

Report By:

National TAB
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CINCINNATI, OH 45246



Report: TAB REPORT
Function: Test, Adjust, & Balance
Date: 03/25/2025
Completed By: National TAB

PROJECT
SWEATHOUZ RENOVATION (WEST
CHESTER, OH)

7682 VOICE OF AMERICA CT DR

WEST CHESTER , OH 45069

Client

Champion Commercial HVAC

2638 Tem Mile Rd.

Melbourne, KY 41059

National TAB

Project: SWEATHOUZ RENOVATION (WEST CHESTER, OH)

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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 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



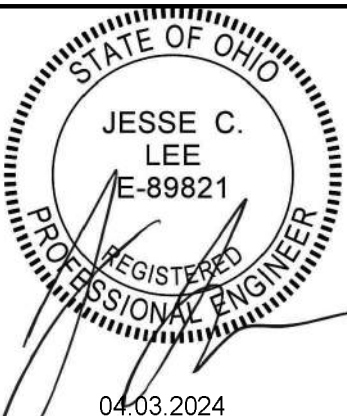
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SWEATHOUZ
RENOVATION

RECOVERY WAVES, LLC.
7682 VOICE OF AMERICA CT DR
WEST CHESTER, OH 45069
PERMIT



04-03-2024

MD PROJECT #	2/021
DRAWN BY	###
CHECKED BY	###
PERMIT SET	###
REVISION SCHEDULE	DATE
DESCRIPTION	

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MECHANICAL - PLANS AND NOTES

