Report By:

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

Report: TAB REPORT

Function: Test, Adjust, & Balance

Date: 06/03/2024

PROJECT

Grain Valley Police Station (Grain Valley, MO)

719 NW Mize Rd

Grain Valley, MO 64029

Client

Temp-Con, Inc.

15670 S Keller St

Olathe, KS 66062

National TAB

Project: Grain Valley Police Station (Grain Valley, MO)

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Project: Grain Valley Police Station (Grain Valley, MO)

System/Unit: AHU/RTU

Asset: RTU1 AREA:

Unit Data		
	Design	**Actual**
MFG	NA	JCI
Serial Num	-	N2L3969755
Model Num	NA	AD25T3DH4G1CGS14G2
Configuration	VERTICAL	VERTICAL
Num PreFilter 1	-	9
PreFilter Size 1	-	16X25X4
Num Final Filter 1	-	2 METAL MESH 16.5X30.5

Motor Data		
	Design	**Actual**
Motor MFG	-	MARATHON
Frame	-	184T
Horsepower	10	5
Motor Rpm	-	1765
Phase	3	3
Rated Voltage	460	230/460
Rated Amperage	18.7	12.6/6.3
Service Factor	-	1.15

Drive Data		
	Design	**Actual**
Motor Sheave Size	-	6"
Motor Bore Size	-	1-3/8"
Motor Sheave SetPt	-	4 TURNS OUT
Fan Sheave Size	-	7.25"
Fan Sheave Bore	-	1-7/16"
Belt CL Distance	-	12"
Num of Belts	-	1
Belt Size	-	5VX450

Test Data		
	Design	**Actual**
SF CFM	8175	7858
SF RPM	1197	1127
RA CFM	6000	5509
OA CFM	2175	2349
RL Voltage	460	469/469/470
RL Amperage	18.7	6.0/5.9/5.9
SF Motor Freq(HZ)	-	54HZ
SF System SetPt	-	1.18" of 1.5"
Min OA Damper Position	-	8%
Brake Horse Power	5.76	

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.36"
Fan Suction SP	-	-0.94"
Fan Discharge SP	-	1.69"
Total ESP	1.50	
Fan Total SP	-	
Pre-Filter P.D.	-	

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Project:Grain Valley Police Station (Grain Valley, MO)

AHU/RTU

VAV - Single Duct

RTU1/

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)**
RTU1-VAV1	PRICE	SDV-1-1	VAV	8"	650	635	195	188	325	330	1.704
RTU1-VAV2	PRICE	SDV-1-1	VAV	6	300	292	90	88	150	154	1.970
RTU1-VAV3	PRICE	SDV-1-1	VAV	7"	550	542	165	165	275	276	1.870
RTU1-VAV4	PRICE	SDV-1-1	VAV	9	900	934	270	273	450	460	1.780
RTU1-VAV5	PRICE	SDV-1-1	VAV	4	150	159	45	42	75	80	0.400
RTU1-VAV6	PRICE	SDV-1-1	VAV	8	700	703	210	220	350	360	1.87
RTU1-VAV7	PRICE	SD-1-1	VAV	4"	100	101	30	29	50	53	0.793
RTU1-VAV8	PRICE	SDV-1-1	VAV	5	200	196	60	59	100	100	1.194
RTU1-VAV9	PRICE	SDV-1-1	VAV	6	270	281	85	83	137	140	1.6941

VAV-Fan Powered Box

RTU1/

Asset											
Asset Name	**MFG**	**Model Num**	**Service**	**Type**	**Inlet Size**	**Design Max Cool CFM**	**Max Cool CFM**	**Design Min Cool CFM**	**Min Cool CFM**	**Design Fan CFM (Heat)**	**Fan CFM (Heat)**	**Ak (max)**
RTU1-FPB1	PRICE	FDV5-3012		FAN POWERED VAV	12	1000	997	400	403	600	602	2.61
RTU1-FPB2	PRICE	FDV5-5016		FAN POWERED VAV	16	3000	3018	1000	996	2000	2015	1.300

Diffuser Supply (GRD)

