Report By:

National TAB
1126 SWIFT STREET
KANSAS CITY, MO 64116

Report: TAB REPORT

Function: Test, Adjust, & Balance

Date: 07/22/2025

Completed By: National TAB

PROJECT

Jefferson County Crime Lab (Pevely, MO)

1177 Mason Cir

Pevely, MO 63070

Client

Crystal Heating and Cooling

National TAB

Project: Jefferson County Crime Lab (Pevely, MO)

Table Of Contents

CERTIFICATION

PROJECT: Jefferson County Crime Lab (Pevely, MO)

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.

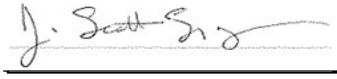
The air distribution system has been tested and balanced and final adjustments have been made in accordance with NEBB standards and the project specifications.

NEBB TAB FIRM:	National TAB-Southeast
REGISTRATION NO:	3755
CERTIFIED BY:	J. Scott Springer 23312
DATE:	7/31/2025

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:	7/31/2025

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

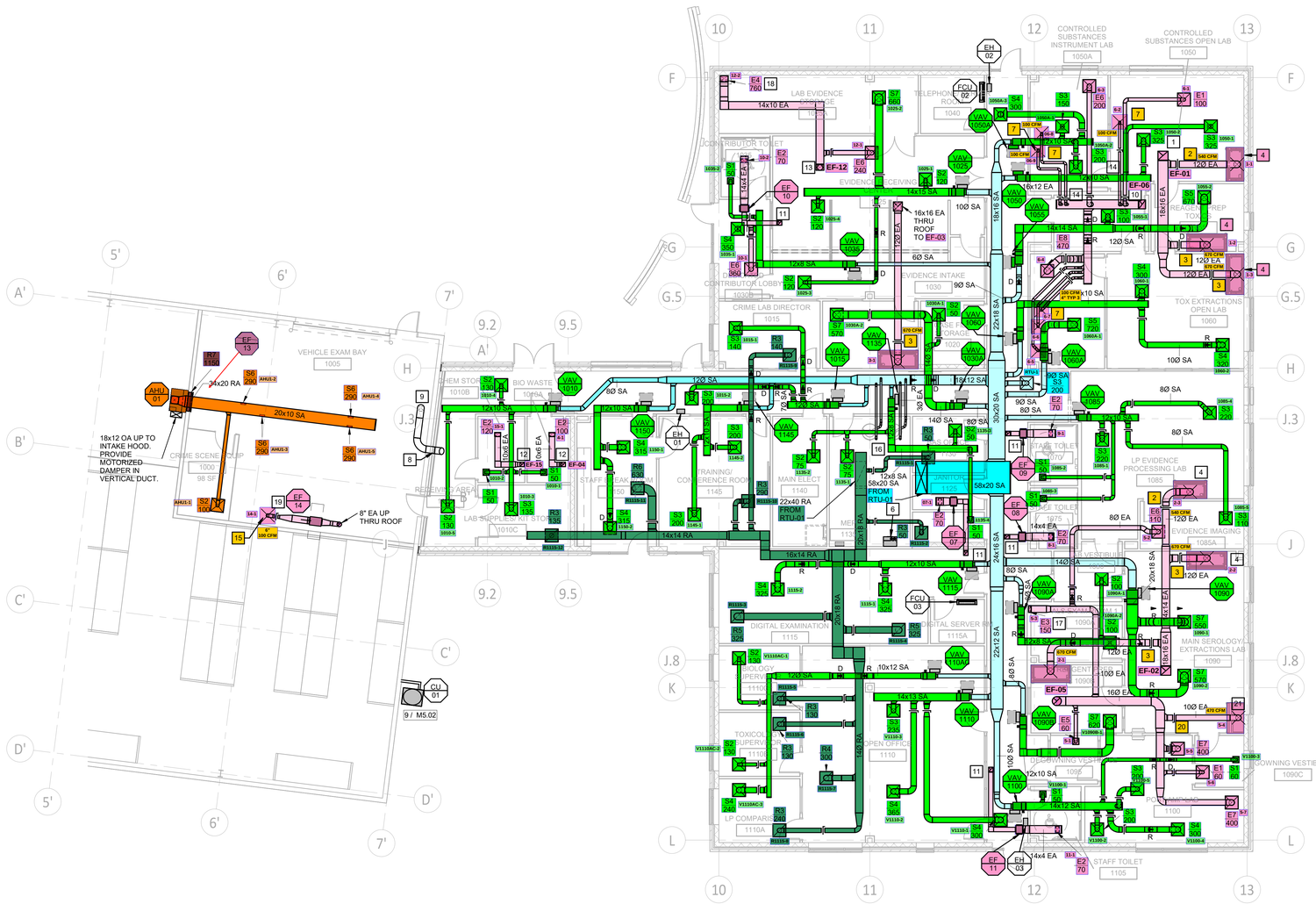
National TAB

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	Shortridge HDM 250 - S/N W25059	6/18/2025	6/18/2026
	DIFFERENTIAL PRESSURE MEASUREMENT	0 psi - 80 psi	±2% of reading +/- 1 psi	Shortridge HDM 250 - S/N W25059	6/18/2025	6/18/2026
DALT	DUCT LEAKAGE	-10"- +10" wc	±1% of reading +/- 0.004" wc	Kanomax DALT 6900 S/N: 080439	3/7/2025	3/7/2026

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
CO2 = 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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1 MECHANICAL FIRST FLOOR PLAN DUCTWORK

SCALE | 1/8" = 1'-0"

0 4'-0" 8'-0" 16'-0"

SCALE: 1/8" = 1'-0"

M2.01 KEYED NOTES

#	
1	18x16 EXHAUST DUCT UP TO EF-01. TRANSITION DUCT AS REQUIRED TO CONNECT TO FAN.
2	BALANCE TO 540 CFM.
3	BALANCE TO 670 CFM.
4	EXHAUST HOOD. REFER TO LAB DRAWINGS FOR DETAILS.
6	ROUTE 4" DIAMETER INTAKE AND FLUE UP THROUGH ROOF.
7	CONNECT 4" EA TO TASK HOOD. REFER TO LAB DRAWINGS FOR DETAILS. BALANCE TO 100 CFM.
8	12" ROUND EXHAUST DUCT THROUGH SIDE WALL. REFER TO ROOF PLAN FOR CONTINUATION.
9	CONNECT TO TASK HOOD. REFER TO LAB DRAWINGS FOR DETAILS.
10	10x10 EA UP TO EF-06. TRANSITION DUCT AS REQUIRED TO CONNECT TO EXHAUST FAN.
11	ROUTE 8x8 EA UP THROUGH ROOF.
12	8x8 EA UP TO EXHAUST FAN ON ROOF. TRANSITION DUCT AS REQUIRED TO CONNECT TO EXHAUST FAN.
13	14x10 EA DUCT UP TO EXHAUST FAN ON ROOF. TRANSITION DUCTS AS REQUIRED TO CONNECT TO EXHAUST FAN.
14	ROUTE 4" EXHAUST DUCT THROUGH JOIST WEBBING.
15	CONNECT 6" EXHAUST DUCT TO EXHAUST HOOD AND BALANCE FOR 100 CFM. TRANSITION DUCT AS REQUIRED TO CONNECT TO HOOD.
16	ROUTE 3" EA & INTAKE COMBUSTION AIR UP THRU ROOF FROM DWH1 AND DWH2.
17	ROUTE 12x4 EA DUCT DOWN THRU WALL TO EA GRILLE 6" AFF.
18	ROUTE 14x10 EA DUCT DOWN THRU CHASE TO EA GRILLE 12" AFF.
19	BALANCE TO 100 CFM.
20	BALANCE TO 470 CFM.
21	CONNECT TO BIOLOGICAL CABINET. REFER TO LAB DRAWINGS FOR DETAILS.