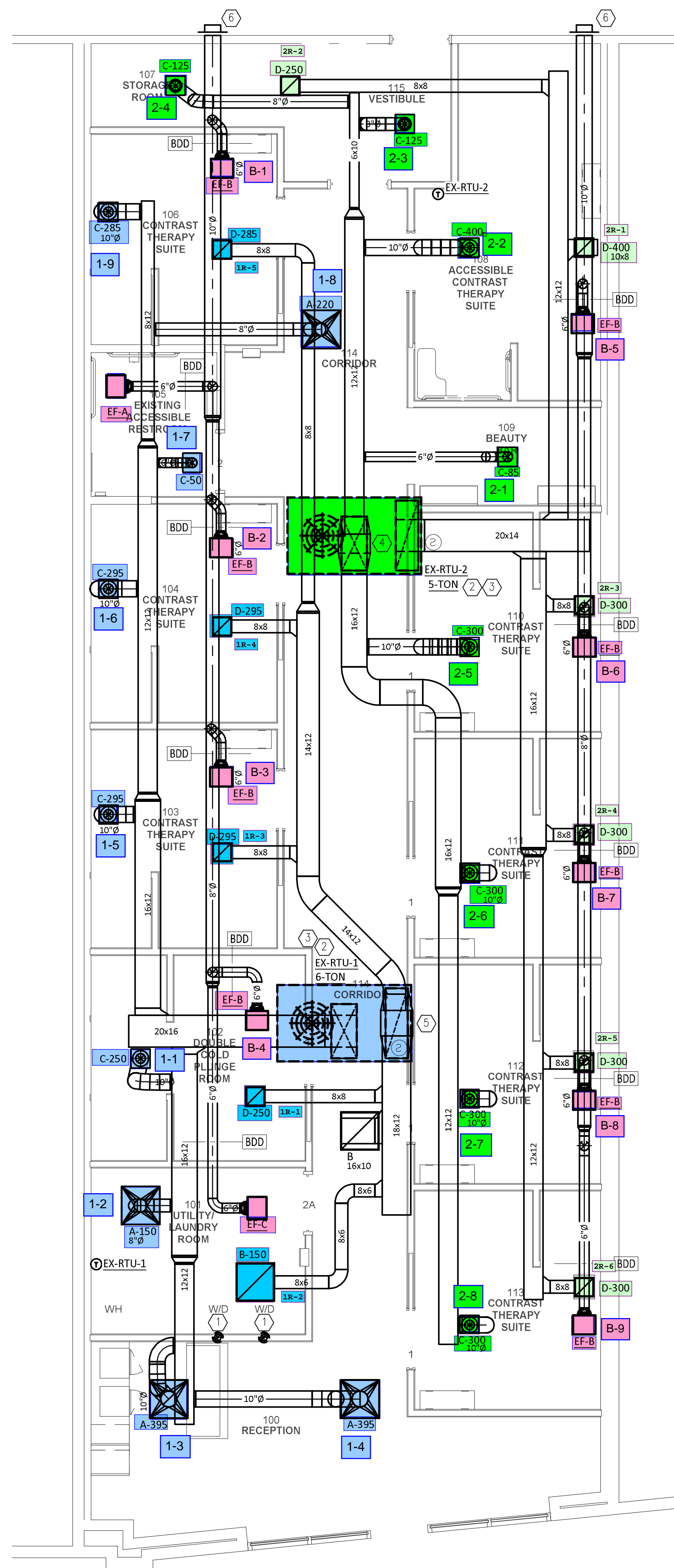


KEYNOTES (APPLY TO THIS SHEET ONLY):

- ① 4" DRYER EXHAUST DUCT; ROUTE TO EXTERIOR AND TERMINATE ON ROOF WITH ROOF CAP. COORDINATE EXACT LOCATION WITH EQUIPMENT.
- ② EXISTING RTU TO REMAIN. INSPECT, CLEAN, AND PROVIDE MAINTENANCE TO ENSURE UNIT FUNCTIONS PER DESIGN INTENT. REPORT ANY DEFECTS TO ENGINEER & OWNER.
- ③ PROVIDE SMOKE DETECTOR IN RETURN DUCT AS REQUIRED BY CODE IF NOT EXISTING.
- ④ 20x14 DUCT UP TO EX-RTU-2 ABOVE.
- ⑤ 20x16 DUCT UP TO EX-RTU-1 ABOVE.
- ⑥ PROVIDE PAINTABLE WALL CAP SIZED AT 0.01"WC FOR EXHAUST DUCT TERMINATIONS. MAINTAIN 3'-0" FROM BUILDING OPENINGS AND 10'-0" FROM BUILDING INTAKES.

GENERAL NOTES (APPLY TO THIS SHEET ONLY)

1. THERMOSTATS ARE TO BE INSTALLED 44" ON CENTER, TOP OF THERMOSTATS CAN NOT EXCEED 46" AFF.
2. THERMOSTATS TO BE LOCATED AFTER LIGHT SWITCHES WHEN THERE IS A DOOR OR END WALL CONDITION. THERMOSTATS NOT TO BE INSTALLED IN CENTER OF WALLS.
3. PROVIDE ACCESS PANELS IN CEILING WHERE REQUIRED. COORDINATE WITH ARCHITECT.
4. THERMOSTAT JUNCTION BOX TO BE COORDINATED WITH SPEC TO DETERMINE IF BOX IS TO BE INSTALLED IN EITHER THE HORIZONTAL OR VERTICAL ORIENTATION.
5. LINE RETURN DUCT 10' OR THRU THE FIRST TRANSITION.
6. PROVIDE A CABLE OPERATED DAMPER WHERE DUCTS ARE LOCATED ABOVE INACCESSIBLE CEILINGS.
7. PRIOR TO PROJECT COMPLETION ALL EQUIPMENT AND CONTROLS SHALL BE PROVEN TO FUNCTION PER DESIGN INTENT.
8. ROOFTOP UNITS ARE EXISTING TO REMAIN. CLEAN, SERVICE, AND PROVIDE MAINTENANCE AS REQUIRED. REPORT ANY DEFECTS AND DIFFERENCES TO OWNER.



1 FLOOR PLAN - MECHANICAL
1/4" = 1'-0"

National TAB

Project: SWEATHOUZ RENOVATION (WEST CHESTER, OH)

System/Unit: AHU/RTU



Asset: RTU1

AREA:WEST SIDE OF STORE

Unit Data		
	Design	Actual
MFG	N/A	LENNOX
Serial Num	-	5620F04822
Model Num	N/A	ZGB074S4TH1Y
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	27.5x16
Num Final Filter 1	-	2
Final Filter Size 1	-	16X20X2
Num Final Filter 2	-	2
Final Filter Size 2	-	20X20X2