RTU1-FPB1/

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
RTU1-FPB1-SGRD1	LOBBY	SD1	6"	100	111	105	105.0
RTU1-FPB1-SGRD2	LOBBY	SD2	8"	150	167	145	96.7
RTU1-FPB1-SGRD3	LOBBY	SD2	8"	150	179	142	94.7
RTU1-FPB1-SGRD4	LOBBY	SD2	8"	150	142	153	102.0
RTU1-FPB1-SGRD5	LOBBY	SD2	8"	150	145	154	102.7
RTU1-FPB1-SGRD6	LOBBY	SD1	8"	100	61	91	91.0
RTU1-FPB1-SGRD7	WOMENS RR	SD1	6"	100	112	102	102.0
RTU1-FPB1-SGRD8	MENS RR	SD1	6"	100	102	105	105.0
Total				1000	1019	997	99.7%

RTU1-FPB2/

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
RTU1-FPB2-SGRD1	COMMUNITY	SD3	12"	500	536	521	104.2
RTU1-FPB2-SGRD2	COMMUNITY	SD3	12"	500	447	489	97.8
RTU1-FPB2-SGRD3	COMMUNITY	SD3	12"	500	630	497	99.4
RTU1-FPB2-SGRD4	COMMUNITY	SD3	12"	500	389	501	100.2
RTU1-FPB2-SGRD5	COMMUNITY	SD3	12"	500	505	534	106.8
RTU1-FPB2-SGRD6	COMMUNITY	SD3	12"	500	464	476	95.2
Total				3000	2971	3018	100.6%

RTU1-VAV1/

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
RTU1-VAV1-SGRD1	CHIEF	SD1	8"	150	140	144	96.0
RTU1-VAV1-SGRD2	CHIEF	SD1	8"	150	163	142	94.7
RTU1-VAV1-SGRD3	ADMIN	SD1	8"	150	175	160	106.7
RTU1-VAV1-SGRD4	PATROL	SD1	8"	200	162	189	94.5
Total				650	640	635	97.69%

RTU1-VAV2/

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
RTU1-VAV2-SGRD1	CASE ROOM	SD1	8"	200	205	205	102.5
RTU1-VAV2-SGRD2	STANDARDS	SD1	8"	100	92	92	92.0
Total				300	297	297	99%

RTU1-VAV3/

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
RTU1-VAV3-SGRD1	CONFERENCE	SD1	10"	275	246	270	98.2
RTU1-VAV3-SGRD2	CONFERENCE	SD1	10"	275	297	272	98.9
Total				550	543	542	98.55%

RTU1-VAV4/

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
RTU1-VAV4-SGRD1	OFFICE	SD1	8"	150	198	145	96.7
RTU1-VAV4-SGRD2	OFFICE	SD1	8"	150	160	156	104.0
RTU1-VAV4-SGRD3	OFFICE	SD1	8"	150	142	165	110.0
RTU1-VAV4-SGRD4	OFFICE	SD1	8"	150	162	164	109.3
RTU1-VAV4-SGRD5	OFFICE	SD1	8"	150	135	146	97.3
RTU1-VAV4-SGRD6	OFFICE	SD1	8"	150	147	158	105.3
Total				900	944	934	103.78%

RTU1-VAV5/

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
RTU1-VAV5-SGRD1	INT	SD1	6"	50	88	53	106.0
RTU1-VAV5-SGRD2	INT	SD1	6"	50	88	54	108.0
RTU1-VAV5-SGRD3	VICTIM ADVOCATE	SD1	6"	50	85	52	104.0
Total				150	261	159	106%

RTU1-VAV6/

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
RTU1-VAV6-SGRD1	OPEN OFFICE	SD1	8"	175	173	184	105.1
RTU1-VAV6-SGRD2	OPEN OFFICE	SD1	8"	175	195	176	100.6
RTU1-VAV6-SGRD3	HALLWAY	SD1	8"	175	148	167	95.4
RTU1-VAV6-SGRD4	HALLWAY	SD1	8"	175	205	176	100.6
Total				700	721	703	100.43%

RTU1-VAV7/

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
RTU1-VAV7-SGRD1	SOFT INT	SD1	6"	50	89	54	108.0
RTU1-VAV7-SGRD2	REPORT INT	SD1	6"	50	75	47	94.0
Total				100	164	101	101%

RTU1-VAV8/

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
RTU1-VAV8-SGRD1	STORAGE	SD2	12X6	100	112	99	99.0
RTU1-VAV8-SGRD2	STORAGE	SD2	12X6	100	148	97	97.0
Total				200	260	196	98%

