Report By:

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

Report: TAB REPORT

Function: Test, Adjust, & Balance

Date: 11/29/2023

PROJECT

11-27-23 CULVERS-DELANO, MN

800 Babcock Blvd

East Delano, MN 55328

Client

G4 Construction Management

12903 Pioneer Trail

Minneapolis, MN 55347

Project Summary

The summary below provides a quick understanding of our scope of work and general testing procedures. Enclosed in the report is further detail about your building performance including recommendations, asset data, and pictures. Our focus is to work with the trades to remedy any issues or deficiencies during the actual field balancing and not after the balancing has occurred to achieve a positive environment and outcome. The level of success is determined by the availability of the trades, possible parts needed, or time constraints.

RTU's (Roof Top Units)
Each of the RTU's were measured at their terminal devices or via traverse to establish a total flow for that unit. Each RTU was adjusted to within tolerance of the engineer's design flow. Each outlet was then adjusted to within tolerance of the design flow. Outside air was measured by reading the intake air opening with a velocity grid and multiplying by the free area. The outside air damper was adjusted until the airflow was within the design requirements. Any equipment that fell outside of that tolerance is noted throughout the report.

Kitchen Exhaust Hood & Associated Fans
Each kitchen exhaust fan was measured at the hood filter bay utilizing a velocity matrix and a manufacturer's correction factor. Each filter velocity is multiplied by the manufacturer's corrected area. The sum of these readings equals the total flow of the exhaust fans. The total flow of the exhaust was then adjusted to within tolerance of the design flow.

General Exhaust Fans
The general exhaust fans were measured by reading each air device with a flow hood. The total airflow for each fan is equivalent to the sum of these readings. Fan speed was then adjusted so that the airflow was within tolerance of design. Each terminal device was balanced to within tolerance of the design volume using the installed volume dampers. Any equipment that fell outside of this tolerance is noted throughout the report.

Final Building Tests
After completing the test and balance the final building pressure was measured. It was confirmed that the building pressure fell within acceptable tolerances of -0.02" wc to +0.02" wc and that the pressure measurement coincides with the actual and design net airflow. Any deviations from these standards are noted throughout the report.
The hood capture was tested at the perimeter of the hood and the cook top level with the equipment heat on to ensure satisfactory hood capture and containment.

Issue List

- PRV-1 (RR Exhaust) Incorrect Grilles Installed

11-27-23 CULVERS-DELANO, MN

Project Issue Information

Issue Name : PRV-1 (RR Exhaust) Incorrect Grilles Installed

Description : Installed Exhaust grilles in bathroom are supply grilles (SD-4). Plans call for EG-1 return grilles. Recommend correct grilles are installed.

Created By : National TAB

Assigned To : National TAB - Michael McDonnell

Status : Open

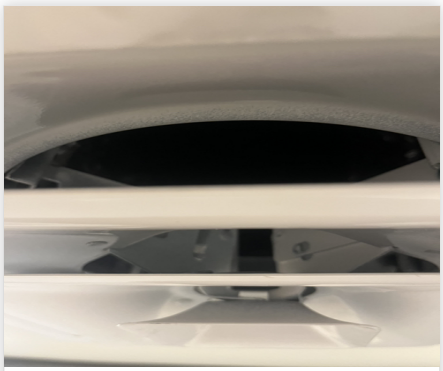
Priority : Low

Asset Tag :

Originated Date : 11/27/2023 - Michael McDonnell - National TAB

Project Issue File Details

Incorrect
11/27/2023



Nodamper(1)
11/27/2023

NATIONAL TAB

AIR BALANCE SCHEDULE

UNIT	AREA SERVED	HVAC SUPPLY		HVAC RETURN		HVAC OUTDOOR		OA %		HOOD MAKE-UP		HOOD EXHAUST		GENERAL EXH.	
		DESIGN	ACTUAL	DESIGN	ACTUAL	DESIGN	ACTUAL	DESIGN	ACTUAL	DESIGN	ACTUAL	DESIGN	ACTUAL	DESIGN	ACTUAL
RTU-1	DINING	6150	5960	4275	3952	1875	2008	30.5%	33.7%						
RTU-2	KITDCHEN	6150	6043	4300	4067	1850	1976	30.1%	32.7%						
PRV-2	HOOD1											1500	1555		
PRV-3	HOOD2											1500	1604		
PRV-4	HOOD3											350	362		
PRV-1	RESTROOM													300	292
EF-1A	MOP ROOM													75	80
TOTALS		12300	12003	8575	8019	3725	3984			0	0	3350	3521	375	372