Test Data		
	Design	Actual
SF CFM	2335	2128
SF RPM	-	738
RA CFM	2055	1837
OA CFM	280	291
RL Voltage	-	210/211/210
RL Amperage	-	6.8/6.6/6.6
OA Damper Position	-	0.5"
Brake Horse Power	-	1.8

Motor Data		
	Design	Actual
Motor MFG	-	NA
Frame	-	56HZ
Horsepower	-	2
Motor Rpm	-	1740
Phase	-	3
Rated Voltage	-	208
Rated Amperage	-	7.5
Service Factor	-	1.15

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.66
Fan Suction SP	-	-0.98
Fan Discharge SP	-	0.23
Total ESP	0.50	0.89
Fan Total SP	-	1.21
Cooling Coil P.D.	-	0.32

Drive Data	
	Actual
Motor Sheave Size	3-3/4"
Motor Bore Size	7/8"
Motor Sheave SetPt	1 out
Fan Sheave Size	8"
Fan Sheave Bore	1"
Belt CL Distance	19-1/4"
Num of Belts	1
Belt Size	AX53

Completed By: Nick Payne on 03/27/2025

Notes:
No accessible dampers located.

Written By: Nick Payne on 03/27/2025

Unit Data - PHOTO LOG



03/12/2025



03/12/2025



03/12/2025

National TAB

Project: SWEATHOUZ RENOVATION (WEST CHESTER, OH)

AHU/RTU



Diffuser Supply (GRD)

RTU1/WEST SIDE OF STORE

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
RTU1-SGRD1	PLUNGE ROOM	DOWNBLAST	10"	250	222	246	98.4
RTU1-SGRD2	UTILITY/LAUNDRY	DOWNBLAST	8"	150	177	184	122.7
RTU1-SGRD3	RECEPTION	DOWNBLAST	10"	395	307	328	83.0
RTU1-SGRD4	RECEPTION	DOWNBLAST	10"	395	264	277	70.1
RTU1-SGRD5	CONTRAST THERAPY103	DOWNBLAST	10"	295	318	333	112.9
RTU1-SGRD6	CONTRAST THERAPY104	DOWNBLAST	10"	295	258	270	91.5
RTU1-SGRD7	ACCESSIBLE RESTROOM	DOWNBLAST	6"	50	98	108	216.0
RTU1-SGRD8	CORRIDOR	DOWNBLAST	8"	220	187	205	93.2
RTU1-SGRD9	CONTRAST THERAPY106	DOWNBLAST	10"	285	152	177	62.1
Total				2335	1983	2128	91.13%

National TAB

Project: SWEATHOUZ RENOVATION (WEST CHESTER, OH)

System/Unit: AHU/RTU



Asset: RTU2

AREA:EAST SIDE OF STORE

Unit Data		
	Design	Actual
MFG	N/A	LENNOX
Serial Num	-	5620F04871
Model Num	N/A	ZGB060S4BH1
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	27.5x16
Num Final Filter 1	-	2
Final Filter Size 1	-	16X20X2
Num Final Filter 2	-	2
Final Filter Size 2	-	20X20X2

Motor Data		
	Design	Actual
Motor MFG	-	NA
Frame	-	NA
Horsepower	-	1
Motor Rpm	-	1760
Phase	-	3
Rated Voltage	-	208
Rated Amperage	-	4.6
Service Factor	-	1.15

Drive Data	
	Actual
Motor Sheave Size	3-1/4"
Motor Bore Size	7/8"
Motor Sheave SetPt	1.5 out
Fan Sheave Size	4"
Fan Sheave Bore	5/8"
Belt CL Distance	15-3/8"
Num of Belts	1
Belt Size	A39

Test Data		
	Design	Actual
SF CFM	1935	1869
SF RPM	-	1197
RA CFM	1655	1601
OA CFM	280	268
RL Voltage	-	212/210/211
RL Amperage	-	4.0/4.2/4/2
OA Damper Position	-	0.5"
Brake Horse Power	-	0.87

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.39
Fan Suction SP	-	-0.59
Fan Discharge SP	-	0.53
Total ESP	0.50	0.92
Fan Total SP	-	1.12
Cooling Coil P.D.	-	0.2

Completed By: Nick Payne on 03/27/2025

Notes:
No accessible dampers located.