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314-531-4321 . FAX 314-531-6966. WWW.HORNERSHIFRIN.COM
DISCIPLINE: PROFESSIONAL ENGINEERING
CONTACT: DAVID E. LAUVER
EXPIRATION DATE: DECEMBER 31, 2024

Jefferson County Crime Lab

JEFFERSON COUNTY, MISSOURI

1177 MASON CIR, PEVELY, MO 63070

%100 CONSTRUCTION DOCUMENTS - BID SET |01-02-2024

REVISIONS

Date	01-02-2024
Project Number	3360
Sheet Name	MECHANICAL FIRST FLOOR PLAN - DUCTWORK

M2.01

FacilBuild

STATE OF MISSOURI
DAVID E. LAUVER
NUMBER PE-2007002812
PROFESSIONAL ENGINEER

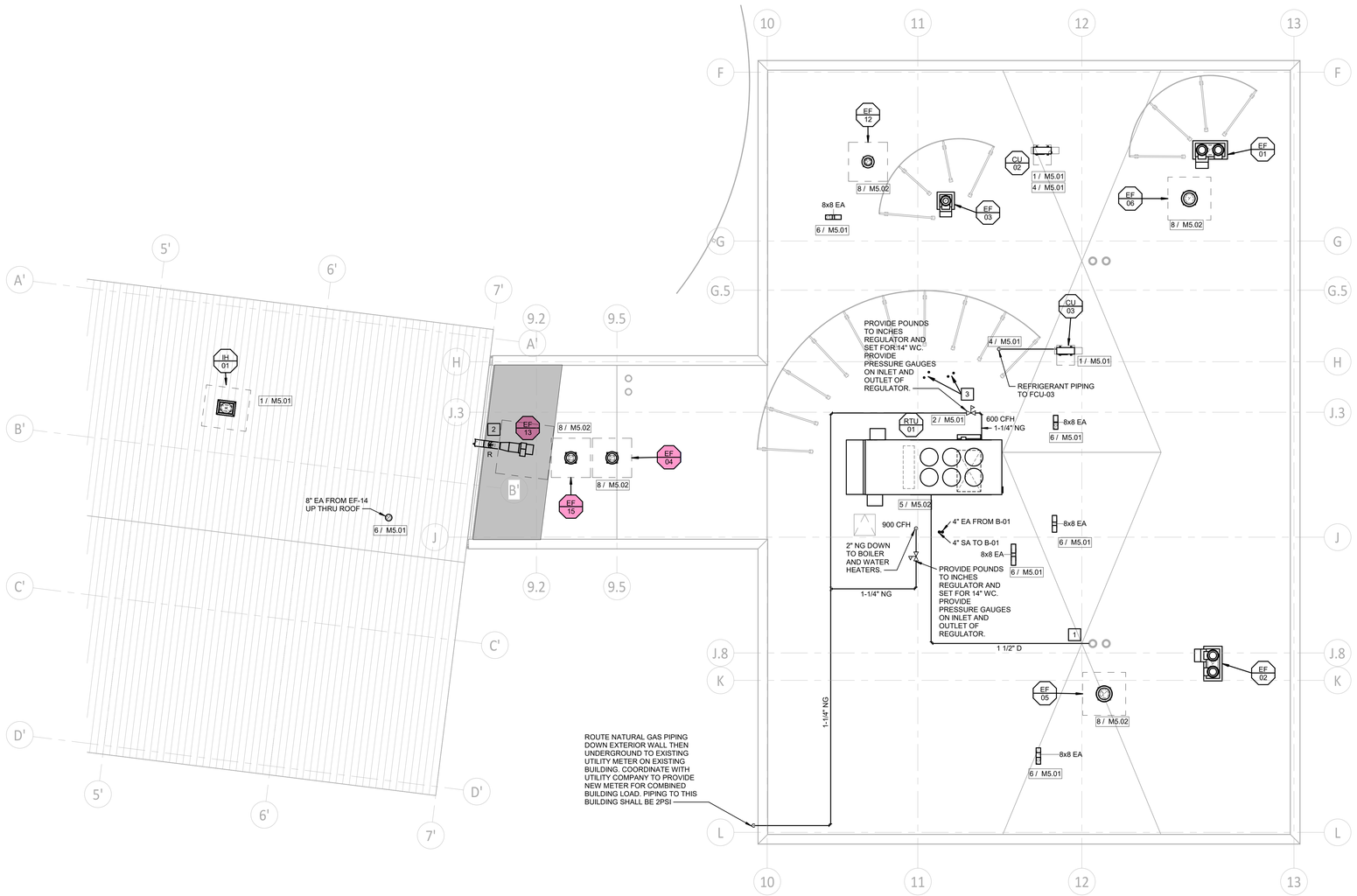
Name: David E. Lauver
Discipline: Professional Engineer
License No: PE-2007002812
Expiration Date: 12/31/2023

THE PROFESSIONALS WHOSE SIGNATURES AND SEALS APPEAR HERE, ASSUME RESPONSIBILITY FOR WHAT APPEARS ON THIS SHEET ONLY. ALL OTHER PLANS, SPECIFICATIONS, REPORTS, AND OTHER WORK PRODUCTS PREPARED BY THE CONSULTANTS, OWNER OR OTHERS ARE NOT PART OF THE PROJECT FOR WHICH THIS SEAL INDICATES RESPONSIBILITY.

Date: 7/31/2025

M2.02 KEYED NOTES

#	
1	TERMINATE 1-1/4" CONDENSATE DRAIN OVER PRIMARY ROOF DRAIN.
2	PROVIDE FLEXIBLE CONNECTION AT DUCT PENETRATION INTO EXISTING BUILDING.
3	ROUTE 3" EA & INTAKE COMBUTION AIR UP THRU ROOF FROM DWH1 AND DWH2.