RTU1-VAV9/

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
RTU1-VAV9-SGRD1	RECORDS	SD1	6"	75	90	75	100.0
RTU1-VAV9-SGRD2	RECORDS	SD1	6"	75	119	81	108.0
RTU1-VAV9-SGRD3	RECORD MASTER	SD1	6"	125	166	125	100.0
Total				275	375	281	102.18%

Completed By: Jacob Davidson on 03/13/2024

Asset	Notes	Date	Written By
RTU1-FPB1	FAN SPEED SET AT 2.74VDC	03/21/2024	Jacob Davidson
RTU1-FPB2	FAN IS NOT FUNCTIONING AT THIS TIME 03/19/24	03/21/2024	Jacob Davidson

National TAB

Project: Grain Valley Police Station (Grain Valley, MO)

System/Unit: AHU/RTU

Asset: RTU2 AREA:

Unit Data		
	Design	**Actual**
MFG	NA	JCI
Serial Num	-	N2L3969754
Model Num	NA	AD25T3DH4G1CGS14G2
Configuration	VERTICAL	VERTICAL
Num PreFilter 1	-	9
PreFilter Size 1	-	16X25X4
Num Final Filter 1	-	2 METAL MESH 16.5X30.5

Motor Data		
	Design	**Actual**
Motor MFG	-	MARATHON
Frame	-	184T
Horsepower	10	5
Motor Rpm	-	1765
Phase	3	3
Rated Voltage	460	230/460
Rated Amperage	18.7	12.6/6.3
Service Factor	-	1.15

Drive Data		
	Design	**Actual**
Motor Sheave Size	-	6"
Motor Bore Size	-	1-3/8"
Motor Sheave SetPt	-	4 TURNS OUT
Fan Sheave Size	-	7.25"
Fan Sheave Bore	-	1-7/16"
Belt CL Distance	-	12"
Num of Belts	-	1
Belt Size	-	5VX450

Test Data		
	Design	**Actual**
SF CFM	7250	7223
SF RPM	1142	1217
RA CFM	5600	5481
OA CFM	1650	1742
RL Voltage	460	481/485/484
RL Amperage	18.7	6.2/6.3/6.4
SF Motor Freq(HZ)	-	60HZ
SF System SetPt	-	0.6" of 1.4"
Min OA Damper Position	-	10%
Brake Horse Power	4.90	

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-1.13"
Fan Suction SP	-	-1.56"
Fan Discharge SP	-	1.13"
Total ESP	1.50	2.26"
Fan Total SP	-	2.69"
Pre-Filter P.D.	-	

Notes:
RTU was overamping at 12A of 6.3A when motor was at max. Motor was slowed down by reducing the pressure setpoint to 0.20" in order to get motor under FLA. Motor is scheduled to be a 10HP motor but each unit only has a 5HP motor.

Written By: Jacob Davidson on 04/16/2024

National TAB

Project:Grain Valley Police Station (Grain Valley, MO)

AHU/RTU

VAV - Single Duct

RTU2/

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)**
RTU2-VAV1	PRICE	SDV-1-1	VAV	5	200	190	60	57	150	151	0.885
RTU2-VAV2	PRICE	SDV-1-1	VAV	6	300	297	90	88	150	156	2.251
RTU2-VAV3	PRICE	SDV-1-1	VAV	7"	500	513	150	146	250	253	2.021
RTU2-VAV4	PRICE	SDV-1-1	VAV	12"	1400	1406	420	416	700	709	1.548
RTU2-VAV5	PRICE	SDV-1-1	VAV	5	200	201	60	58	100	99	1.083
RTU2-VAV6	PRICE	SDV-1-1	VAV	8"	600	585	180	175	300	301	2.168
RTU2-VAV7	PRICE	SDV-1-1	VAV	6	300	288	90	90	150	154	1.978
RTU2-VAV8	PRICE	SDV-1-1	VAV	5	175	179	55	52	87	86	1.091
RTU2-VAV9	PRICE	SDV-1-1	VAV	8"	600	602	180	175	300	295	2.317
RTU2-VAV10	PRICE	SDV-1-1	VAV	10	1250	1201	375	380	625	621	1.862
RTU2-VAV11	PRICE	SDV-1-1	VAV	4	200	197	40	37	62	65	0.772