Written By: Nick Payne on 03/27/2025

Unit Data - PHOTO LOG



03/12/2025



03/12/2025



03/12/2025

National TAB

Project: SWEATHOUZ RENOVATION (WEST CHESTER, OH)

AHU/RTU



Diffuser Supply (GRD)

RTU2/EAST SIDE OF STORE

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
RTU2-SGRD1	BEAUTY BAR	DOWNBLAST	6"	85	136	152	178.8
RTU2-SGRD2	ACCESSIBLE THERAPY SUITE	DOWNBLAST	10"	400	367	388	97.0
RTU2-SGRD3	VESTIBULE	DOWNBLAST	8"	125	108	117	93.6
RTU2-SGRD4	STORAGE ROOM	DOWNBLAST	8"	125	89	99	79.2
RTU2-SGRD5	CONTRAST THERAPY 110	DOWNBLAST	10"	300	289	306	102.0
RTU2-SGRD6	CONTRAST THERAPY 111	DOWNBLAST	10"	300	277	298	99.3
RTU2-SGRD7	CONTRAST THERAPY 112	DOWNBLAST	10"	300	254	271	90.3
RTU2-SGRD8	CONTRAST THERAPY 113	DOWNBLAST	10"	300	229	238	79.3
Total				1935	1749	1869	96.59%

National TAB

Project: SWEATHOUZ RENOVATION (WEST CHESTER, OH)

System/Unit: FAN - Exhaust



Asset: EF-A1

AREA: ACCESSIBLE UTILITY CLOSET

Unit Data		
	Design	Actual
MFG	N/A	PENNBARRY
Model Num	N/A	NL
Serial Num	-	NL

Test Data		
	Design	Actual
CFM	70	72

Motor Data		
	Design	Actual
Motor MFG	-	NL
Horsepower	28W	NL
Motor Rpm	900	1200
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	NL

Completed By: Cody Collett on 03/12/2025

Notes:
Unit label not legible due to being painted over.

Written By: Cody Collett on 03/12/2025

National TAB

Project: SWEATHOUZ RENOVATION (WEST CHESTER, OH)

System/Unit: FAN - Exhaust



Asset: EF-B1

AREA:

Unit Data		
	Design	Actual
MFG	N/A	PENNBARRY
Model Num	N/A	NL
Serial Num	-	NL

Test Data		
	Design	Actual
CFM	50	50

Motor Data		
	Design	Actual
Motor MFG	-	NL
Horsepower	28W	NL
Motor Rpm	900	1200
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	NL

Completed By: Cody Collett on 03/12/2025

Notes:
Unit label not legible due to being painted over.

Written By: Cody Collett on 03/12/2025

National TAB

Project: SWEATHOUZ RENOVATION (WEST CHESTER, OH)

System/Unit: FAN - Exhaust



Asset: EF-B2

AREA:

Unit Data		
	Design	Actual
MFG	NA	PENNBARRY
Model Num	NA	NL
Serial Num	-	NL

Test Data		
	Design	Actual
CFM	50	49

Motor Data		
	Design	Actual
Motor MFG	-	NL
Horsepower	28W	NL
Motor Rpm	900	1200
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	NL

Completed By: Cody Collett on 03/12/2025

Notes:
Unit label not legible due to being painted over.

Written By: Cody Collett on 03/12/2025

National TAB

Project: SWEATHOUZ RENOVATION (WEST CHESTER, OH)

System/Unit: FAN - Exhaust



Asset: EF-B3

AREA:

Unit Data		
	Design	Actual
MFG	NA	PENNBARRY
Model Num	NA	NL
Serial Num	-	NL

Test Data		
	Design	Actual
CFM	50	47

Motor Data		
	Design	Actual
Motor MFG	-	NL
Horsepower	28W	NL
Motor Rpm	900	1200
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	NL

Completed By: Cody Collett on 03/12/2025

Notes:
Unit label not legible due to being painted over.

Written By: Cody Collett on 03/12/2025

National TAB

Project: SWEATHOUZ RENOVATION (WEST CHESTER, OH)

System/Unit: FAN - Exhaust



Asset: EF-B4

AREA:

Unit Data		
	Design	Actual
MFG	NA	PENNBARRY
Model Num	NA	NL
Serial Num	-	NL

Test Data		
	Design	Actual
CFM	50	59

Motor Data		
	Design	Actual
Motor MFG	-	NL
Horsepower	28W	NL
Motor Rpm	900	1200
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	NL

Completed By: Cody Collett on 03/12/2025

Notes:

Unable to reduce CFM, Fan set to lowest speed setpoint.

