

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
FCU-204-SGRD1	204	SR	10	225	245	245	108.9
FCU-204-SGRD2	204	SR	10	280	302	302	107.9
FCU-204-SGRD3	204	SR	10	285	295	295	103.5
FCU-204-SGRD4	204	SR	10	285	312	312	109.5
FCU-204-SGRD5	204	SR	10	230	238	238	103.5
FCU-204-SGRD6	204	SR	10	230	248	248	107.8
FCU-204-SGRD7	204	SR	10	230	252	252	109.6
Total				1765	1892	1892	107.2%

**Diffuser Ret/Exh (GRD)**

**FCU-204/204**

Asset								
Asset Name	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
FCU-204-EGRD1	RR	23X20	1760		1839	1839	1839	104.5
Total			1760		1839	1839	1839	104.49%

Completed By: Cody Collett on 02/10/2025

# National TAB

Project: Formica 2nd Floor Fitouts (Cincinnati, OH)

System/Unit: Fan Coil



Asset: FCU-205

AREA:205

Unit Data		
	Design	Actual
MFG	NA	CARRIER
Model Num	NA	FT4BNBD60
Serial Num	-	0424F07903
Configuration	-	HORIZONTAL

Motor Data		
	Design	Actual
Horsepower	-	3/4
Phase	1	1
Voltage (rated)	208	208
Amperage (rated)	-	5.7

Test Data		
	Design	Actual
SFAN CFM	2030	1986
Motor Speed SetPt	-	NOM
RL Voltage	-	213
RL Amperage	-	2.1
RA CFM	-	1933
OA CFM	50	53

Performance Data		
	Design	Actual
Suction ESP	-	-1.02
Discharge ESP	-	0.12"
Total ESP	0.5	1.14"

Completed By: Cody Collett on 02/10/2025

Notes:  
Filter removed for testing.

Written By: Cody Collett on 02/10/2025

# National TAB

Project: Formica 2nd Floor Fitouts (Cincinnati, OH)

## Fan Coil



**Diffuser Supply (GRD)**

**FCU-205/205**

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
FCU-205-SGRD1	205	SR	10	290	262	262	90.3
FCU-205-SGRD2	205	SR	10	290	268	268	92.4
FCU-205-SGRD3	205	SR	10	290	276	276	95.2
FCU-205-SGRD4	205	SR	10	225	230	230	102.2
FCU-205-SGRD5	205	SR	10	225	233	233	103.6
FCU-205-SGRD6	205	SR	10	225	239	239	106.2
FCU-205-SGRD7	205	SR	10	225	238	238	105.8
FCU-205-SGRD8	205	SR	10	230	240	240	104.3
Total				2000	1986	1986	99.3%

**Diffuser Ret/Exh (GRD)**

**FCU-205/205**

Asset								
Asset Name	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
FCU-205-EGRD1	RR	26X14	2020		1933	1933	1933	95.7
Total			2020		1933	1933	1933	95.69%

Completed By: Cody Collett on 02/10/2025

# National TAB

Project: Formica 2nd Floor Fitouts (Cincinnati, OH)

System/Unit: Fan Coil



Asset: FCU-206

AREA:206

Unit Data		
	Design	Actual
MFG	NA	CARRIER
Model Num	NA	FT4BNBD60
Serial Num	-	0624F14645
Configuration	-	HORIZONTAL

Motor Data		
	Design	Actual
Horsepower	-	3/4
Phase	1	1
Voltage (rated)	208	208
Amperage (rated)	-	5.7

Test Data		
	Design	Actual
SFAN CFM	2035	2043
Motor Speed SetPt	-	HIGH
RL Voltage	-	213
RL Amperage	-	5.6
RA CFM	-	1990
OA CFM	51	53

Performance Data		
	Design	Actual
Suction ESP	-	-0.11
Discharge ESP	-	0.12"
Total ESP	0.5	0.23"