NET BUILDING AIRFLOW CALCULATION

TOTALS	DESIGN	ACTUAL
TOTAL OA	3725	3984
TOTAL EXHAUST	3725	3893
NET AIRFLOW	0	91

DOOR TESTED	BUILDING PRESSURE MEASUREMENTS (IN. H20)
FRONT	0.006
SIDE	0.005
REAR	0.007
AVERAGE	**0.006**

FINAL CHECKS

ACTUAL NET AIRFLOW COINCIDES WITH DESIGN: ✓

MEASURED PRESSURES COINCIDES WITH ACTUAL NET AIRFLOW: ✓

PRESSURE FALLS WITHIN IMC TOLERANCE OF +/-0.02" W.C. ✓

NOTES:

CheckList List

- SITE PICTURES
- TECH - STEP 1: INITIAL WALKTHROUGH
- TECH - STEP 2: UNIT DATA AND EVAL
- TECH - STEP 3: TEST, ADJUST AND BALANCE
- TECH - STEP 4: FINAL TESTS

11-27-23 CULVERS-DELANO, MN

CheckList Information

Name :	SITE PICTURES	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	11/22/2023 - Wale Odofin - National TAB		
Completed Date :	11/29/2023 - Michael McDonnell - National TAB		

CheckList Item Details

STORE FRONT

Comment:

Culvers-Delano-MN.jpe..
11/28/2023

RTU-1

Comment:

RTU-1-Dining
11/28/2023

Unit-Label
11/28/2023

RTU-2

Comment:

RTU-2-Kitchen
11/28/2023

Unit-Label
11/28/2023

PRV-1

Comment:

PRV-1-RR
11/28/2023

Unit-Label
11/28/2023

PRV-2

Comment:

PRV-2-Griddle
11/29/2023

Duct
11/29/2023

PRV-3

Comment:

PRV-3-Fryer
11/29/2023

Duct
11/29/2023

PRV4

Comment:

PRV-4-Dishwasher
11/29/2023

Setpoint-Marked
11/29/2023

EF-1A

Comment:

EFA1-Mop
11/29/2023

Setpoint-Marked
11/29/2023

HOOD 1

Comment:

HD-1-Griddle
11/29/2023

HOOD 2

Comment:

HD-2-Fryer
11/29/2023

HOOD3

Comment:

HD-3-DW
11/29/2023

11-27-23 CULVERS-DELANO, MN

CheckList Information

Name :	TECH - STEP 1: INITIAL WALKTHROUGH	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	11/22/2023 - Wale Odofin - National TAB		
Completed Date :	11/29/2023 - Michael McDonnell - National TAB		

CheckList Item Details

INITIAL SITE WALKTHROUGH

All diffusers and grilles are installed and match design?	No
Comment: Restroom exhaust grilles do not match design. Supply diffusers are installed. See issue.	
Perforated diffusers are installed on the cook line? (4-ways will disrupt hood capture)	Yes
Comment:	
All hood filters installed and accounted for?	Yes
Comment:	
Hoods are wired and have power?	Yes
Comment:	
Thermostats have power?	Yes
Comment:	
Have trades/general contractor been notified about any issues and are they created on FaciliBuild?	