VAV-Fan Powered Box

RTU2/

Asset												
Asset Name	**MFG**	**Model Num**	**Service**	**Type**	**Inlet Size**	**Design Max Cool CFM**	**Max Cool CFM**	**Design Min Cool CFM**	**Min Cool CFM**	**Design Fan CFM (Heat)**	**Fan CFM (Heat)**	**Ak (max)**
RTU2-FPB1	PRICE	FDV5-3012		FPB	12	1600	1564	550	540	1050	1054	1.670

Diffuser Supply (GRD)

RTU2-FPB1/

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
RTU2-FPB1-SGRD1	BREAKROOM	SD2	18X10	525	141	481	91.6
RTU2-FPB1-SGRD2	BREAKROOM	SD2	18X10	525	704	540	102.9
RTU2-FPB1-SGRD3	BREAKROOM	SD2	18X10	525	695	543	103.4
Total				1575	1540	1564	99.3%

RTU2-VAV1/

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
RTU2-VAV1-SGRD1	MENS LOCKER	SD1	6"	50	70	49	98.0
RTU2-VAV1-SGRD2	MENS LOCKER	SD1	6"	50	54	47	94.0
RTU2-VAV1-SGRD3	MENS LOCKER	SD1	6"	50	42	46	92.0
RTU2-VAV1-SGRD4	MENS LOCKER	SD1	6"	50	36	48	96.0
Total				200	202	190	95%

RTU2-VAV10/

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
RTU2-VAV10-SGRD1	QUIET ROOM	SD1	6"	50	82	49	98.0
RTU2-VAV10-SGRD2	DECON	SD1	6"	50	67	79	158.0
RTU2-VAV10-SGRD3	INTERVIEW	SD1	6"	50	55	50	100.0
RTU2-VAV10-SGRD4	BOOKING	SD1	12"	400	333	363	90.8
RTU2-VAV10-SGRD5	TEMP HOLDING	SD1	8"	150	145	155	103.3
RTU2-VAV10-SGRD6	BOOKING	SD1	12"	400	328	369	92.3
RTU2-VAV10-SGRD7	BONDING	SD1	8"	150	128	136	90.7
Total				1250	1138	1201	96.08%

RTU2-VAV11/

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
RTU2-VAV11-SGRD1	WEAPONS	SD1	6"	75	64	68	90.7
RTU2-VAV11-SGRD2	ARMORIST	SD1	6"	50	54	52	104.0
RTU2-VAV11-SGRD3	K9	SD2	6X6	75	95	77	102.7
Total				200	213	197	98.5%

RTU2-VAV2/

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
RTU2-VAV2-SGRD1	WOMENS LOCKER	SD1	8"	150	164	144	96.0
RTU2-VAV2-SGRD2	WOMENS LOCKER	SD1	8"	150	171	153	102.0
Total				300	335	297	99%

RTU2-VAV3/

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
RTU2-VAV3-SGRD1	REPORTING	SD1	8"	175	213	185	105.7
RTU2-VAV3-SGRD2	REPORTING	SD1	8"	175	223	191	109.1
RTU2-VAV3-SGRD3	PACKAGING	SD1	8"	150	155	137	91.3
Total				500	591	513	102.6%

RTU2-VAV4/

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
RTU2-VAV4-SGRD1	GYM	SD1	12"	350	339	347	99.1
RTU2-VAV4-SGRD2	GYM	SD1	12"	350	260	340	97.1
RTU2-VAV4-SGRD3	GYM	SD1	12"	350	369	365	104.3
RTU2-VAV4-SGRD4	GYM	SD1	12"	350	329	354	101.1
Total				1400	1297	1406	100.43%

RTU2-VAV5/

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
RTU2-VAV5-SGRD1	SERGEANT	SD1	6"	100	129	97	97.0
RTU2-VAV5-SGRD2	SERGEANT	SD1	6"	100	143	104	104.0
Total				200	272	201	100.5%

RTU2-VAV6/

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
RTU2-VAV6-SGRD1	RECEIVING	SD1	8"	150	110	139	92.7
RTU2-VAV6-SGRD2	PROPERTY STORAGE	SD1	8"	225	340	217	96.4
RTU2-VAV6-SGRD3	PROPERTY STORAGE	SD1	8"	225	249	229	101.8
Total				600	699	585	97.5%