Completed By: Cody Collett on 03/07/2025

# National TAB

Project: Formica 2nd Floor Fitouts (Cincinnati, OH)

## Fan Coil



**Diffuser Supply (GRD)**

**FCU-206/206**

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
FCU-206-SGRD1	206	SR	10	290	187	299	103.1
FCU-206-SGRD2	206	SR	10	290	180	290	100.0
FCU-206-SGRD3	206	SR	10	290	192	289	99.7
FCU-206-SGRD4	206	SR	10	225	150	238	105.8
FCU-206-SGRD5	206	SR	10	225	143	243	108.0
FCU-206-SGRD6	206	SR	10	230	146	232	100.9
FCU-206-SGRD7	206	SR	10	225	151	237	105.3
FCU-206-SGRD8	206	SR	10	225	145	215	95.6
Total				2000	1294	2043	102.15%

**Diffuser Ret/Exh (GRD)**

**FCU-206/206**

Asset								
Asset Name	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
FCU-206-EGRD1	RR	23X20	2000	3.423	1294	1636	1990	99.5
Total			2000		1294	1636	1990	99.5%

Completed By: Cody Collett on 03/07/2025

# National TAB

Project: Formica 2nd Floor Fitouts (Cincinnati, OH)

System/Unit: Fan Coil



Asset: FCU-201A9

AREA:201

Unit Data		
	Design	Actual
MFG	NA	CARRIER
Model Num	NA	FT4BNBD60
Serial Num	-	0924F01450
Configuration	-	HORIZONTAL

Motor Data		
	Design	Actual
Horsepower	-	3/4
Phase	1	1
Voltage (rated)	208	208
Amperage (rated)	-	5.7

Test Data		
	Design	Actual
SFAN CFM	2210	2030
Motor Speed SetPt	-	HIGH
RL Voltage	-	211
RL Amperage	-	5.7
RA CFM	-	1965
OA CFM	61	65

Performance Data		
	Design	Actual
Suction ESP	-	-0.64"
Discharge ESP	-	0.08"
Total ESP	0.5	0.72"

Completed By: Cody Collett on 02/10/2025

# National TAB

Project: Formica 2nd Floor Fitouts (Cincinnati, OH)

## Fan Coil



**Diffuser Supply (GRD)**

**FCU-201A9/201**

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
FC9-SGRD1	201	SR	10	240	225	225	93.8
FC9-SGRD2	201	SR	10	240	219	219	91.3
FC9-SGRD3	201	SR	10	240	226	226	94.2
FC9-SGRD4	201	SR	10	245	233	233	95.1
FC9-SGRD5	201	SR	10	245	229	229	93.5
FC9-SGRD6	201	SR	10	245	228	228	93.1
FC9-SGRD7	201	SR	10	245	222	222	90.6
FC9-SGRD8	201	SR	10	240	225	225	93.8
FC9-SGRD9	201	SR	10	240	223	223	92.9
Total				2180	2030	2030	93.12%

Completed By: Cody Collett on 02/10/2025

# National TAB

Project: Formica 2nd Floor Fitouts (Cincinnati, OH)

System/Unit: Fan Coil



Asset: FCU-201B10

AREA:201

Unit Data		
	Design	Actual
MFG	NA	CARRIER
Model Num	NA	FT4BNBD60
Serial Num	-	0424F07905
Configuration	-	HORIZONTAL

Motor Data		
	Design	Actual
Horsepower	-	3/4
Phase	1	1
Voltage (rated)	208	208
Amperage (rated)	-	5.7

Test Data		
	Design	Actual
SFAN CFM	1645	1529
Motor Speed SetPt	-	NOM
RL Voltage	-	212
RL Amperage	-	3.1
RA CFM	-	1494
OA CFM	36	35

Performance Data		
	Design	Actual
Suction ESP	-	-0.75"
Discharge ESP	-	0.14"
Total ESP	0.5	0.89"

Completed By: Cody Collett on 02/10/2025

# National TAB

Project: Formica 2nd Floor Fitouts (Cincinnati, OH)