Comment:

Yes

11-27-23 CULVERS-DELANO, MN

CheckList Information

Name :	TECH - STEP 2: UNIT DATA AND EVAL	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	11/22/2023 - Wale Odofin - National TAB		
Completed Date :	11/29/2023 - Michael McDonnell - National TAB		

CheckList Item Details

UNIT DATA AND EVALUATION WHILE GATHERING UNIT DATA CHECK THE FOLLOWING:

RTU's/AHU's

Economizers are assembled and functional?	Yes
Comment:	
Thermostat wire run from OCP on the RTU to the Ec terminal at the thermostat? If no, jumper can be installed from R to OCP temporarily. (The economizers will not open without OCP being energized.)	N/A
Comment: Captive Aire DOAS units installed.	
Motors are all operating below the FLA rating?	Yes
Comment:	
Are belts tight?	
Comment: NA, all units are direct drive.	
If direct drive unit is the speed controller working.	

Comment:

Yes

Is gas piping installed and valves turned on?	Yes

Comment:

Unit free of noticeable noise and vibration	Yes

Comment:

EF's

Rotation is correct?	Yes

Comment:

Belts are tight?

Comment:

NA, fans are direct drive.

Grease cup installed on hood fan?	Yes

Comment:

Hinge kit installed installed on hood fan?	Yes

Comment:

Lean grease rated fans back. Is grease duct installation adequate and is duct ran all the way to the base of the fan?	Yes

Comment:

Flex conduit is long enough so that fan can be completely tilted back?	Yes

Comment:

There is no major leakage around base of fan?	Yes

Comment:

Is the motor operating below the motor FLA rating?	Yes

Comment:

For restroom fan(s) is the back draft damper installed and can it fully open?	Yes

Comment:

Unit free of noticeable noise and vibration?	Yes

Comment:

The hood exhaust fans are installed in correct positions and are not switched?	Yes

Comment:

HOODS

Kitchen equipment installed in proper places?	Yes

Comment:

Can kitchen equipment be turned on for final smoke test?	Yes

Comment:

Second stage Grease Grabber filters are installed on the griddle hood?	N/A

Comment:

Captive Aire Hoods installed.

DOCUMENTATION

Have trades/general contractor been notified about any issues and are they created on FaciliBuild?	Yes

Comment:

11-27-23 CULVERS-DELANO, MN

CheckList Information

Name :	TECH - STEP 3: TEST, ADJUST AND BALANCE	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	11/22/2023 - Wale Odofin - National TAB		
Completed Date :	11/29/2023 - Michael McDonnell - National TAB		

CheckList Item Details

TEST, ADJUST, AND BALANCE ALL EQUIPMENT:

DURING TESTING MAKE NOTE OF THE FOLLOWING:

Is space free of drafting?	Yes
Comment:	
Is space comfortable in all areas?	Yes
Comment:	
Is the space free of ventilation noise?	Yes
Comment:	

If deviations from design were necessary to resolve 1-3 what were they? Otherwise put "NA".

Comment:

NA

11-27-23 CULVERS-DELANO, MN

CheckList Information

Name :	TECH - STEP 4: FINAL TESTS	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	11/22/2023 - Wale Odofin - National TAB		
Completed Date :	11/29/2023 - Michael McDonnell - National TAB		

CheckList Item Details

FINAL TESTS

HOOD CAPTURE TEST

List equipment turned on for testing

Comment:

Griddle, 1/4 Fryer

List smoke candle type used

Comment:

45 second smoke emitter.

Smoke test capture - Perimeter of hood

Comment:

100%

Smoke test capture - Top of cooking surface

Comment:

100%

WITNESS

Date test was completed	11/28/2023

Comment:

TAB tech name / Firm

Comment:

Michael McDonnell

Site super name / Firm

Comment:

Unknown

Owner representative name / Firm (if Applicable)

Comment:

Ryan Kaiser / Culvers

Building pressure at front & back doors (All Systems On)

Comment:

0.006"

ADDITIONAL

Do actual net building airflow, design net building airflow, and pressure coincide? If not why? (All three should either be positive or negative)

Comment:

Yes

Thermostats are programmed?	Yes

Comment:

RTU Occupancy interlocked with Hood operation.