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1 MECHANICAL ROOF PLAN

SCALE | 1/8" = 1'-0"

0 4'-0" 8'-0" 16'-0"

SCALE: 1/8" = 1'-0"

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CERTIFICATE OF AUTHORITY: 2007002812
EXPIRATION DATE: DECEMBER 31, 2024

%100 CONSTRUCTION DOCUMENTS - BID SET | 01-02-2024

Jefferson County Crime Lab

JEFFERSON COUNTY, MISSOURI

1177 MASON CIR, PEVELY, MO 63070

REVISIONS

Date | 01-02-2024

Project Number | 3360

Sheet Name | MECHANICAL ROOF PLAN

M2.02

STATE OF MISSOURI
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MECHANICAL FIRST FLOOR PLAN PIPING

SCALE | 1/8" = 1'-0"

SCALE: 1/8" = 1'-0"

M3.01 KEYED NOTES

1 PROVIDE DIFFERENTIAL PRESSURE SENSOR BETWEEN MAIN SEROLOGY/EXTRACTIONS LAB AND GOWNING VESTIBULE. SENSOR SHALL BE PROVIDED WITH GREEN LIGHT/RED LIGHT DISPLAY ONLY. LIGHT SHALL BE GREEN WHEN GOWNING VESTIBULE IS NEGATIVE COMPARED TO MAIN SEROLOGY/EXTRACTIONS LAB AND RED IF IT IS NEUTRALOR POSITIVE. VAV BOXES, FANS, AIR DEVICES, ETC. SHALL BE BALANCED SUCH THAT THE POST AMP LAB IS NEGATIVE COMPARED TO THE GOWNING VESTIBULE AND THE GOWNING VESTIBULE IS NEGATIVE COMPARED TO THE MAIN SEROLOGY/EXTRACTIONS LAB.

2 PROVIDE 2 ALARM CONTACTS, ONE FOR EACH FRIDGE AT THIS LOCATION. BAS SHALL MONITOR CONTACTS AND INDICATE AN ALARM AT THE OPERATOR'S WORKSTATION IF ANY OF THE MONITORED EQUIPMENT IS OUT OF RANGE. REFER TO ARCHITECTURAL AND LABORATORY DRAWINGS FOR EXACT QUANTITIES AND LOCATIONS.

3 PROVIDE 2 ALARM CONTACTS, ONE FOR THE FRIDGE AND ONE FOR THE FREEZER AT THIS LOCATION. BAS SHALL MONITOR CONTACTS AND INDICATE AN ALARM AT THE OPERATOR'S WORKSTATION IF ANY OF THE MONITORED EQUIPMENT IS OUT OF RANGE. REFER TO ARCHITECTURAL AND LABORATORY DRAWINGS FOR EXACT QUANTITIES AND LOCATIONS.

4 PROVIDE 4 ALARM CONTACTS, ONE FOR EACH FRIDGE AND ONE FOR EACH FREEZER AT THIS LOCATION. BAS SHALL MONITOR CONTACTS AND INDICATE AN ALARM AT THE OPERATOR'S WORKSTATION IF ANY OF THE MONITORED EQUIPMENT IS OUT OF RANGE. REFER TO ARCHITECTURAL AND LABORATORY DRAWINGS FOR EXACT QUANTITIES AND LOCATIONS.

5 ROUTE REFRIGERANT PIPING UP TO CONDENSING UNIT. ROUTE CONDENSATE PIPING TO MOP SINK IN JANITOR'S CLOSET.

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EXPIRATION DATE: DECEMBER 31, 2024

%100 CONSTRUCTION DOCUMENTS - BID SET | 01-02-2024

Jefferson County Crime Lab

JEFFERSON COUNTY, MISSOURI

1177 MASON CIR, PEVELY, MO 63070

REVISIONS

STATE OF MISSOURI
DAVID E. LAUVER
NUMBER PE-2007002812
PROFESSIONAL ENGINEER

Name: David E. Lauver
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License No: PE-2007002812
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Date | 01-02-2024
Project Number | 3360
Sheet Name | MECHANICAL FIRST FLOOR PLAN - PIPING

M3.01

National TAB

Project: Jefferson County Crime Lab (Pevely, MO)

System/Unit: AHU-DUAL FAN

Asset: RTU-1 AREA:CRIME LAB

UNIT DATA - SUPPLY		
	Design	**Actual**
Manufacturer	NA	AAON
Model Number	NA	RNA-070-D-A-3-EAB0B-CB3L0
Serial Number	-	202409-BNGY118930
No. Pre-Filters / Size (1)	-	24/12x24x2"
No. Final Filters / Size (2)	-	24/12x24x4"

MOTOR DATA - SUPPLY	
	Actual
Motor MFG / Frame	BALDOR
Horsepower / RPM	20 / 1760
Rated Volts / Phase	460 / 3
Rated Amperage / SF	27.0 /

TEST DATA - SUPPLY		
	Design	**Actual**
Total CFM	11500	11770
OA CFM	9020	8318
VFD Speed	-	52.17 Hz
RL Voltage	460	416 VFD
RL Amperage	27.0	16.6 VFD
Motor B.H.P.	14.81	12.30

PERFORMANCE DATA - SUPPLY		
	Design	**Actual**
Static Pressure Stpt	-	0.90"
Suction S.P.	-	-1.72"
Discharge S.P.	-	1.39"
Total S.P.	4.77	3.11"
DX Coil P.D.	-	0.81"
Pre-Filters P.D.	-	COMBINED*
Total ESP	3.75	3.11"

UNIT DATA - EXHAUST/RETURN		
	Design	**Actual**
Manufacturer	-	WEG
Model Number	-	00318OT3E182T-S
Serial Number	-	1087609500

MOTOR DATA - EXHAUST/RETURN	
	Actual
Motor MFG / FRAME	WEG/182/4T
Horsepower / RPM	3 / 1760
Rated Volts / Phase	460 / 3
Rated Amperage / SF	4.8 / 1.15

TEST DATA - EXHAUST/RETURN		
	Design	**Actual**
Total CFM	2480	2490
VFD Speed	-	22.3 Hz
RL Voltage	460	491 VFD
RL Amperage	4.8	2.12 VFD
Motor B.H.P.	1.48	1.33

PERFORMANCE DATA - EXHAUST/RETURN		
	Design	**Actual**
Suction S.P.	-	-0.32
Discharge S.P.	-	0.14
Total S.P.	0.50	0.46

Notes:
(1) OA Damper can only be open 50 % or 100 %. It is not adjustable in between those 2 settings.
*Building pressure was 0.01" with the OA damper at 100%.
*OA damper adjusts automatically based on building pressure.