RTU2-VAV7/

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
RTU2-VAV7-SGRD1	ROLLCALL	SD1	8"	150	168	142	94.7
RTU2-VAV7-SGRD2	ROLLCALL	SD1	8"	150	182	146	97.3
Total				300	350	288	96%

RTU2-VAV8/

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
RTU2-VAV8-SGRD1	JUVENILE	SD2	8	175	179	179	102.3
Total				175	179	179	102.29%

RTU2-VAV9/

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
RTU2-VAV9-SGRD1	MALE CELL	SD1	6"	100	85	90	90.0
RTU2-VAV9-SGRD2	CORRIDOR	SD1	6"	100	132	99	99.0
RTU2-VAV9-SGRD3	MALE CELL	SD1	6"	100	83	98	98.0
RTU2-VAV9-SGRD4	CORRIDOR	SD1	6"	100	113	109	109.0
RTU2-VAV9-SGRD5	FEMALE CELL	SD1	6"	100	116	108	108.0
RTU2-VAV9-SGRD6	FEMALE CELL	SD1	6"	100	36	39	39.0
Total				600	565	543	90.5%

Asset	Notes	Date	Written By
RTU2-VAV9	2-6 LOW FLOW	03/21/2024	Jacob Davidson
RTU2-VAV11	Increased Design Max CFM from 125 to 200 due to diffuser design.	03/18/2024	Jacob Davidson
RTU2-FPB1	FAN SPEED SET AT 4.1 VDC	03/21/2024	Jacob Davidson
RTU2-VAV10-SGRD2	NO DAMPER TO LOWER AIRFLOW	03/21/2024	Jacob Davidson
RTU2-VAV9-SGRD6	DAMPER SHOULD BE FULLY OPEN BUT IT IS ABOVE HARD CEILING AND TECH IS UNABLE TO ACCESS THE DAMPER TO CONFIRM.	03/21/2024	Jacob Davidson

National TAB

Project: Grain Valley Police Station (Grain Valley, MO)

System/Unit: FAN - Exhaust

Asset: EF1 AREA:

Unit Data		
	Design	**Actual**
MFG	NA	GREENHECK
Model Num	NA	G-080-VG-1-17-X
Serial Num	-	22303910
Type	CRE	DOWNBLAST

Motor Data		
	Design	**Actual**
Motor MFG	-	BROAD OCEAN
Frame	-	NL
Horsepower	0.10	1/10
Motor Rpm	1725	300-1750
Phase	1	1
Voltage (rated)	115	115/208-230/277
Amperage (rated)	-	1.38/0.84/0.73
Service Factor	-	1

Test Data		
	Design	**Actual**
CFM	235	259
RL Voltage	-	119V
RL Amperage	-	NA
Total ESP	0.200	0.17"

Completed By: Jacob Davidson on 04/16/2024

Notes:
MAX SPEED SETPOINT: 65%

Written By: Jacob Davidson on 04/16/2024

National TAB

Project:Grain Valley Police Station (Grain Valley, MO)

FAN - Exhaust

Diffuser Ret/Exh (GRD)

EF1/

Asset								
Asset Name	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
EF1-EGRD1	EG1	12X12	75	0.877	100	124	75	100.0
EF1-EGRD2	EG1	12X12	75	0.877	149	128	78	104.0
EF1-EGRD3	EG1	12X12	50	0.877	85	84	52	104.0
EF1-EGRD4	EG1	12X12	50	0.877	87	89	54	108.0
Total			250		421	425	259	103.6%

Completed By: Jacob Davidson on 04/15/2024

National TAB

Project: Grain Valley Police Station (Grain Valley, MO)

System/Unit: FAN - Exhaust

Asset: EF2 AREA:

Unit Data		
	Design	**Actual**
MFG	NA	GREENHECK
Model Num	NA	G-080-VG-1-17-X
Serial Num	-	22303907
Type	CRE	DOWNBLAST

Motor Data		
	Design	**Actual**
Motor MFG	-	BROAD OCEAN
Frame	-	NL
Horsepower	0.10	1/10
Motor Rpm	1725	300-1725
Phase	1	1
Voltage (rated)	115	115/208-230/277
Amperage (rated)	-	1.38/0.84/0.73
Service Factor	-	1

Test Data		
	Design	**Actual**
CFM	300	325
RL Voltage	-	121V
RL Amperage	-	NA
Total ESP	0.200	0.26"