National TAB

Project: 11-27-23 CULVERS-DELANO, MN

System/Unit: AHU/RTU

Asset: RTU1 AREA:DINING

Unit Data		
	Design	**Actual**
MFG	LENNOX	CAPTIVE AIRE
Serial Num	-	6059182
Model Num	ENLIGHT LGT	CASRTU-3-I.400-24-20T
Type	RTU	DOAS
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	4
OA Filter Size 1	-	16X25X2
Num Final Filter 1	-	8
Final Filter Size 1	-	20X25X2

Motor Data		
	Design	**Actual**
Motor MFG	-	TECO WESTINGHOUSE
Frame	-	215T
Horsepower	-	10.0
Motor Rpm	-	1755
Phase	3	3
Rated Voltage	208	230
Rated Amperage	-	24.3

Drive Data		
	Design	**Actual**
Motor Sheave Size	-	DD
Motor Bore Size	-	DD
Motor Sheave SetPt	-	56.0 HZ
Fan Sheave Size	-	DD
Fan Sheave Bore	-	DD
Belt CL Distance	-	DD
Num of Belts	-	DD
Belt Size	-	DD
Belt Alignment	-	DD

Test Data		
	Design	**Actual**
SF CFM	6150	5960
SF RPM	-	1638
RA CFM	4275	3952
OA CFM	1875	2008
RL Voltage	-	183 @VFD
RL Amperage	-	23.3 @VFD
SF Rotation	-	CORRECT
Min OA Damper Position	-	4.2V
Min OA Damper Type	-	ECONOMIZER

Performance Data		
	Design	**Actual**
Fan Discharge SP	-	0.789"

General		
	Design	**Actual**
Fan Rotation Correct	-	YES
Unit Filters Clean	-	YES
Condensate Drain Installed	-	YES

Completed By: Michael McDonnell on 11/29/2023

National TAB

Project:11-27-23 CULVERS-DELANO, MN

AHU/RTU

Diffuser Supply (GRD)

RTU1/DINING

Asset									
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
SGRD1	ENTRY	SD3	8"	150	1.0	292	248	141	94.0
SGRD2	DINING	SD1	8"	150	1.0	200	168	156	104.0
SGRD3	DINING	SD1	8"	150	1.0	37	163	138	92.0
SGRD4	DINING	SD1	8"	150	1.0	86	182	135	90.0
SGRD5	DINING	SD1	8"	150	1.0	96	195	146	97.3
SGRD6	DINING	SD1	8"	150	1.0	79	163	156	104.0
SGRD7	DINING	SD1	8"	150	1.0	92	159	149	99.3
SGRD8	DINING	SD1	8"	150	1.0	50	113	161	107.3
SGRD9	DINING	SD1	8"	150	1.0	83	182	153	102.0
SGRD10	DINING	SD1	8"	150	1.0	182	174	160	106.7
SGRD11	DINING	SD1	8"	150	1.0	147	145	158	105.3
SGRD12	DINING	SD1	8"	150	1.0	195	154	138	92.0
SGRD13	DINING	SD1	8"	150	1.0	147	183	156	104.0
SGRD14	DINING	SD1	8"	150	1.0	199	180	152	101.3
SGRD15	DINING	SD1	8"	150	1.0	141	135	142	94.7
SGRD16	DINING	SD1	10"	300	1.0	316	315	314	104.7
SGRD17	DINING	SD1	8"	150	1.0	211	205	136	90.7
SGRD18	DINING	SD1	12"	500	1.0	537	581	490	98.0
SGRD19	DINING	SD1	8"	200	1.0	200	179	195	97.5
SGRD20	DINING	SD1	12"	450	1.0	462	431	420	93.3
SGRD21	DINING	SD1	10"	350	1.0	284	268	324	92.6
SGRD22	DINING	SD1	10"	350	1.0	277	259	322	92.0
SGRD23	DINING	SD1	10'	350	1.0	243	209	329	94.0
SGRD24	DINING	SD1	10"	350	1.0	241	212	326	93.1
SGRD25	DINING	SD1	8"	150	1.0	209	185	143	95.3
SGRD26	DINING	SD1	12"	450	1.0	373	328	422	93.8
SGRD27	DINING	SD4	8"	150	1.0	245	224	144	96.0
SGRD28	DINING	SD4	8"	150	1.0	319	297	154	102.7
Total				6150		5943	6237	5960	96.91%