Written By: Kalen Kemp on 07/30/2025

National TAB

Project:Jefferson County Crime Lab (Pevely, MO)

AHU-DUAL FAN

VAV - Single Duct

RTU-1/CRIME LAB

Asset												
Asset Name	MFG	Model Num	Type	Inlet Size	Design Max CFM	Max CFM	Design Min CFM	Min CFM	Design Heat CFM	Heat CFM	Ak (max)	Sensor Reading
VAV-1010	TITUS	DESV	REHEAT	8	495	505	495	500	495	501	912	53.60
VAV-1015	TITUS	DESV	REHEAT	6	340	345	330	329	330	333	447	71.25
VAV-1025	TITUS	DESV	REHEAT	10	1020	1006	1020	1000	1020	999	1414	66.24
VAV-1035	TITUS	DESV	REHEAT	6	400	425	400	402	400	398	447	84.64
VAV-1050	TITUS	DESV	REHEAT	8	650	647	650	653	650	644	912	69.11
VAV-1055	TITUS	DESV	REHEAT	10	770	751	770	777	770	767	1414	51.81
VAV-1060	TITUS	DESV	REHEAT	8	620	631	620	623	620	629	912	64.83
VAV-1085	TITUS	DESV	REHEAT	8	650	655	650	658	650	654	912	67.10
VAV-1090	TITUS	DESV	REHEAT	14	1120	1124	1100	1096	1100	1117	3000	38.29
VAV-1100	TITUS	DESV	REHEAT	10	810	821	810	812	810	816	1414	54.21
VAV-1110	TITUS	DESV	REHEAT	10	900	883	300	289	900	890	1414	57.59
VAV-1115	TITUS	DESV	REHEAT	8	650	659	210	211	650	642	912	66.39
VAV-1135	TITUS	DESV	REHEAT	6	250	258	200	205	200	203	447	47.34
VAV-1145	TITUS	DESV	REHEAT	8	400	403	100	103	330	335	912	49.55
VAV-1150	TITUS	DESV	REHEAT	8	630	635	200	198	630	626	912	62.99
VAV-A1030	TITUS	DESV	REHEAT	8	620	631	620	625	620	628	912	68.37
VAV-A1050	TITUS	DESV	REHEAT	8	650	658	650	660	650	632	912	66.80
VAV-A1060	TITUS	DESV	REHEAT	10	720	732	720	723	720	718	1414	46.61
VAV-A1090	TITUS	DESV	REHEAT	6	200	204	200	198	200	199	447	41.17
VAV-AC1110	TITUS	DESV	REHEAT	8	500	507	210	211	480	479	912	52.12
VAV-B1090	TITUS	DESV	REHEAT	8	620	624	620	619	620	625	912	63.16

Diffuser Supply (GRD)

RTU-1/CRIME LAB

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
SGRD1	CORRIDOR	S3	8	200	667	195	97.5
Total				200	667	195	97.5%

VAV-1010/CRIME LAB

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
SGRD1	1010A	S1	6	50	82	55	110.0
SGRD2	1010A	S1	6	50	79	50	100.0
SGRD3	1010C	S3	8	135	183	136	100.7
SGRD4	1010A	S2	6	130	117	124	95.4
SGRD5	1010C	S2	36	130	130	140	107.7
Total				495	591	505	102.02%

VAV-1015/

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
SGRD1	1015	S3	8	140	169	144	102.9
SGRD2	1010A	S3	8	200	169	201	100.5
Total				340	338	345	101.47%

VAV-1025/

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
SGRD1	1025	S2	6	120	104	123	102.5
SGRD2	1025A	S7	14	660	636	652	98.8
SGRD3	1030B	S2	6	120	107	112	93.3
SGRD4	1025	S2	6	120	141	119	99.2
Total				1020	988	1006	98.63%

VAV-1035/

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
SGRD1	1030B	S4	10	350	345	376	107.4
SGRD2	1035	S1	6	50	71	49	98.0
Total				400	416	425	106.25%

VAV-1050/

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
SGRD1	1050 OPEN LAB	S3	8	325	302	297	91.4
SGRD2	1050 OPEN LAB	S3	8	325	356	350	107.7
Total				650	658	647	99.54%

VAV-1055/

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
SGRD1	1055	S3	8	100	173	97	97.0
SGRD2	1055	S5	12	670	645	654	97.6
Total				770	818	751	97.53%

VAV-1060/

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
SGRD1	1060	S4	10	300	351	293	97.7
SGRD2	1060	S4	10	320	316	338	105.6
Total				620	667	631	101.77%

VAV-1085/

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
SGRD1	1085	S3	8	220	182	212	96.4
SGRD2	1070	S1	6	50	105	54	108.0
SGRD3	1075	S1	6	50	97	48	96.0
SGRD4	1085	S3	8	220	177	228	103.6
SGRD5	1085A	S3	8	110	162	113	102.7
Total				650	723	655	100.77%

VAV-1090/

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
SGRD1	1090	S7	14	550	515	569	103.5
SGRD2	1090	S7	14	570	635	555	97.4
Total				1120	1150	1124	100.36%

VAV-1100/

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
SGRD1	1105	S1	6	50	91	51	102.0
SGRD2	100	S3	8	200	269	215	107.5
SGRD3	1090C	S1	6	60	74	62	103.3
SGRD4	1100	S4	10	300	367	302	100.7
SGRD5	1100	S3	8	200	221	191	95.5
Total				810	1022	821	101.36%

VAV-1110/

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
SGRD1	1110	S4	10	300	292	301	100.3
SGRD2	1110	S4	10	365	370	360	98.6
SGRD3	1110	S3	8	235	274	222	94.5
Total				900	936	883	98.11%

VAV-1115/

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
SGRD1	1115A	S4	10	325	370	343	105.5
SGRD2	1115	S4	10	325	338	316	97.2
Total				650	708	659	101.38%

VAV-1135/

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
SGRD1	1140	S2	6	75	49	72	96.0
SGRD2	1135	S2	6	75	40	82	109.3
SGRD3	1130	S2	6	50	72	54	108.0
SGRD4	1125	S1	6	50	112	49	98.0
Total				250	273	257	102.8%

VAV-1145/

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
SGRD1	1145	S3	8	200	249	199	99.5
SGRD2	1145	S3	8	200	263	204	102.0
Total				400	512	403	100.75%

VAV-1150/

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
SGRD1	1150	S4	10	315	290	313	99.4
SGRD2	1150	S4	10	315	283	322	102.2
Total				630	573	635	100.79%

VAV-A1030/

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
SGRD1	1020	S2	6	50	54	54	108.0
SGRD2	1030	S7	14	570	569	577	101.2
Total				620	623	631	101.77%

VAV-A1050/

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
SGRD1	1050A	S3	8	150	147	157	104.7
SGRD2	1050A	S3	8	200	205	204	102.0
SGRD3	1050A	S4	10	300	360	297	99.0
Total				650	712	658	101.23%

VAV-A1060/

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
SGRD1	1060	S5	12	720	745	732	101.7
Total				720	745	732	101.67%

VAV-A1090/

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
SGRD1	1080	S2	6	100	114	107	107.0
SGRD2	1090A	S2	6	100	108	97	97.0
Total				200	222	204	102%