Completed By: Jacob Davidson on 04/16/2024

National TAB

Project:Grain Valley Police Station (Grain Valley, MO)

FAN - Exhaust

Diffuser Ret/Exh (GRD)

EF2/

Asset								
Asset Name	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
EF2-EGRD1	EG2	12X12	75	1	62	72	76	101.3
EF2-EGRD2	EG2	12X12	75	1	137	169	159	212.0
EF2-EGRD3	EG2	12X12	75	1	23	18	22	29.3
EF2-EGRD4	EG2	12X12	75	1	124	72	68	90.7
Total			300		346	331	325	108.33%

Asset	Notes	Date	Written By
EF2-EGRD2	Damper is stuck. Tech is unable to reduce flow on the diffuser. MC was also unable to free diffuser and was hesitant to break anything.	04/16/2024	Jacob Davidson
EF2-EGRD3	Damper is fully open.	04/16/2024	Jacob Davidson

National TAB

Project: Grain Valley Police Station (Grain Valley, MO)

System/Unit: FAN - Exhaust

Asset: EF3 AREA:

Unit Data		
	Design	**Actual**
MFG	NA	GREENHECK
Model Num	NA	G-095-VG-1-17-X
Serial Num	-	22303904
Type	CRE	DOWNBLAST

Test Data		
	Design	**Actual**
CFM	625	622
RL Voltage	-	121V
RL Amperage	-	NA
Total ESP	0.500	0.61

Motor Data		
	Design	**Actual**
Motor MFG	-	BROAD OCEAN
Frame	-	NL
Horsepower	0.16	1/6
Motor Rpm	1725	300-1750
Phase	1	1
Voltage (rated)	115	115/208-230/277
Amperage (rated)	-	2.2/1.7/1.5
Service Factor	-	1

Completed By: Jacob Davidson on 04/16/2024

National TAB

Project:Grain Valley Police Station (Grain Valley, MO)

FAN - Exhaust

Diffuser Ret/Exh (GRD)

EF3/

Asset								
Asset Name	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
EF3-EGRD1	EG1	12X12	75	1	94	118	115	153.3
EF3-EGRD2	EG1	12X12	75	1	120	140	127	169.3
EF3-EGRD3	EG1	22X22	100	1	259	124	119	119.0
EF3-EGRD4	EG1	22X22	225	1	178	153	224	99.6
EF3-EGRD5	EG1	12X12	75	1	26	42	33	44.0
EF3-EGRD6	EG1	8X8	75	1	43	45	34	45.3
Total			625		720	622	652	104.32%

Asset	Notes	Date	Written By
EF3-EGRD1	Diffuser needs a damper to reduce flow. MC is to add a damper and reduce the flow.	04/16/2024	Jacob Davidson
EF3-EGRD2	Diffuser needs a damper to reduce flow. MC is to add a damper and reduce the flow.	04/16/2024	Jacob Davidson
EF3-EGRD5	Damper fully open. Diffuser is at the end of long duct where it is difficult to push more air.	04/16/2024	Jacob Davidson
EF3-EGRD6	Damper fully open. Diffuser is at the end of long duct where it is difficult to push more air.	04/16/2024	Jacob Davidson

National TAB

Project: Grain Valley Police Station (Grain Valley, MO)

System/Unit: FAN - Exhaust

Asset: EF4 AREA:

Unit Data		
	Design	**Actual**
MFG	NA	GREENHECK
Model Num	NA	G-095-VG-1-17-X
Serial Num	-	22303902
Type	CRE	DOWNBLAST

Test Data		
	Design	**Actual**
CFM	700	733
RL Voltage	-	122V
RL Amperage	-	1.97A
Total ESP	0.500	0.27"

Motor Data		
	Design	**Actual**
Motor MFG	-	BROAD OCEAN
Frame	-	NL
Horsepower	0.16	1/6
Motor Rpm	1725	300-1750
Phase	1	1
Voltage (rated)	115	115/208-230/277
Amperage (rated)	-	2.2/1.3/1.1
Service Factor	-	1

Completed By: Jacob Davidson on 03/21/2024

National TAB

Project:Grain Valley Police Station (Grain Valley, MO)

FAN - Exhaust

Diffuser Ret/Exh (GRD)