Completed By: Michael McDonnell on 11/28/2023

National TAB

Project: 11-27-23 CULVERS-DELANO, MN

System/Unit: AHU/RTU

Asset: RTU2 AREA:KITCHEN

Unit Data		
	Design	**Actual**
MFG	LENNOX	CAPTIVE AIRE
Serial Num	-	6059182
Model Num	ENLIGHT LGT	CASRTU3-I.300-24-T
Type	RTU	DOAS
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	4
OA Filter Size 1	-	16X25X2
Num Final Filter 1	-	8
Final Filter Size 1	-	20X25X2

Motor Data		
	Design	**Actual**
Motor MFG	-	TECO WESTINGHOUSE
Frame	-	215T
Horsepower	-	10.0
Motor Rpm	-	1755
Phase	3	3
Rated Voltage	208	230
Rated Amperage	-	24.3

Drive Data		
	Design	**Actual**
Motor Sheave Size	-	DD
Motor Bore Size	-	DD
Motor Sheave SetPt	-	56.0 HZ
Fan Sheave Size	-	DD
Fan Sheave Bore	-	DD
Belt CL Distance	-	DD
Num of Belts	-	DD
Belt Size	-	DD
Belt Alignment	-	DD

Test Data		
	Design	**Actual**
SF CFM	6150	6043
SF RPM	-	1638
RA CFM	4300	4067
OA CFM	1850	1976
RL Voltage	-	180 @ VFD
RL Amperage	-	24.0
SF Rotation	-	CORRECT
Min OA Damper Position	-	4.1V
Min OA Damper Type	-	ECONOMIZER

Performance Data		
	Design	**Actual**
Fan Discharge SP	-	0.817"

General		
	Design	**Actual**
Fan Rotation Correct	-	YES
Unit Filters Clean	-	YES
Condensate Drain Installed	-	YES

Completed By: Michael McDonnell on 11/29/2023

National TAB

Project:11-27-23 CULVERS-DELANO, MN

AHU/RTU

Diffuser Supply (GRD)

RTU2/KITCHEN

Asset									
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
SGRD1	KITCHEN	SD-1	12"	600	1.0	371	442	608	101.3
SGRD2	KITCHEN	SD-1	12"	600	1.0	379	421	564	94.0
SGRD3	KITCHEN	SD-5	8"	200	1.0	120	131	182	91.0
SGRD4	KITCHEN	SD-5	12"	375	1.0	403	451	378	100.8
SGRD5	KITCHEN	SD-5	12"	400	1.0	329	366	419	104.8
SGRD6	KITCHEN	SD-5	12"	400	1.0	351	401	418	104.5
SGRD7	KITCHEN	SD-5	10"	250	1.0	276	324	234	93.6
SGRD8	KITCHEN	SD-5	10"	275	1.0	191	215	278	101.1
SGRD9	KITCHEN	SD-5	8"	125	1.0	215	241	129	103.2
SGRD10	KITCHEN	SD-1	6"	75	1.0	107	104	77	102.7
SGRD11	KITCHEN	SD-5	12"	350	1.0	462	517	341	97.4
SGRD12	KITCHEN	SD-5	12"	350	1.0	350	383	346	98.9
SGRD13	KITCHEN	SD-5	12"	350	1.0	693	754	350	100.0
SGRD14	UTILITY ROOM	SD-1	12"	600	1.0	381	433	557	92.8
SGRD15	DRY GOODS	SD-1	12"	600	1.0	313	346	546	91.0
SGRD16	DRY GOODS	SD-1	12"	600	1.0	590	644	616	102.7
Total				6150		5531	6173	6043	98.26%

Completed By: Michael McDonnell on 11/28/2023

National TAB

Project: 11-27-23 CULVERS-DELANO, MN

System/Unit: FAN - Exhaust

Asset: EFA1 AREA:

Unit Data		
	Design	**Actual**
MFG	ACCUREX	CAPTIVE AIRE
Model Num	XCR-B80	CFA 10CA
Serial Num	-	6059182
Type	CEILING	CEILING
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	BROAN
Frame	-	NL
Horsepower	-	87W
Motor Rpm	-	640
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	1.1