VAV-AC1110/

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
SGRD1	1110C	S2	6	130	96	133	102.3
SGRD2	1110B	S2	6	130	104	135	103.8
SGRD3	1110A	S4	10	240	339	239	99.6
Total				500	539	507	101.4%

VAV-B1090/

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
SGRD1	1090B	S7	14	620	681	624	100.6
Total				620	681	624	100.65%

Diffuser Ret/Exh (GRD)

RTU-1/CRIME LAB

Asset								
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**FINAL CFM**	**% to design**
EGRD1	1130	R3	8	45	1	182	76	168.9
EGRD2		R3	8	45	1	227	74	164.4
EGRD3	1115	R5	12	295	1	642	447	151.5
EGRD4	1115	R5	12	295	1	650	465	157.6
EGRD5	1110C	R3	8	115	1	317	205	178.3
EGRD6	1110B	R3	8	115	1	224	205	178.3
EGRD7	1110	R4	10	270	1	314	440	163.0
EGRD8	1110A	R3	8	210	1	252	363	172.9
EGRD9	1015	R3	8	125	1	216	211	168.8
EGRD10	1145	R3	8	260	1	322	392	150.8
EGRD11	1150	R6	14	580	1	781	905	156.0
EGRD12	1010C	R3	8	125	1	23	197	157.6
Total				2480		4150	3980	160.48%

Completed By: Kalen Kemp on 07/03/2025

National TAB

Project: Jefferson County Crime Lab (Pevely, MO)

System/Unit: AHU/RTU

Asset: AHU-1 AREA:CRIME SCENE EQUIP

Unit Data		
	Design	**Actual**
MFG	NA	AAON
Serial Num	-	202410-CJEB09166
Model Num	NA	V3-BRB3-0-141D-7DS
Configuration	-	VERTICAL
Num Final Filter 1	-	1
Final Filter Size 1	-	20X24X2”
Num Final Filter 2	-	
Final Filter Size 2	-	

Motor Data		
	Design	**Actual**
Motor MFG	-	NA
Frame	-	NA
Horsepower	1.0	1.0
Motor Rpm	-	1800
Phase	3	3
Rated Voltage	460	460
Rated Amperage	1.2	1.2
Service Factor	-	NA

Test Data		
	Design	**Actual**
SF CFM	1260	1235
SF RPM	1760	1548
RA CFM	0	953
OA CFM	1260	282
RL Voltage	460	393
RL Amperage	1.2	0.50
VFD Max SetPt	-	51.89 Hz
SF Motor Freq(HZ)	-	51.89Hz
SF System SetPt	-	87%
RA Damper Position	-	NA
OA Damper Position	-	100%
Brake Horse Power	0.61	

Performance Data		
	Design	**Actual**
Fan Suction SP	-	-0.01
Fan Discharge SP	-	0.10
Total ESP	1.0	0.11

Completed By: Kalen Kemp on 07/03/2025

Notes:
OA is low. OA damper at 100%.
No RA damper.
Unable to increase OA.

Written By: Kalen Kemp on 07/02/2025

National TAB

Project:Jefferson County Crime Lab (Pevely, MO)

AHU/RTU

Diffuser Supply (GRD)

AHU-1/CRIME SCENE EQUIP

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
AHU-1-SGRD1	1000	S2	6	100	138	98	98.0
AHU-1-SGRD2	1005	S6	10	290	299	286	98.6
AHU-1-SGRD3	1000	S6	10	290	315	279	96.2
AHU-1-SGRD4	1005	S6	10	290	342	288	99.3
AHU-1-SGRD5	1000	S6	10	290	340	284	97.9
Total				1260	1434	1235	98.02%

Diffuser Ret/Exh (GRD)

AHU-1/CRIME SCENE EQUIP

Asset								
Asset Name	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
AHU-1-EGRD1	RG	34X20	1150	4.44	1058	831	831	72.3
Total			1150		1058	831	831	72.26%

Completed By: Kalen Kemp on 07/03/2025

National TAB

Project: Jefferson County Crime Lab (Pevely, MO)

System/Unit: FAN - Exhaust

Asset: EF-1 AREA:1055

Unit Data		
	Design	**Actual**
MFG	NA	GREENHECK
Model Num	NA	VEKTOR-H-13-A5-X
Serial Num	-	25014692

Test Data		
	Design	**Actual**
CFM	1880	1813
RL Voltage	460	386/389
RL Amperage	2.59	0.58
Total ESP	0.77	0.33

Motor Data		
	Design	**Actual**
Motor MFG	-	BALDOR
Frame	-	56C
Horsepower	-	2 @ 0.50
Motor Rpm	-	1770
Phase	-	3
Voltage (rated)	-	460
Amperage (rated)	-	2.59
Service Factor	-	NA

Completed By: Kalen Kemp on 06/25/2025

Notes:
Motor data retrieved from submittal.

Written By: Kalen Kemp on 06/25/2025

National TAB

Project:Jefferson County Crime Lab (Pevely, MO)

FAN - Exhaust

Diffuser Ret/Exh (GRD)

EF-1/1055

Asset								
Asset Name	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
EF-1-EGRD1	FUME HOOD	12	540	0.79	373	749	517	95.7
EF-1-EGRD2	FUME HOOD	12	670	0.79	317	633	684	102.1
EF-1-EGRD3	FUME HOOD	12	670	0.79	262	545	612	91.3
Total			1880		952	1927	1813	96.44%

Completed By: Kalen Kemp on 06/25/2025

National TAB

Project: Jefferson County Crime Lab (Pevely, MO)

System/Unit: FAN - Exhaust

Asset: EF-2 AREA:LABS

Unit Data		
	Design	**Actual**
MFG	NA	GREENHECK
Model Num	NA	VEKTOR-H-13-A5-X
Serial Num	-	NA

Test Data		
	Design	**Actual**
CFM	1880	1912
RL Voltage	460	348
RL Amperage	2.59	0.55
Total ESP	0.77	0.20”

Motor Data		
	Design	**Actual**
Motor MFG	-	BALDOR
Frame	-	56C
Horsepower	-	0.5
Motor Rpm	-	1770
Phase	-	3
Voltage (rated)	-	460
Amperage (rated)	-	2.59
Service Factor	-	NL

Completed By: Kalen Kemp on 06/26/2025

Notes:
Motor Data retrieved from submittal

Written By: Kalen Kemp on 06/26/2025

National TAB

Project:Jefferson County Crime Lab (Pevely, MO)

FAN - Exhaust

Diffuser Ret/Exh (GRD)

EF-2/LABS

Asset								
Asset Name	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
EF-2-EGRD1	FUME HOOD	12	670	0.79	412	640	706	105.4
EF-2-EGRD2	FUME HOOD	12	670	0.79	427	593	628	93.7
EF-2-EGRD3	FUME HOOD	12	540	0.79	387	605	504	93.3
Total			1880		1226	1838	1838	97.77%

National TAB

Project: Jefferson County Crime Lab (Pevely, MO)

System/Unit: FAN - Exhaust

Asset: EF-3 AREA:1030

Unit Data		
	Design	**Actual**
MFG	NA	GREENHECK
Model Num	NA	VEKTOR-H-10-A5-X
Serial Num	-	25014705

Test Data		
	Design	**Actual**
CFM	670	677
RL Voltage	460	366
RL Amperage	2.59	0.44
Total ESP	0.52	0.24

Motor Data		
	Design	**Actual**
Motor MFG	-	BALDOR
Frame	-	56C
Horsepower	-	0.5
Motor Rpm	-	1750
Phase	-	3
Voltage (rated)	-	460
Amperage (rated)	-	2.59
Service Factor	-	NL

Completed By: Kalen Kemp on 06/25/2025

Notes:
Motor Data retrieved from Submittal.