EF4/

Asset									
Asset Name	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**	**Location**
EF4-EGRD1	EG1	22X2	100	1	55	96	96	96.0	
EF4-EGRD2	EG1	12X12	75	1	75	82	82	109.3	
EF4-EGRD3	EG1	12X12	75	1	75	82	82	109.3	
EF4-EGRD4	EG1	22X22	300	1	187	284	284	94.7	
EF4-EGRD5	EG1	12X12	75	1	205	73	73	97.3	
EF4-EGRD6	EG1	12X12	75	1	203	116	116	154.7	
Total			700		800	733	733	104.71%	

Completed By: Jacob Davidson on 03/20/2024

Asset	Notes	Date	Written By
EF4-EGRD6	DIFFUSER IS FULLY CLOSED. UNABLE TO REDUCE AIRFLOW.	03/20/2024	Jacob Davidson

National TAB

Project: Grain Valley Police Station (Grain Valley, MO)

System/Unit: FAN - Exhaust

Asset: EF5 AREA:

Unit Data		
	Design	**Actual**
MFG	NA	GREENHECK
Model Num	NA	G-090-VG-1-17-X
Serial Num	-	22303896
Type	CRE	DOWNBLAST

Test Data		
	Design	**Actual**
CFM	450	467
RL Voltage	-	121V
RL Amperage	-	1.21A
Total ESP	0.200	0.16"

Motor Data		
	Design	**Actual**
Motor MFG	-	BROAD-OCEAN
Frame	-	NL
Horsepower	0.10	1/10
Motor Rpm	1725	300-1750
Phase	1	1
Voltage (rated)	115	115/208-230/277
Amperage (rated)	-	1.38/0.84/0.73
Service Factor	-	1

Completed By: Jacob Davidson on 03/19/2024

Notes:
MAX SPEED SET AT 85%

Written By: Jacob Davidson on 03/19/2024

National TAB

Project:Grain Valley Police Station (Grain Valley, MO)

FAN - Exhaust

Diffuser Ret/Exh (GRD)

EF5/

Asset								
Asset Name	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
EF5-EGRD1	EG1	12X12	225	1	324	259	228	101.3
EF5-EGRD2	EG1	12X12	225	1	228	262	239	106.2
Total			450		552	521	467	103.78%

Completed By: Jacob Davidson on 03/18/2024

National TAB

Project: Grain Valley Police Station (Grain Valley, MO)

System/Unit: FAN - Exhaust

Asset: EF6 AREA:

Unit Data		
	Design	**Actual**
MFG	NA	GREENHECK
Model Num	NA	G-097-4-VG-1-19-X
Serial Num	-	22303895
Type	CRE	DOWNBLAST

Test Data		
	Design	**Actual**
CFM	75	80
RL Voltage	-	120V
RL Amperage	-	NA
Total ESP	0.200	0.17"

Motor Data		
	Design	**Actual**
Motor MFG	-	BROAD OCEAN
Frame	-	NL
Horsepower	0.25	1/4
Motor Rpm	1725	300-1750
Phase	1	1
Voltage (rated)	115	115/208-230/277
Amperage (rated)	-	2.85/1.7/1.5
Service Factor	-	1

Completed By: Jacob Davidson on 04/15/2024

Notes:
NO ADJUSTMENT TO SPEED

Written By: Jacob Davidson on 04/16/2024

National TAB

Project:Grain Valley Police Station (Grain Valley, MO)

FAN - Exhaust

Diffuser Ret/Exh (GRD)

EF6/

Asset								
Asset Name	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
EF6-EGRD1	EG1	6X6	75	0.225	84	80	80	106.7
Total			75		84	80	80	106.67%

Completed By: Jacob Davidson on 04/15/2024

National TAB

Project: Grain Valley Police Station (Grain Valley, MO)

System/Unit: FAN - Exhaust

Asset: EF7 AREA:

Unit Data		
	Design	**Actual**
MFG	NA	GREENHECK
Model Num	NA	G-120-5-VG-1-19-X
Serial Num	-	22303898
Type	CRE	DOWNBLAST

Test Data		
	Design	**Actual**
CFM	1175	1149
RL Voltage	-	120V
RL Amperage	-	NA
Total ESP	0.500	0.39"

Motor Data		
	Design	**Actual**
Motor MFG	-	BROAD OCEAN
Frame	-	NL
Horsepower	0.50	1/2
Motor Rpm	1725	300-1750
Phase	1	1
Voltage (rated)	115	115/208-230/277
Amperage (rated)	-	6.4/3.8/3.2
Service Factor	-	1