## Fan Coil



**Diffuser Supply (GRD)**

**FCU-201B10/201**

<b>Asset</b>							
<b>Asset Name</b>	<b>Location</b>	<b>Type</b>	<b>Size</b>	<b>DESIGN CFM</b>	<b>CFM(1)</b>	<b>FINAL CFM</b>	<b>% to design</b>
FCU-201B10-SGRD1	201	SR	10	270	249	249	92.2
FCU-201B10-SGRD2	201	SR	10	270	255	255	94.4
FCU-201B10-SGRD3	201	SR	10	270	261	261	96.7
FCU-201B10-SGRD4	201	SR	10	275	248	248	90.2
FCU-201B10-SGRD5	201	SR	10	275	252	252	91.6
FCU-201B10-SGRD6	201	SR	10	270	264	264	97.8
<b>Total</b>				<b>1630</b>	<b>1529</b>	<b>1529</b>	<b>93.8%</b>

Completed By: Cody Collett on 02/10/2025

# National TAB

Project: Formica 2nd Floor Fitouts (Cincinnati, OH)

System/Unit: Fan Coil



Asset: FCU-207A1

AREA:207-1

Unit Data		
	Design	Actual
MFG	NA	CARRIER
Model Num	NA	FT4BNBD60
Serial Num	-	0924F01553
Configuration	-	HORIZONTAL

Motor Data		
	Design	Actual
Horsepower	-	3/4
Phase	1	1
Voltage (rated)	208	208
Amperage (rated)	-	5.7

Test Data		
	Design	Actual
SFAN CFM	1925	1815
Motor Speed SetPt	-	NOM
RL Voltage	-	NA
RL Amperage	-	NA
RA CFM	-	1762
OA CFM	55	53

Performance Data		
	Design	Actual
Suction ESP	-	-0.29"
Discharge ESP	-	0.07"
Total ESP	0.5	0.36"

Completed By: Cody Collett on 02/10/2025

Notes:

Volts and amps not accessible due to restricted space above ceiling preventing enough access to safely read volts and amps.

Written By: Cody Collett on 02/10/2025

# National TAB

Project: Formica 2nd Floor Fitouts (Cincinnati, OH)

## Fan Coil



**Diffuser Supply (GRD)**

**FCU-207A1/207-1**

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
FCU-207A1-SGRD1	207-1	SR	10	235	212	212	90.2
FCU-207A1-SGRD2	207-1	SR	10	235	224	224	95.3
FCU-207A1-SGRD3	207-1	SR	10	235	236	236	100.4
FCU-207A1-SGRD4	207-1	SR	10	235	228	228	97.0
FCU-207A1-SGRD5	207-1	SR	10	235	234	234	99.6
FCU-207A1-SGRD6	207-1	SR	10	235	222	222	94.5
FCU-207A1-SGRD7	207-1	SR	10	235	229	229	97.4
FCU-207A1-SGRD8	207-1	SR	10	235	230	230	97.9
Total				1880	1815	1815	96.54%

Completed By: Cody Collett on 02/10/2025

# National TAB

Project: Formica 2nd Floor Fitouts (Cincinnati, OH)

## System/Unit: Fan Coil



Asset: FCU-207B2

AREA:207-2

Unit Data		
	Design	Actual
MFG	NA	CARRIER
Model Num	NA	FT4BNXB24
Serial Num	-	1224F09024
Configuration	-	HOTIZONTAL

Motor Data		
	Design	Actual
Horsepower	-	1/2
Phase	1	1
Voltage (rated)	208	208
Amperage (rated)	-	4

Test Data		
	Design	Actual
SFAN CFM	825	879
Motor Speed SetPt	-	LOW
RL Voltage	-	NA
RL Amperage	-	1.98
RA CFM	-	860
OA CFM	18	19

Performance Data		
	Design	Actual
Suction ESP	-	-0.21"
Discharge ESP	-	0.13"
Total ESP	0.5	0.34"

Completed By: Cody Collett on 02/10/2025

Notes:  
Filter clogged; removed for testing.  
Volts not safely accessible.