Written By: Kalen Kemp on 06/25/2025

National TAB

Project:Jefferson County Crime Lab (Pevely, MO)

FAN - Exhaust

Diffuser Ret/Exh (GRD)

EF-3/1030

Asset								
Asset Name	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
EF-3-EGRD1	FUME HOOD	12	670	0.79	240	770	677	101.0
Total			670		240	770	677	101.04%

National TAB

Project: Jefferson County Crime Lab (Pevely, MO)

System/Unit: FAN - Exhaust

Asset: EF-4 AREA:1010A

Unit Data		
	Design	**Actual**
MFG	NA	GREENHECK
Model Num	NA	GB-097-6-1-19-X
Serial Num	-	24909470

Motor Data		
	Design	**Actual**
Motor MFG	-	US MOTORS
Frame	-	NL
Horsepower	0.167	0.167
Motor Rpm	1725	1725
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	3.8
Service Factor	-	1.35

Drive Data	
	Actual
Motor Sheave Size	2.5”
Motor Bore Size	0.5”
Motor Sheave SetPt	2.5 TURNS
Fan Sheave Size	4.25”
Fan Sheave Bore	0.75”
Belt CL Distance	4.625”
Num of Belts	1
Belt Size	3L180

Test Data		
	Design	**Actual**
CFM	100	108
Fan RPM	1057	1052
RL Voltage	115	121
RL Amperage	4.4	NA
Total ESP	0.40	0.36"

Completed By: Kalen Kemp on 07/03/2025

Notes:
-Motor RPM: 1772
-Could not safely access amperage reading.

Written By: Kalen Kemp on 07/03/2025

National TAB

Project:Jefferson County Crime Lab (Pevely, MO)

FAN - Exhaust

Diffuser Ret/Exh (GRD)

EF-4/1010A

Asset								
Asset Name	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
EF-4-EGRD1	E2	6	100	1	54	108	108	108.0
Total			100		54	108	108	108%

National TAB

Project: Jefferson County Crime Lab (Pevely, MO)

System/Unit: FAN - Exhaust

Asset: EF-5 AREA:1090B

Unit Data		
	Design	**Actual**
MFG	NA	GREENHECK
Model Num	NA	CUE-140-VG
Serial Num	-	24909471 24I

Motor Data		
	Design	**Actual**
Motor MFG	-	GREENHECK
Frame	-	NL
Horsepower	-	0.50
Motor Rpm	-	1260
Phase	-	1
Voltage (rated)	-	115
Amperage (rated)	-	NL
Service Factor	-	NL

Test Data		
	Design	**Actual**
CFM	1650	1586
RL Voltage	115	122
RL Amperage	6.4	4.40
Total ESP	0.75	0.52”

Completed By: Kalen Kemp on 06/26/2025

National TAB

Project:Jefferson County Crime Lab (Pevely, MO)

FAN - Exhaust

Diffuser Ret/Exh (GRD)

EF-5/1090B

Asset								
Asset Name	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
EF-5-EGRD1	E5	6	60	1	115	115	65	108.3
EF-5-EGRD2	E6	8	110	1	170	170	118	107.3
EF-5-EGRD3	E3	8	150	1	199	199	153	102.0
EF-5-EGRD4	FUME HOOD	10	470	0.55	395	444	444	94.5
EF-5-EGRD5	E7	10	400	1	329	329	367	91.8
EF-5-EGRD6	E1	6	60	1	84	84	63	105.0
EF-5-EGRD7	E7	10	400	1	343	343	376	94.0
Total			1650		1635	1684	1586	96.12%

National TAB

Project: Jefferson County Crime Lab (Pevely, MO)

System/Unit: FAN - Exhaust

Asset: EF-6 AREA:LABS

Unit Data		
	Design	**Actual**
MFG	NA	GREENHECK
Model Num	NA	CUE-140-VG
Serial Num	-	24909473 24I

Motor Data		
	Design	**Actual**
Motor MFG	-	GREENHECK
Frame	-	NL
Horsepower	-	0.50
Motor Rpm	-	1750
Phase	-	1
Voltage (rated)	-	115/208-230/277
Amperage (rated)	-	6.4/3.8/3.2
Service Factor	-	NL

Test Data		
	Design	**Actual**
CFM	1370	1290
RL Voltage	115	121
RL Amperage	6.4	4.45
Total ESP	0.75	0.85”

Completed By: Kalen Kemp on 06/24/2025

National TAB

Project:Jefferson County Crime Lab (Pevely, MO)

FAN - Exhaust

Diffuser Ret/Exh (GRD)

EF-6/LABS

Asset								
Asset Name	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
EF-6-EGRD1	E1	6	100	1	27	102	94	94.0
EF-6-EGRD2	DUCT	4	100	0.09	72	83	92	92.0
EF-6-EGRD3	E6	8	200	1	446	232	204	102.0
EF-6-EGRD4	E8	12	480	1	764	431	437	91.0
EF-6-EGRD5	DUCT	4	100	0.09	52	69	90	90.0
EF-6-EGRD6	DUCT	4	100	0.09	57	81	94	94.0
EF-6-EGRD7	DUCT	4	100	0.09	60	83	95	95.0
EF-6-EGRD8	DUCT	4	100	0.09	69	85	94	94.0
EF-6-EGRD9	DUCT	4	100	0.09	64	81	90	90.0
Total			1380		1611	1247	1290	93.48%

National TAB

Project: Jefferson County Crime Lab (Pevely, MO)

System/Unit: FAN - Exhaust

Asset: EF-7 AREA:1125

Unit Data		
	Design	**Actual**
MFG	NA	GREENHECK
Model Num	NA	CSP-A200

Test Data		
	Design	**Actual**
CFM	70	71

Completed By: Kalen Kemp on 07/01/2025

National TAB

Project:Jefferson County Crime Lab (Pevely, MO)

FAN - Exhaust

Diffuser Ret/Exh (GRD)

