Report By:

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

Report: FINAL REPORT

Function: Test, Adjust, & Balance

Date: 09/21/2023

PROJECT

09-18-23 CULVERS - ANDERSON, SC

2109 HWY 81 NORTH

ANDERSON, SC 29621

Client

Accurex

PO Box 410

Schofield, WI 54476

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.

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Issue List

- GAS STARTUPS
- GREASE CUPS
- MISSING SCREWS FOR EFs
- PRV2 & PRV3 HINGE KITS
- RTU1 DAMPERS

09-18-23 CULVERS - ANDERSON, SC

Project Issue Information

Issue Name :	GAS STARTUPS		
Description :	GAS STARTUPS HAVE NOT BEEN DONE. VALVES ARE CLOSED		
Created By :	National TAB	**Assigned To :**	National TAB - Antonio Flores-De La Cruz
Status :	Open		
Originated Date :	09/20/2023 - Antonio Flores-De La Cruz - National TAB		

09-18-23 CULVERS - ANDERSON, SC

Project Issue Information

Issue Name : GREASE CUPS
Description : GREASE CUPS FOR BOTH HOODS NOT INSTALLED
Created By : National TAB
Assigned To : National TAB - Antonio Flores-De La Cruz
Status : Open
Originated Date : 09/20/2023 - Antonio Flores-De La Cruz - National TAB

Project Issue File Details

GREASECUP
09/20/2023

09-18-23 CULVERS - ANDERSON, SC

Project Issue Information

Issue Name : MISSING SCREWS FOR EFs

Description : ALL EXHAUST FANS ARE NOT SCREWED INTO CURBS

Created By : National TAB

Assigned To : National TAB - Antonio Flores-De La Cruz

Status : Open

Originated Date : 09/20/2023 - Antonio Flores-De La Cruz - National TAB

Project Issue File Details

CURBSCREWS
09/20/2023

09-18-23 CULVERS - ANDERSON, SC

Project Issue Information

Issue Name : PRV2 & PRV3 HINGE KITS

Description : HINGE KITS HAVE NOT BEEN INSTALLED FOR BOTH FANS. BASE BRACKETS ONLY INSTALLED

Created By : National TAB

Assigned To : National TAB - Antonio Flores-De La Cruz

Status : Open

Originated Date : 09/20/2023 - Antonio Flores-De La Cruz - National TAB

Project Issue File Details

HINGEKIT
09/20/2023

09-18-23 CULVERS - ANDERSON, SC

Project Issue Information

Issue Name :	RTU1 DAMPERS		
Description :	WRONG SIZE WING NUTS FOR SGRD-6 and SGRD-10. DOES NOT KEEP DAMPER IN PLACE		
Created By :	National TAB	**Assigned To :**	National TAB - Antonio Flores-De La Cruz
Status :	Open		
Originated Date :	09/20/2023 - Antonio Flores-De La Cruz - National TAB		

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
AC-1		9500	9238	8450	8218	1050	1020	11.1%	11.0%						
AC-2		5600	5401	4025	3838	1575	1563	28.1%	28.9%						
AC-3		5250	5268	3950	3980	1300	1288	24.8%	24.4%						
EF-1	HD1 L+R PRESS COOKER											1913	2002		
EF-2	HD2/HD3 FRYERS											1402	1401		
EF-3	RESTROOM													300	302
TOTALS		20350	19907	16425	16036	3925	3871			0	0	3315	3403	300	302

NET BUILDING AIRFLOW CALCULATION

TOTALS	DESIGN	ACTUAL
TOTAL OA	3925	3871
TOTAL EXHAUST	3615	3705
NET AIRFLOW	310	166

DOOR TESTED	BUILDING PRESSURE MEASUREMENTS (IN. H20)
FRONT	0.007
SIDE	0.005
REAR	0.007
AVERAGE	**0.0063**

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

09-18-23 CULVERS - ANDERSON, SC

CheckList Information

Name :	SITE PICTURES	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	09/14/2023 - Wale Odofin - National TAB		
Completed Date :			

CheckList Item Details

STORE FRONT

Comment:

STOREFRONT
09/20/2023

RTU-1

Comment:

RTU-1
09/20/2023

RTU-2

Comment:

RTU-2(1)
09/20/2023

PRV-1

Comment:

PRV-1
09/20/2023

PRV-2

Comment:

PRV-2
09/20/2023

PRV-3

Comment:

PRV-3
09/20/2023

PRV-4

Comment:

PRV-4
09/20/2023

EF-1A

Comment:

EF-1A
09/20/2023

HOOD 1

Comment:

HOOD-1
09/20/2023

HOOD 2

Comment:

HOOD-2
09/20/2023

HOOD 3

Comment:

HOOD-3
09/20/2023

PRODIGY BOARD WIRING

Comment:

WIRING
09/20/2023

CheckList List

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

09-18-23 CULVERS - ANDERSON, SC

CheckList Information

Name :	TECH - STEP 1: INITIAL WALKTHROUGH	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	09/14/2023 - Wale Odofin - National TAB		
Completed Date :	09/20/2023 - Antonio Flores-De La Cruz - National TAB		

CheckList Item Details

INITIAL SITE WALKTHROUGH

All diffusers and grilles are installed and match design?	Yes
Comment:	
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

Notes/Comments :

N/A

Date :09/20/2023

09-18-23 CULVERS - ANDERSON, SC

CheckList Information

Name :	TECH - STEP 2: UNIT DATA AND EVAL	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	09/14/2023 - Wale Odofin - National TAB		
Completed Date :	09/20/2023 - Antonio Flores-De La Cruz - 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.)	Yes
Comment:	
Motors are all operating below the FLA rating?	Yes
Comment:	
Are belts tight?	
Comment:	
YES	
If direct drive unit is the speed controller working.	

Comment:

N/A

Is gas piping installed and valves turned on?	No

Comment:

INSTALLED BUT OFF

Unit free of noticeable noise and vibration	Yes

Comment:

EF's

Rotation is correct?	Yes

Comment:

Belts are tight?	

Comment:

N/A, DIRECT DRIVE UNITS

Grease cup installed on hood fan?	Yes

Comment:

Hinge kit installed installed on hood fan?	No

Comment:

NOT INSTALLED

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

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:

AFTER TALKING TO MECHANICAL, THEY STATED THAT A ROUND BACKDRAFT DAMPER WAS ORDERED BY THEIR FOREMAN HANK INSTEAD OF THE TYPICAL SQUARE SIZED ONE

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?	No

Comment:

Second stage Grease Grabber filters are installed on the griddle hood?	Yes

Comment:

DOCUMENTATION

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

Comment:

09-18-23 CULVERS - ANDERSON, SC

CheckList Information

Name :	TECH - STEP 3: TEST, ADJUST AND BALANCE	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	09/14/2023 - Wale Odofin - National TAB		
Completed Date :	09/20/2023 - Antonio Flores-De La Cruz - 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:

N/A

Notes/Comments :

N/A

Date :09/20/2023

09-18-23 CULVERS - ANDERSON, SC

CheckList Information

Name :	TECH - STEP 4: FINAL TESTS	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	09/14/2023 - Wale Odofin - National TAB		
Completed Date :	09/20/2023 - Antonio Flores-De La Cruz - National TAB		

CheckList Item Details

FINAL TESTS

HOOD CAPTURE TEST

List equipment turned on for testing

Comment:

N/A

List smoke candle type used

Comment:

75 SMOKE PELLET

Smoke test capture - Perimeter of hood

Comment:

100%

- Open HOOD-2.MOV
09/20/2023
- Open HOOD-1.MOV
09/20/2023

Smoke test capture - Top of cooking surface

Comment:

100%

WITNESS

Date test was completed	09/19/2023

Comment:

TAB tech name / Firm

Comment:

ANTONIO FLORES-DE LA CRUZ

Site super name / Firm

Comment:

JIMMY LEE

Owner representative name / Firm (if Applicable)

Comment:

DAVID

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

Comment:

SIDE: .007 FRONT: .005 BACK: .007

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?