Written By: Cody Collett on 02/10/2025

# National TAB

Project: Formica 2nd Floor Fitouts (Cincinnati, OH)

## Fan Coil



**Diffuser Supply (GRD)**

**FCU-207B2/207-2**

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
FCU-207B2-SGRD1	207-2	SR	10	275	285	285	103.6
FCU-207B2-SGRD2	207-2	SR	10	275	295	295	107.3
FCU-207B2-SGRD3	207-2	SR	10	275	299	299	108.7
Total				825	879	879	106.55%

Completed By: Cody Collett on 02/10/2025

# National TAB

Project: Formica 2nd Floor Fitouts (Cincinnati, OH)

## System/Unit: Fan Coil



Asset: FCU-C1

AREA:CORRIDOR

Unit Data		
	Design	Actual
MFG	NA	CARRIER
Model Num	NA	FTRBNBD60L
Serial Num	-	0724F05604
Configuration	-	HORIZONTAL

Motor Data		
	Design	Actual
Horsepower	-	3/4
Phase	1	1
Voltage (rated)	208	208/230
Amperage (rated)	-	5.7

Test Data		
	Design	Actual
SFAN CFM	1680	1727
Motor Speed SetPt	-	HIGH
RL Voltage	-	212
RL Amperage	-	4.8
RA CFM	-	1591
OA CFM	125	136

Performance Data		
	Design	Actual
Suction ESP	-	-0.58"
Discharge ESP	-	0.25"
Total ESP	0.5	0.83"

Completed By: Cody Collett on 03/07/2025

# National TAB

Project: Formica 2nd Floor Fitouts (Cincinnati, OH)

## Fan Coil



**Diffuser Supply (GRD)**

**FCU-C1/CORRIDOR**

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
FCU-C1-SGRD1	CORR	CD-1	10	240	243	243	101.3
FCU-C1-SGRD2	CORR	CD-1	10	240	241	241	100.4
FCU-C1-SGRD3	CORR	CD-1	10	240	263	263	109.6
FCU-C1-SGRD4	CORR	SR-1	10	240	231	231	96.3
FCU-C1-SGRD5	CORR	SR-1	10	240	255	255	106.3
FCU-C1-SGRD6	CORR	SR-1	10	240	249	249	103.8
FCU-C1-SGRD7	CORR	SR-1	10	240	245	245	102.1
Total				1680	1727	1727	102.8%

**Diffuser Ret/Exh (GRD)**

**FCU-C1/CORRIDOR**

Asset								
Asset Name	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
FCU-C1-EGRD1	RR-1	24x24	657	1	778	856	704	107.2
FCU-C1-EGRD2	RR-1	24x24	897	1	757	871	887	98.9
Total			1554		1535	1727	1591	102.38%

Completed By: Cody Collett on 03/07/2025

# National TAB

Project: Formica 2nd Floor Fitouts (Cincinnati, OH)

System/Unit: FAN - Exhaust



Asset: EF-202

AREA:

Unit Data		
	Design	Actual
MFG	NA	COOK
Model Num	NA	GEMINI 140
Serial Num	-	NA

Test Data		
	Design	Actual
CFM	80	87

Motor Data		
	Design	Actual
Motor MFG	-	QUEACE
Motor Rpm	-	1550
Phase	-	1
Voltage (rated)	-	115
Amperage (rated)	-	0.40/0.22

Completed By: Gabe Merk on 02/17/2025

# National TAB

Project: Formica 2nd Floor Fitouts (Cincinnati, OH)

System/Unit: FAN - Exhaust



Asset: EF-203

AREA:

Unit Data		
	Design	Actual
MFG	NA	COOK
Model Num	NA	GEMINI 140
Serial Num	-	NA

Test Data		
	Design	Actual
CFM	80	84

Motor Data		
	Design	Actual
Motor MFG	-	QUEACE
Motor Rpm	-	1550
Phase	-	1
Voltage (rated)	-	115
Amperage (rated)	-	0.40

Completed By: Gabe Merk on 02/17/2025

# National TAB

Project: Formica 2nd Floor Fitouts (Cincinnati, OH)

System/Unit: FAN - Exhaust



Asset: EF-204

AREA:

Unit Data		
	Design	Actual
MFG	NA	COOK
Model Num	NA	GEMINI 140
Serial Num	-	NA

Test Data		
	Design	Actual
CFM	80	79

Motor Data		
	Design	Actual
Motor MFG	-	QUEACE
Motor Rpm	-	1550
Phase	-	1
Voltage (rated)	-	115
Amperage (rated)	-	0.40

Completed By: Gabe Merk on 02/17/2025

# National TAB

Project: Formica 2nd Floor Fitouts (Cincinnati, OH)

System/Unit: FAN - Exhaust



Asset: EF-205

AREA:

Unit Data		
	Design	Actual
MFG	NA	COOK
Model Num	NA	GEMINI 140
Serial Num	-	NA

Test Data		
	Design	Actual
CFM	80	86

Motor Data		
	Design	Actual
Motor MFG	-	QUEACE
Motor Rpm	-	1550
Phase	-	1
Voltage (rated)	-	115
Amperage (rated)	-	0.40

Completed By: Gabe Merk on 02/17/2025

# National TAB

Project: Formica 2nd Floor Fitouts (Cincinnati, OH)

System/Unit: FAN - Exhaust



Asset: EF-206

AREA:

Unit Data		
	Design	Actual
MFG	NA	COOK
Model Num	NA	GEMINI 140
Serial Num	-	NA

Test Data		
	Design	Actual
CFM	80	84

Motor Data		
	Design	Actual
Motor MFG	-	QUEACE
Motor Rpm	-	1550
Phase	-	1
Voltage (rated)	-	115
Amperage (rated)	-	0.4

Completed By: Gabe Merk on 02/17/2025

# National TAB

Project: Formica 2nd Floor Fitouts (Cincinnati, OH)

System/Unit: FAN - Exhaust



Asset: EF-207

AREA:

Unit Data		
	Design	Actual
MFG	NA	COOK
Model Num	NA	GEMINI 140
Serial Num	-	NA

Test Data		
	Design	Actual
CFM	80	86

Motor Data		
	Design	Actual
Motor MFG	-	QUEACE
Motor Rpm	-	1550
Phase	-	1
Voltage (rated)	-	115
Amperage (rated)	-	0.40

Completed By: Gabe Merk on 02/17/2025

# National TAB

Project: Formica 2nd Floor Fitouts (Cincinnati, OH)

System/Unit: FAN - Exhaust



Asset: EF-201A1

AREA:

Unit Data		
	Design	Actual
MFG	NA	COOK
Model Num	NA	GEMINI 140
Serial Num	-	N/A

Test Data		
	Design	Actual
CFM	80	88

Motor Data		
	Design	Actual
Motor MFG	-	QUEACE
Motor Rpm	-	1550
Phase	-	1
Voltage (rated)	-	115
Amperage (rated)	-	0.22

Completed By: Gabe Merk on 02/17/2025

# National TAB

Project: Formica 2nd Floor Fitouts (Cincinnati, OH)

System/Unit: FAN - Exhaust



Asset: EF-201B2

AREA:

Unit Data		
	Design	Actual
MFG	NA	COOK
Model Num	NA	GEMINI 140
Serial Num	-	NA

Test Data		
	Design	Actual
CFM	80	87

Motor Data		
	Design	Actual
Motor MFG	-	QUEACE
Motor Rpm	-	1550
Phase	-	1
Voltage (rated)	-	115
Amperage (rated)	-	0.40/22

Completed By: Gabe Merk on 02/17/2025