EF-7/1125

Asset								
Asset Name	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
EF-7-EGRD1	E2	6	70	1	195	71	71	101.4
Total			70		195	71	71	101.43%

National TAB

Project: Jefferson County Crime Lab (Pevely, MO)

System/Unit: FAN - Exhaust

Asset: EF-8 AREA:1075

Unit Data		
	Design	**Actual**
MFG	NA	GREENHECK
Model Num	NA	CSP-A200

Test Data		
	Design	**Actual**
CFM	70	73

Completed By: Kalen Kemp on 07/01/2025

National TAB

Project:Jefferson County Crime Lab (Pevely, MO)

FAN - Exhaust

Diffuser Ret/Exh (GRD)

EF-8/1075

Asset								
Asset Name	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
EF-8-EGRD1	E2	6	70	1	221	73	73	104.3
Total			70		221	73	73	104.29%

National TAB

Project: Jefferson County Crime Lab (Pevely, MO)

System/Unit: FAN - Exhaust

Asset: EF-9 AREA:1070

Unit Data		
	Design	**Actual**
MFG	NA	GREENHECK
Model Num	NA	CSP-A200

Test Data		
	Design	**Actual**
CFM	70	74

Completed By: Kalen Kemp on 07/01/2025

National TAB

Project:Jefferson County Crime Lab (Pevely, MO)

FAN - Exhaust

Diffuser Ret/Exh (GRD)

EF-9/1070

Asset								
Asset Name	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
EF-9-EGRD1	E2	6	70	1	198	74	74	105.7
Total			70		198	74	74	105.71%

National TAB

Project: Jefferson County Crime Lab (Pevely, MO)

System/Unit: FAN - Exhaust

Asset: EF-10 AREA:1030B

Unit Data		
	Design	**Actual**
MFG	NA	GREENHECK
Model Num	NA	CSP-A200

Test Data		
	Design	**Actual**
CFM	430	397

Completed By: Kalen Kemp on 07/31/2025

Notes:
Could not balance EF.
Airflow was low.
Backdraft damper appears shut.

Written By: Scott Springer on 07/22/2025

National TAB

Project:Jefferson County Crime Lab (Pevely, MO)

FAN - Exhaust

Diffuser Ret/Exh (GRD)

EF-10/1030B

Asset								
Asset Name	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
EF-10-EGRD1	E6	8	360	1	258	231	325	90.3
EF-10-EGRD2	E2	6	70	1	213	188	72	102.9
Total			430		471	419	397	92.33%

National TAB

Project: Jefferson County Crime Lab (Pevely, MO)

System/Unit: FAN - Exhaust

Asset: EF-11 AREA:1095

Unit Data		
	Design	**Actual**
MFG	NA	GREENHECK
Model Num	NA	CSP-A200

Test Data		
	Design	**Actual**
CFM	70	71

Completed By: Kalen Kemp on 07/01/2025

National TAB

Project:Jefferson County Crime Lab (Pevely, MO)

FAN - Exhaust

Diffuser Ret/Exh (GRD)

EF-11/1095

Asset								
Asset Name	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
EF-11-EGRD1	E2	6	70	1	179	71	71	101.4
Total			70		179	71	71	101.43%

National TAB

Project: Jefferson County Crime Lab (Pevely, MO)

System/Unit: FAN - Exhaust

Asset: EF-12 AREA:1025A

Unit Data		
	Design	**Actual**
MFG	NA	GREENHECK
Model Num	NA	CUE-120-VG-1-19-X
Serial Num	-	24909472 24I

Test Data		
	Design	**Actual**
CFM	1000	1048
RL Voltage	115	120
RL Amperage	3.5	2.05
Total ESP	0.50	0.49

Motor Data		
	Design	**Actual**
Motor MFG	-	GREENHECK
Frame	-	NL
Horsepower	-	0.25
Motor Rpm	-	1750
Phase	-	1
Voltage (rated)	-	120
Amperage (rated)	-	3.5/2.1/1.8
Service Factor	-	NL

Completed By: Kalen Kemp on 06/18/2025

National TAB

Project:Jefferson County Crime Lab (Pevely, MO)

FAN - Exhaust

Diffuser Ret/Exh (GRD)

EF-12/1025A

Asset								
Asset Name	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
EF-12-EGRD1	E6	8	240	0.77	324	277	251	104.6
EF-12-EGRD2	E4	14	760	1	896	766	797	104.9
Total			1000		1220	1043	1048	104.8%

National TAB

Project: Jefferson County Crime Lab (Pevely, MO)

System/Unit: FAN - Exhaust

Asset: EF-13 AREA:1005

Unit Data		
	Design	**Actual**
MFG	NA	GREENHECK
Model Num	NA	USF-04-3-B7-00-02-02
Serial Num	-	24913404 24I

Motor Data		
	Design	**Actual**
Motor MFG	-	GREENHECK
Frame	-	NL
Horsepower	-	0.25
Motor Rpm	-	1750
Phase	-	1
Voltage (rated)	-	115
Amperage (rated)	-	2.85
Service Factor	-	1.25

Test Data		
	Design	**Actual**
CFM	500	549
RL Voltage	115	120
RL Amperage	-	1.55
Suction ESP	-	
Discharge ESP	-	0.20”
Total ESP	0.53	0.69

Completed By: Kalen Kemp on 06/25/2025

National TAB

Project: Jefferson County Crime Lab (Pevely, MO)

System/Unit: FAN - Exhaust

Asset: EF-14 AREA:1000

Unit Data		
	Design	**Actual**
MFG	NA	GREENHECK
Model Num	NA	SQ-97-VG4X-QD
Serial Num	-	25409529 24I

Motor Data		
	Design	**Actual**
Motor MFG	-	GREENHECK
Frame	-	NL
Horsepower	-	0.25
Motor Rpm	-	1725
Phase	-	1
Voltage (rated)	-	115
Amperage (rated)	-	2.85
Service Factor	-	NL

Test Data		
	Design	**Actual**
CFM	100	107
RL Voltage	115	121
RL Amperage	2.85	0.14
Suction ESP	-	0.35
Discharge ESP	-	0.049
Total ESP	0.50	0.40

Completed By: Kalen Kemp on 06/24/2025

National TAB

Project:Jefferson County Crime Lab (Pevely, MO)

FAN - Exhaust

Diffuser Ret/Exh (GRD)

EF-14/1000

Asset								
Asset Name	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
EF-14-EGRD1	DUCT	6	100	0.73	573	324	107	107.0
Total			100		573	324	107	107%

National TAB

Project: Jefferson County Crime Lab (Pevely, MO)

System/Unit: FAN - Exhaust

Asset: EF-15 AREA:1010C

Unit Data		
	Design	**Actual**
MFG	NA	GREENHECK
Model Num	NA	CUE-080-VG-1-19-X
Serial Num	-	24909474 24I

Test Data		
	Design	**Actual**
CFM	120	113
RL Voltage	115	120
RL Amperage	1.5	0.39
Total ESP	0.40	0.26