Comment:

PRODIGY SETTINGS FOR RTU'S

Parameter 65 set to 0	Yes

Comment:

Parameter 78 set to 0	Yes
Comment:	
Parameter 105 set to 6	Yes
Comment:	
Parameter 156 set to 70 (Dining unit only)	Yes
Comment:	
Parameter 156 set to 65 (Kitchen Unit Only)	Yes
Comment:	
Parameter 170 set to 75 (Dining Unit Only)	Yes
Comment:	
Parameter 170 set to 70 (Kitchen Unit Only)	Yes
Comment:	
Parameter 131 set to the same % as OA minimum position?	Yes
Comment:	
Parameter 117 set to the same % as OA minimum position?	Yes
Comment:	

Notes/Comments :

N/A

Date :09/20/2023

National TAB

Project: 09-18-23 CULVERS - ANDERSON, SC

System/Unit: AHU/RTU

Asset: RTU1 AREA:

Unit Data		
	Design	**Actual**
MFG	LENNOX	LENNOX
Serial Num	-	5622F04376
Model Num	LGH180H4B	LGH180H4B
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	3
OA Filter Size 1	-	23.25X14.125
Num Final Filter 1	-	6
Final Filter Size 1	-	24X24X2

Motor Data		
	Design	**Actual**
Motor MFG	-	US MOTORS
Frame	-	184TZ
Horsepower	5	5
Motor Rpm	1765	1765
Phase	3	3
Rated Voltage	208	208
Rated Amperage	13.8	13.8

Drive Data		
	Design	**Actual**
Motor Sheave Size	-	1VP65B
Motor Bore Size	-	1.125"
Motor Sheave SetPt	-	2 TO
Fan Sheave Size	-	10.5"
Fan Sheave Bore	-	1.125"
Belt CL Distance	-	21"
Num of Belts	-	1
Belt Size	-	BX65
Belt Alignment	-	CORRECT

Test Data		
	Design	**Actual**
SF CFM	4950	5210
SF RPM	-	805
RA CFM	2850	3202
OA CFM	1950	2008
RL Voltage	-	212/212/211
RL Amperage	-	9.5/9.5/9.4
SF Rotation	-	CCW
RA Damper Position	-	54%
Min OA Damper Position	-	46%
Min OA Damper Type	-	ECONOMIZER
OA Enthalpy Setpt	-	12 mA

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.41"
Fan Suction SP	-	-0.66"
Fan Discharge SP	-	0.81"
Total ESP	0.3"	1.22"
Fan Total SP	-	1.47"

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

Completed By: Antonio Flores-De La Cruz on 09/20/2023

National TAB

Project:09-18-23 CULVERS - ANDERSON, SC

AHU/RTU

Diffuser Supply (GRD)

RTU1/

Asset									
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
SGRD1	ENTRY	CD13	8"	150	1	161	131	154	102.7
SGRD2	DINING	CD16	12"	400	1	436	356	416	104.0
SGRD3	DINING	CD10	8"	150	1	199	162	153	102.0
SGRD4	DINING	CD10	8"	150	1	201	163	158	105.3
SGRD5	DINING	CD10	8"	150	1	200	253	161	107.3
SGRD6	DINING	CD10	8"	150	1	109	89	161	107.3
SGRD7	DINING	CD10	8"	150	1	220	180	160	106.7
SGRD8	DINING	CD10	8"	150	1	219	179	158	105.3
SGRD9	DINING	CD10	8"	150	1	164	134	160	106.7
SGRD10	DINING	CD10	8"	150	1	81	65	158	105.3
SGRD11	DINING	CD10	8"	150	1	249	203	159	106.0
SGRD12	DINING	CD10	8"	150	1	202	164	161	107.3
SGRD13	DINING	CD10	8"	150	1	235	191	160	106.7
SGRD14	DINING	CD10	8"	150	1	244	199	157	104.7
SGRD15	DINING	CD18	10"	300	1	351	287	312	104.0
SGRD16	DINING	CD10	8"	150	1	273	223	159	106.0
SGRD17	DINING	CD10	8"	150	1	167	136	161	107.3
SGRD18	DINING	CD11	8"	200	1	196	160	216	108.0
SGRD19	DINING	CD12	8"	200	1	202	164	211	105.5
SGRD20	DINING	CD16	12"	400	1	486	398	430	107.5
SGRD21	DINING	WD10	8"	150	1	269	219	157	104.7
SGRD22	DINING	WD10	8"	150	1	202	165	154	102.7
SGRD23	DINING	WD10	8"	150	1	151	123	155	103.3
SGRD24	DINING	WD10	8"	150	1	201	163	157	104.7
SGRD25	DINING	CD10	8"	150	1	210	171	156	104.0
SGRD26	DINING	CD15	8"	110	1	119	97	114	103.6
SGRD27	DINING	CD15	8"	115	1	168	136	119	103.5
SGRD28	DINING	CD14	6"	75	1	74	60	77	102.7
SGRD29	DINING	CD10	8"	150	1	113	113	156	104.0
Total				4950		6102	5084	5210	105.25%