Test Data		
	Design	**Actual**
CFM	75	80
Fan RPM	885	DD
Fan Rotation	-	CORRECT
Motor RPM	-	DD
System SetPt	-	SPEED CONTROLLER MARKED
RL Voltage	-	121
RL Amperage	-	0.6

Completed By: Michael McDonnell on 11/28/2023

Notes:
[1] CONTROLLED BY SPEED CONTROLLER MOUNTED ON WALL TOWARDS DISHWASHER. SETPOINT MARKED ON CONTROLLER.

Written By: Michael McDonnell on 11/28/2023

National TAB

Project: 11-27-23 CULVERS-DELANO, MN

System/Unit: FAN - Exhaust

Asset: PRV1 AREA:RESTROOMS

Unit Data		
	Design	**Actual**
MFG	ACCUREX	CAPTIVE AIRE
Model Num	XRED-095-VG	DR12HFA
Serial Num	-	6059182
Type	DOWNBLAST	DOWNBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	TELCO GREEN
Horsepower	-	0.25
Motor Rpm	-	1800
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	2.9

Test Data		
	Design	**Actual**
CFM	300	292
Fan RPM	-	773
Fan Rotation	-	CCW, CORRECT
Motor RPM	-	773
System SetPt	-	53%
RL Voltage	-	121
RL Amperage	-	2.0
Total ESP	0.5	0.163"
Fan Inlet SP	-	-0.163"
Fan Discharge SP	-	ATM

Completed By: Michael McDonnell on 11/29/2023

National TAB

Project:11-27-23 CULVERS-DELANO, MN

FAN - Exhaust

Diffuser Ret/Exh (GRD)

PRV1/RESTROOMS

Asset									
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
EGRD1	RESTROOM	EG1	8X8	150	1.0	132	104	138	92.0
EGRD2	RESTROOM	EG1	8X8	150	1.0	262	199	154	102.7
Total				300		394	303	292	97.33%

Completed By: Michael McDonnell on 11/28/2023

National TAB

Project: 11-27-23 CULVERS-DELANO, MN

System/Unit: FAN - Exhaust

Asset: PRV2 AREA:

Unit Data		
	Design	**Actual**
MFG	ACCUREX	CAPTIVE AIRE
Model Num	XCUE-140-VG	DU85HFA
Serial Num	-	6059182
Type	UPBLAST	UPBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	TELCO GREEN
Horsepower	-	1.0
Motor Rpm	-	1800
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	11.6

Test Data		
	Design	**Actual**
CFM	1500	1555
Fan RPM	1702	1209
Fan Rotation	-	CCW, CORRECT
Motor RPM	-	1209
System SetPt	-	64%
RL Voltage	-	121.6
RL Amperage	-	3.1
Total ESP	1.8"	0.861"
Fan Inlet SP	-	-0.861"
Fan Discharge SP	-	ATM

Completed By: Michael McDonnell on 11/29/2023

National TAB

Project: 11-27-23 CULVERS-DELANO, MN

System/Unit: FAN - Exhaust

Asset: PRV3 AREA:

Unit Data		
	Design	**Actual**
MFG	ACCUREX	CAPTIVE AIRE
Model Num	XCUE-140-VG	DU85HFA
Serial Num	-	6059182
Type	UPBLAST	UPBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	TELCO GREEN
Horsepower	-	1.0
Motor Rpm	-	1800
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	11.6

Test Data		
	Design	**Actual**
CFM	1500	1604
Fan RPM	-	1100
Fan Rotation	-	CCW, CORRECT
Motor RPM	-	1100
System SetPt	-	59%
RL Voltage	-	121.6
RL Amperage	-	2.4
Total ESP	-	0.645"
Fan Inlet SP	-	-0.645"
Fan Discharge SP	-	ATM