Unit label not legible due to being painted over.

Written By: Cody Collett on 03/12/2025

National TAB

Project: SWEATHOUZ RENOVATION (WEST CHESTER, OH)

System/Unit: FAN - Exhaust



Asset: EF-B5

AREA:

Unit Data		
	Design	Actual
MFG	NA	GREENHECK
Model Num	NA	SP-A190-QD
Serial Num	-	21276134

Test Data		
	Design	Actual
CFM	50	148

Motor Data		
	Design	Actual
Motor MFG	-	GREENHECK
Horsepower	28W	NL
Motor Rpm	900	NL
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	NL

Notes:

Does not have speed controller

Written By: Nick Payne on 03/27/2025

National TAB

Project: SWEATHOUZ RENOVATION (WEST CHESTER, OH)

System/Unit: FAN - Exhaust



Asset: EF-B6

AREA:

Unit Data		
	Design	Actual
MFG	NA	PENNBARRY
Model Num	NA	NL
Serial Num	-	L24ZZ71734

Test Data		
	Design	Actual
CFM	50	47

Motor Data		
	Design	Actual
Motor MFG	-	NL
Horsepower	28W	NL
Motor Rpm	900	1200
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	NL

Completed By: Cody Collett on 03/12/2025

Notes:
Unit label not legible due to being painted over.

Written By: Cody Collett on 03/12/2025

National TAB

Project: SWEATHOUZ RENOVATION (WEST CHESTER, OH)

System/Unit: FAN - Exhaust



Asset: EF-B7

AREA:

Unit Data		
	Design	Actual
MFG	NA	PENNBARRY
Model Num	NA	NL
Serial Num	-	NL

Test Data		
	Design	Actual
CFM	50	49

Motor Data		
	Design	Actual
Motor MFG	-	NL
Horsepower	28W	NL
Motor Rpm	900	1200
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	NL

Completed By: Cody Collett on 03/12/2025

Notes:
Unit label not legible due to being painted over.

Written By: Cody Collett on 03/12/2025

National TAB

Project: SWEATHOUZ RENOVATION (WEST CHESTER, OH)

System/Unit: FAN - Exhaust



Asset: EF-B8

AREA:

Unit Data		
	Design	Actual
MFG	NA	PENNBARRY
Model Num	NA	NL
Serial Num	-	NL

Test Data		
	Design	Actual
CFM	50	51

Motor Data		
	Design	Actual
Motor MFG	-	NL
Horsepower	28W	NL
Motor Rpm	900	1200
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	NL

Completed By: Cody Collett on 03/12/2025

Notes:
Unit label not legible due to being painted over.

Written By: Cody Collett on 03/12/2025

National TAB

Project: SWEATHOUZ RENOVATION (WEST CHESTER, OH)

System/Unit: FAN - Exhaust



Asset: EF-B9

AREA:

Unit Data		
	Design	Actual
MFG	NA	PENNBARRY
Model Num	NA	NL
Serial Num	-	NL

Test Data		
	Design	Actual
CFM	50	63

Motor Data		
	Design	Actual
Motor MFG	-	NL
Horsepower	28W	NL
Motor Rpm	900	1200
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	NL

Completed By: Cody Collett on 03/12/2025

Notes:

Unable to reduce CFM, fan set to lowest speed setpoint.

Unit label not legible due to being painted over.

Written By: Cody Collett on 03/12/2025

National TAB

Project: SWEATHOUZ RENOVATION (WEST CHESTER, OH)

System/Unit: FAN - Exhaust



Asset: EF-C1

AREA:UTILITY CLOSET

Unit Data		
	Design	Actual
MFG	N/A	PENNBARRY
Model Num	N/A	NL
Serial Num	-	NL

Test Data		
	Design	Actual
CFM	50	45

Motor Data		
	Design	Actual
Motor MFG	-	NL
Horsepower	28W	NL
Motor Rpm	900	1200
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	NL

Completed By: Cody Collett on 03/12/2025