National TAB

Project: 09-18-23 CULVERS - ANDERSON, SC

System/Unit: AHU/RTU

Asset: RTU2 AREA:

Unit Data		
	Design	**Actual**
MFG	LENNOX	LENNOX
Serial Num	-	5622D05798
Model Num	LGH210H4B	LGH210H4B
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	3
OA Filter Size 1	-	23.125X14.25
Num Final Filter 1	-	6
Final Filter Size 1	-	24X24X2

Motor Data		
	Design	**Actual**
Motor MFG	-	US MOTORS
Frame	-	184TZ
Horsepower	5	5
Motor Rpm	1765	1765
Phase	3	3
Rated Voltage	208	208
Rated Amperage	13.80	13.80

Drive Data		
	Design	**Actual**
Motor Sheave Size	-	1VP65B
Motor Bore Size	-	1.25
Motor Sheave SetPt	-	3 TO
Fan Sheave Size	-	10.5"
Fan Sheave Bore	-	1.125"
Belt CL Distance	-	21
Num of Belts	-	1
Belt Size	-	BX65
Belt Alignment	-	CORRECT

Test Data		
	Design	**Actual**
SF CFM	5600	5693
SF RPM	-	909
RA CFM	3650	3730
OA CFM	1950	1963
RL Voltage	-	212/212/211
RL Amperage	-	10/9.6/9.5
SF Rotation	-	CCW
RA Damper Position	-	52%
Min OA Damper Position	-	48%
Min OA Damper Type	-	ECONOMIZER
OA Enthalpy Setpt	-	12 mA

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.56"
Fan Suction SP	-	-0.78"
Fan Discharge SP	-	1.11"
Total ESP	0.3"	1.67"
Fan Total SP	-	1.89"

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

Completed By: Antonio Flores-De La Cruz on 09/20/2023

National TAB

Project:09-18-23 CULVERS - ANDERSON, SC

AHU/RTU

Diffuser Supply (GRD)

RTU2/

Asset									
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
SGRD1	SUNDAE ASSMB.	CD22	12"	550	1	501	501	568	103.3
SGRD2	KITCHEN	CD23	10"	200	1	411	349	207	103.5
SGRD3	KITCHEN	CD24	12"	375	1	604	513	386	102.9
SGRD4	KITCHEN	CD24	12"	400	1	619	526	415	103.8
SGRD5	KITCHEN	CD24	12"	400	1	730	620	414	103.5
SGRD6	KITCHEN	CD26	12"	250	1	486	413	253	101.2
SGRD7	KITCHEN	CD27	10"	275	1	400	340	285	103.6
SGRD8	KITCHEN	CD28	10"	150	1	323	274	154	102.7
SGRD9	KITCHEN	CD21	12"	400	1	579	492	424	106.0
SGRD10	KITCHEN	CD21	12"	400	1	473	402	397	99.3
SGRD11	KITCHEN	CD21	12"	400	1	629	534	414	103.5
SGRD12	KITCHEN	CD29	12"	600	1	573	573	592	98.7
SGRD13	DRY GOOS	WD20	12"	600	1	464	464	595	99.2
SGRD14	DRY GOODS	WD20	12"	600	1	360	360	589	98.2
Total				5600		7152	6361	5693	101.66%