Completed By: Jacob Davidson on 04/16/2024

Notes:
MAX SPEED SETPOINT: 80%

Written By: Jacob Davidson on 04/16/2024

National TAB

Project:Grain Valley Police Station (Grain Valley, MO)

FAN - Exhaust

Diffuser Ret/Exh (GRD)

EF7/

Asset								
Asset Name	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
EF7-EGRD1	EG1	12X8	100	0.510	171	108	90	90.0
EF7-EGRD2	EG1	12X12	350	0.877	249	420	341	97.4
EF7-EGRD3	EG1	12X12	175	0.877	484	235	166	94.9
EF7-EGRD4	EG1	12X12	350	0.877	441	437	368	105.1
EF7-EGRD5	EG1	12X8	200	0.510	173	210	184	92.0
Total			1175		1518	1410	1149	97.79%

Completed By: Jacob Davidson on 04/16/2024

National TAB

Project: Grain Valley Police Station (Grain Valley, MO)

System/Unit: FAN - Exhaust

Asset: EF8 AREA:

Unit Data		
	Design	**Actual**
MFG	NA	GREENHECK
Model Num	NA	G-120-5-VG-1-19-X
Serial Num	-	22303900
Type	CRE	DOWNBLAST

Test Data		
	Design	**Actual**
CFM	1200	1231
RL Voltage	-	121V
RL Amperage	-	4.89A
Total ESP	0.500	0.39"

Motor Data		
	Design	**Actual**
Motor MFG	-	BROAD OCEAN
Frame	-	NL
Horsepower	0.50	1/2
Motor Rpm	1725	300-1750
Phase	1	1
Voltage (rated)	115	115/208-230/277
Amperage (rated)	-	6.4/3.8/3.2
Service Factor	-	1

Completed By: Jacob Davidson on 03/21/2024

Notes:
MAX SPEED SET TO 85%

Written By: Jacob Davidson on 03/21/2024

National TAB

Project:Grain Valley Police Station (Grain Valley, MO)

FAN - Exhaust

Diffuser Ret/Exh (GRD)

EF8/

Asset								
Asset Name	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
EF8-EGRD1	EG1	12X10	300	0.678	364	365	328	109.3
EF8-EGRD2	EG1	12X10	300	0.678	335	378	280	93.3
EF8-EGRD3	EG1	12X10	300	0.678	317	380	316	105.3
EF8-EGRD4	EG1	12X10	300	0.678	460	370	307	102.3
Total			1200		1476	1493	1231	102.58%

Completed By: Jacob Davidson on 03/21/2024

National TAB

Project: Grain Valley Police Station (Grain Valley, MO)

System/Unit: FAN - Exhaust

Asset: VF1 AREA:

Unit Data		
	Design	**Actual**
MFG	NA	GREENHECK
Model Num	NA	SQ-70-VGX-QD
Serial Num	-	21669318
Type	INLINE	INLINE

Test Data		
	Design	**Actual**
CFM	100	109
RL Voltage	-	NA
RL Amperage	-	NA
Total ESP	0.100	0.04"

Motor Data		
	Design	**Actual**
Motor MFG	-	NA
Frame	-	NA
Horsepower	0.06	NA
Motor Rpm	1725	NA
Phase	1	NA
Voltage (rated)	115	NA
Amperage (rated)	-	1.3
Service Factor	-	NA

Completed By: Jacob Davidson on 03/20/2024

National TAB

Project: Grain Valley Police Station (Grain Valley, MO)

System/Unit: FAN - Exhaust

Asset: VF2 AREA:

Unit Data		
	Design	**Actual**
MFG	NA	GREENHECK
Model Num	NA	SQ-90-VG1X-QD
Serial Num	-	22223623
Type	INLINE	INLINE

Test Data		
	Design	**Actual**
CFM	250	243
RL Voltage	-	NA
RL Amperage	-	NA
Total ESP	0.500	0.36"

Motor Data		
	Design	**Actual**
Motor MFG	-	NA
Frame	-	NA
Horsepower	0.10	1/10
Motor Rpm	1725	1725
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	1.38
Service Factor	-	1

Completed By: Jacob Davidson on 03/20/2024