Motor Data		
	Design	**Actual**
Motor MFG	-	VARI-GREEN
Frame	-	NL
Horsepower	-	0.10
Motor Rpm	-	1750
Phase	-	1
Voltage (rated)	-	115/208-230/277
Amperage (rated)	-	1.5/0.9
Service Factor	-	NL

Completed By: Kalen Kemp on 06/18/2025

National TAB

Project:Jefferson County Crime Lab (Pevely, MO)

FAN - Exhaust

Diffuser Ret/Exh (GRD)

EF-15/1010C

Asset								
Asset Name	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
EF-15-EGRD1	E2	6	120	0.79	253	157	113	94.2
Total			120		253	157	113	94.17%

Completed By: Kalen Kemp on 06/18/2025

National TAB

Project: Jefferson County Crime Lab (Pevely, MO)

System/Unit: Pump

Asset: P-01 AREA:1135

Unit Data		
	Design	**Actual**
MFG	NA	BELL & GOSSETT
Model Num	NA	ECOCIRC XL 55-45
Serial Num	-	20220921
Service	-	HOT WATER
Type	-	CIRCULATOR
Configuration	-	HORIZONTAL
Pump RPM	-	4219
GPM/HD	34.8	34.8
Impeller Diameter	-	3.25"

Motor Data		
	Design	**Actual**
Motor MFG	-	BELL & GOSSETT
Frame	-	NL
Horsepower	-	0.50
Motor Rpm	-	4219
Phase	-	1
Voltage	-	208
Amperage	-	2.0
Service Factor	-	1.0

Test Data		
	Design	**Actual**
Pump Off Pres	-	27 psi
Pump Dead Head Pres	-	44 psi
Act Impeller Dia (IN)	-	3.25"
Valve Open GPM	-	34.8
Valve Open Diff (FT)	-	10 psi
Final Suction Pres (FT)	-	55.90
Final Discharge Pres (FT)	-	85.95 ft
Total Head Pres (FT)	30	30.05
Final GPM	34.8	34.8
Pump RPM	-	4000
RL Voltage	-	210
RL Amperage	-	1.87
Brake Horse Power	-	0.47

Completed By: Kalen Kemp on 07/02/2025

National TAB

Project: Jefferson County Crime Lab (Pevely, MO)

System/Unit: Pump

Asset: P-02 AREA:1135

Unit Data		
	Design	**Actual**
MFG	NA	BELL & GOSSETT
Model Num	NA	ECOCIRC XL 55-45
Serial Num	-	20220914
Service	-	HOT WATER
Type	-	CIRCULATOR
Configuration	-	HORIZONTAL
Pump RPM	-	4219
GPM/HD	34.8	34.8
Impeller Diameter	-	3.25"

Motor Data		
	Design	**Actual**
Motor MFG	-	BELL & GOSSETT
Frame	-	NL
Horsepower	0	0.50
Motor Rpm	-	4219
Phase	-	1
Voltage	-	208
Amperage	-	2.0
Service Factor	-	1.0

Test Data		
	Design	**Actual**
Pump Off Pres	-	27 psi
Pump Dead Head Pres	-	44 psi
Act Impeller Dia (IN)	-	3.25
Valve Open GPM	-	34.81
Valve Open Diff (FT)	-	30.03
Final Suction Pres (FT)	-	55.44
Final Discharge Pres (FT)	-	85.47
Total Head Pres (FT)	30	30.03
Final GPM	34.8	34.8
Pump RPM	-	4000
RL Voltage	208	210
RL Amperage	2.00	1.87
Brake Horse Power	-	0.47

Completed By: Kalen Kemp on 07/02/2025

National TAB

Project:Jefferson County Crime Lab (Pevely, MO)

Circuit Setter

HYDRONICS/

Asset							
Asset Name	**Size**	**Type**	**Design GPM**	**Setting**	**Delta P**	**Final GPM**	**% to Design**
CSHW-1010	0.5	AUTOFLOW CONTROL VALVE	2.10	5.9	14.8 in. WC	2.10	100.0
CSHW-1015	0.5	AUTOFLOW CONTROL VALVE	1.30	4.3	37.6 in. WC	1.30	100.0
CSHW-1025	0.5	AUTOFLOW CONTROL VALVE	1.80	2.2	25.7 in. WC	1.80	100.0
CSHW-1035	0.5	AUTOFLOW CONTROL VALVE	0.80	5.3	10.6 in. WC	0.80	100.0
CSHW-1050	0.5	AUTOFLOW CONTROL VALVE	1.80	4.7	8.5 in. WC	1.80	100.0
CSHW-1055	0.5	AUTOFLOW CONTROL VALVE	1.30	5.6	15.4 in. WC	1.30	100.0
CSHW-1060	0.5	AUTOFLOW CONTROL VALVE	2.00	5.2	19.3 in. WC	2.00	100.0
CSHW-1085	0.5	AUTOFLOW CONTROL VALVE	1.40	5.2	11.2 in. WC	1.40	100.0
CSHW-1090	0.5	AUTOFLOW CONTROL VALVE	1.90	6.0	7.6 in. WC	1.90	100.0
CSHW-1100	0.5	AUTOFLOW CONTROL VALVE	1.60	1.9	47.3 in. WC	1.60	100.0
CSHW-1110	0.5	AUTOFLOW CONTROL VALVE	1.80	2.5	50.9 in. WC	1.80	100.0
CSHW-1115	0.5	AUTOFLOW CONTROL VALVE	3.90	5.8	53.8 in. WC	3.90	100.0
CSHW-1135	0.5	AUTOFLOW CONTROL VALVE	0.70	5.7	10.5 in. WC	0.70	100.0
CSHW-1145	0.5	AUTOFLOW CONTROL VALVE	0.70	5.8	25.4 in. WC	0.70	100.0
CSHW-1150	0.5	AUTOFLOW CONTROL VALVE	2.10	5.9	20.5 in. WC	2.10	100.0
CSHW-A1030	0.5	AUTOFLOW CONTROL VALVE	2.00	5.2	19.5 in. WC	2.00	100.0
CSHW-A1050	0.5	AUTOFLOW CONTROL VALVE	1.4	5.4	9.0 in. WC	1.4	100.0
CSHW-A1060	0.5	AUTOFLOW CONTROL VALVE	1.30	5.4	10.8 in. WC	1.30	100.0
CSHW-A1090	0.5	AUTOFLOW CONTROL VALVE	0.40	0.9	67.4 in. WC	0.40	100.0
CSHW-AC1110	0.5	AUTOFLOW CONTROL VALVE	2.50	6.2	24.8 in. WC	2.50	100.0
CSHW-B1090	0.5	AUTOFLOW CONTROL VALVE	2.00	5.6	13.8 in. WC	2.00	100.0
Total			34.8			34.8	100%

Completed By: Kalen Kemp on 07/02/2025