Completed By: Antonio Flores-De La Cruz on 09/20/2023

National TAB

Project: 09-18-23 CULVERS - ANDERSON, SC

System/Unit: FAN - Exhaust

Asset: EFA1 AREA:

Unit Data		
	Design	**Actual**
MFG	ACCUREX	ACCUREX
Model Num	XCR-B80	XCR-B80
Serial Num	-	22268217
Type	CEILING	CEILING
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	GREENHECK
Frame	-	NL
Horsepower	-	NL
Motor Rpm	900	900
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	0.16
Service Factor	-	1

Test Data		
	Design	**Actual**
CFM	75	74
Fan RPM	885	DD
Fan Rotation	-	CW
Motor RPM	-	DD
System SetPt	-	ON DIAL
RL Voltage	-	NA
RL Amperage	-	NA
Total ESP	0.125"	0.08"
Fan Inlet SP	-	-0.08"
Fan Discharge SP	-	ATM

Completed By: Antonio Flores-De La Cruz on 09/19/2023

National TAB

Project: 09-18-23 CULVERS - ANDERSON, SC

System/Unit: FAN - Exhaust

Asset: PRV1 AREA:

Unit Data		
	Design	**Actual**
MFG	ACCUREX	ACCUREX
Model Num	XRED-095-D	XRED-095-D
Serial Num	-	22270548
Type	DOWNBLAST	DOWNBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	VARIGREEN
Frame	-	NL
Horsepower	0.1	0.1
Motor Rpm	1750	1750
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	1.38
Service Factor	-	1

Test Data		
	Design	**Actual**
CFM	375	358
Fan RPM	1479	DD
Fan Rotation	-	CCW
Motor RPM	-	DD
System SetPt	-	7 ON DIAL
RL Voltage	-	NA
RL Amperage	-	NA
Total ESP	0.5"	-0.15"
Fan Inlet SP	-	-0.15"
Fan Discharge SP	-	ATM

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National TAB

Project:09-18-23 CULVERS - ANDERSON, SC

FAN - Exhaust

Diffuser Ret/Exh (GRD)

PRV1/

Asset									
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
EGRD1	RESTROOM	EG2	8"	150	1	221	180	140	93.3
EGRD2	RESTROOM	EG2	8"	150	1	223	183	144	96.0
EGRD3	RESTROOM	EG1	6"	75	1	114	92	74	98.7
Total				375		558	455	358	95.47%

National TAB

Project: 09-18-23 CULVERS - ANDERSON, SC

System/Unit: FAN - Exhaust

Asset: PRV2 AREA:

Unit Data		
	Design	**Actual**
MFG	ACCUREX	ACCUREX
Model Num	XRUB-160XP-15	XCUE-140-10-VG-1-26-G
Serial Num	-	22268721
Type	UPBLAST	UPBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	VARIGREEN
Frame	-	NL
Horsepower	1	1
Motor Rpm	1750	1750
Phase	3	3
Voltage (rated)	208	208
Amperage (rated)	-	7
Service Factor	-	1

Drive Data		
	Design	**Actual**
Motor Sheave Size	-	DD

Test Data		
	Design	**Actual**
CFM	1500	1542
Fan RPM	2411	DD
Fan Rotation	-	CCW
Motor RPM	-	DD
RL Voltage	-	209/208/209
RL Amperage	-	5.6/5.5/5.6
Suction ESP	-	-2.01"
Discharge ESP	-	ATM
Total ESP	2.337"	2.01"

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National TAB

Project: 09-18-23 CULVERS - ANDERSON, SC

System/Unit: FAN - Exhaust

Asset: PRV3 AREA:

Unit Data		
	Design	**Actual**
MFG	ACCUREX	ACCUREX
Model Num	XRUB-140-7	XCUE-140-10-VG-1-26-G
Serial Num	-	22268733
Type	DOWNBLAST	UPBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	VARIGREEN
Frame	-	NL
Horsepower	1	1
Motor Rpm	1750	1750
Phase	3	3
Voltage (rated)	208	208
Amperage (rated)	-	7
Service Factor	-	1