Completed By: Michael McDonnell on 11/29/2023

National TAB

Project: 11-27-23 CULVERS-DELANO, MN

System/Unit: FAN - Exhaust

Asset: PRV4 AREA:HOOD 3

Unit Data		
	Design	**Actual**
MFG	ACCUREX	CAPTIVE AIRE
Model Num	XRED095-VG	DU12HFA
Serial Num	-	6059182
Type	UPBLAST	UPBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	HSSA
Frame	-	42Y
Horsepower	-	1/6
Motor Rpm	-	1400
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	2.4
Service Factor	-	1.0

Test Data		
	Design	**Actual**
CFM	350	362
Fan RPM	1486	DD
Fan Rotation	-	CCW, CORRECT
Motor RPM	-	DD
System SetPt	-	SPEED CONTROLLER MARKED
RL Voltage	-	121
RL Amperage	-	1.8
Total ESP	0.6"	0.342"
Fan Inlet SP	-	-0.342"
Fan Discharge SP	-	ATM

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National TAB

Project: 11-27-23 CULVERS-DELANO, MN

System/Unit: Kitchen Hood Type I

Asset: HD1 AREA:

Unit Data		
	Design	**Actual**
MFG	ACCUREX	CAPTIVE AIRE
Model Num	XGEP-64-S	3347 BD-2
Job / Serial Num	-	6059182
Type	TYPE I	TYPE I CANOPY
Hood length	-	66"
Hood Width	-	33"

Test Data Exhaust		
	Design	**Actual**
Filter Type	-	CAPTRATE SOLO
Filter Size 1	-	16X16
Filter Qty 1	-	4
Filter AK factor size 1	-	1.62
Filter Total AK Area	-	6.48
Filter1 FPM	-	246
Filter2 FPM	-	231
Filter3 FPM	-	246
Filter4 FPM	-	237
Filter Ave FPM(corr)	-	240
CFM	1500	1555

Cooking Equipment		
	Design	**Actual**
Item 1	-	GRIDDLE

Completed By: Michael McDonnell on 11/27/2023

Notes:
[1] SPEED NOT CONTROLLED THROUGH HMI. SPEED CONTROLLER INSTALLED IN FAN HOUSING.

Written By: Michael McDonnell on 11/28/2023

National TAB

Project: 11-27-23 CULVERS-DELANO, MN

System/Unit: Kitchen Hood Type I

Asset: HD2 AREA:

Unit Data		
	Design	**Actual**
MFG	ACCUREX	CAPTIVE AIRE
Model Num	XXEP-83-S	3347 BD-2
Job / Serial Num	-	6059182
Type	TYPE I	TYPE I CANOPY
Hood length	-	84"
Hood Width	-	33"

Test Data Exhaust		
	Design	**Actual**
Filter Type	-	CAPTRATE SOLO
Filter Size 1	-	16X16
Filter Qty 1	-	5
Filter AK factor size 1	-	1.62
Filter Total AK Area	-	8.1
Filter1 FPM	-	198
Filter2 FPM	-	200
Filter3 FPM	-	202
Filter4 FPM	-	194
Filter5 FPM	-	198
Filter Ave FPM(corr)	-	198
CFM	1500	1604

Cooking Equipment		
	Design	**Actual**
Item 1	-	FRYER

Completed By: Michael McDonnell on 11/29/2023

Notes:
[1] SPEED NOT CONTROLLED THROUGH HMI. SPEED CONTROLLER INSTALLED IN FAN HOUSING.

Written By: Michael McDonnell on 11/29/2023

National TAB

Project: 11-27-23 CULVERS-DELANO, MN

System/Unit: Kitchen Hood Type II

Asset: HD3 AREA:

Unit Data		
	Design	**Actual**
MFG	ACCUREX	CAPTIVE AIRE
Model Num	XD3-42-S	4224 VHB
Serial Num	-	6059182
Type	TYPE II	TYPE II
Hood length	42"	42"
Hood Width	42"	42"

Test Data		
	Design	**Actual**
Exhaust CFM	350	362

Completed By: Michael McDonnell on 11/28/2023

Notes:
[1] FAN OPERATED BY SWITCH TO RIGHT OF HOOD

Written By: Michael McDonnell on 11/29/2023