Drive Data		
	Design	**Actual**
Motor Sheave Size	-	DD
Fan Sheave Size	-	

Test Data		
	Design	**Actual**
CFM	1500	1491
Fan RPM	1377	DD
Fan Rotation	-	CCW
Motor RPM	-	DD
RL Voltage	-	209/208/209
RL Amperage	-	5.1/5.0/5.1
Suction ESP	-	-0.74"
Discharge ESP	-	ATM
Total ESP	1.0"	0.74"

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National TAB

Project: 09-18-23 CULVERS - ANDERSON, SC

System/Unit: FAN - Exhaust

Asset: PRV4 AREA:

Unit Data		
	Design	**Actual**
MFG	ACCUREX	ACCUREX
Model Num	XRED-095-D	XRED-095-D
Serial Num	-	22270549
Type	DOWNBLAST	DOWNBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	VARIGREEN
Frame	-	NL
Horsepower	0.1	0.1
Motor Rpm	1750	1750
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	1.38
Service Factor	-	1

Test Data		
	Design	**Actual**
CFM	350	346
Fan RPM	1455	DD
Fan Rotation	-	CCW
Motor RPM	-	DD
System SetPt	-	5.5 ON DIAL
RL Voltage	-	NA
RL Amperage	-	NA
Total ESP	0.5"	0.18"
Fan Inlet SP	-	-0.18"
Fan Discharge SP	-	ATM

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National TAB

Project: 09-18-23 CULVERS - ANDERSON, SC

System/Unit: Kitchen Hood Type I

Asset: HD1 AREA:

Unit Data		
	Design	**Actual**
MFG	ACCUREX	ACCUREX
Model Num	XXEP-83-S	XXEP-83-S
Job / Serial Num	-	22300187
Type	TYPE I	TYPE I
Hood length	83"	83"
Hood Width	23"	23"

Test Data Exhaust		
	Design	**Actual**
Filter Type	X-TRACTOR	X-TRACTOR
Filter Size 1	16X16	16X16
Filter Qty 1	5	5
Filter AK factor size 1	1.53	1.53
Filter Total AK Area	7.65	7.65
Filter1 FPM	-	196
Filter2 FPM	-	175
Filter3 FPM	-	194
Filter4 FPM	-	184
Filter5 FPM	-	225
Filter Ave FPM(corr)	-	195
CFM	1500	1491

Cooking Equipment		
	Design	**Actual**
Item 1	-	FRYER
Item 2	-	FRYER

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National TAB

Project: 09-18-23 CULVERS - ANDERSON, SC

System/Unit: Kitchen Hood Type I

Asset: HD2 AREA:

Unit Data		
	Design	**Actual**
MFG	ACCUREX	ACCUREX
Model Num	XGEP-64-S	XGEP-64-S
Job / Serial Num	-	22300188
Type	TYPE I	TYPE 1
Hood length	64"	64"
Hood Width	23'	23"

Test Data Exhaust		
	Design	**Actual**
Filter Type	GREASE GRABBER	GREASE GRABBER
Filter Size 1	16X16	16X16
Filter Qty 1	4	4
Filter AK factor size 1	1.53	1.53
Filter Total AK Area	6.12	6.12
Filter1 FPM	-	236
Filter2 FPM	-	268
Filter3 FPM	-	247
Filter4 FPM	-	257
Filter Ave FPM(corr)	-	252
CFM	1500	1542

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

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National TAB

Project: 09-18-23 CULVERS - ANDERSON, SC

System/Unit: Kitchen Hood Type II

Asset: HD3 AREA:

Unit Data		
	Design	**Actual**
MFG	ACCUREX	ACCUREX
Model Num	XD3-42-S	XD3-42-S
Serial Num	-	22300189
Type	TYPE II	TYPE II
Hood length	42	42"
Hood Width	42	42"

Test Data		
	Design	**Actual**
Exhaust CFM	350	346

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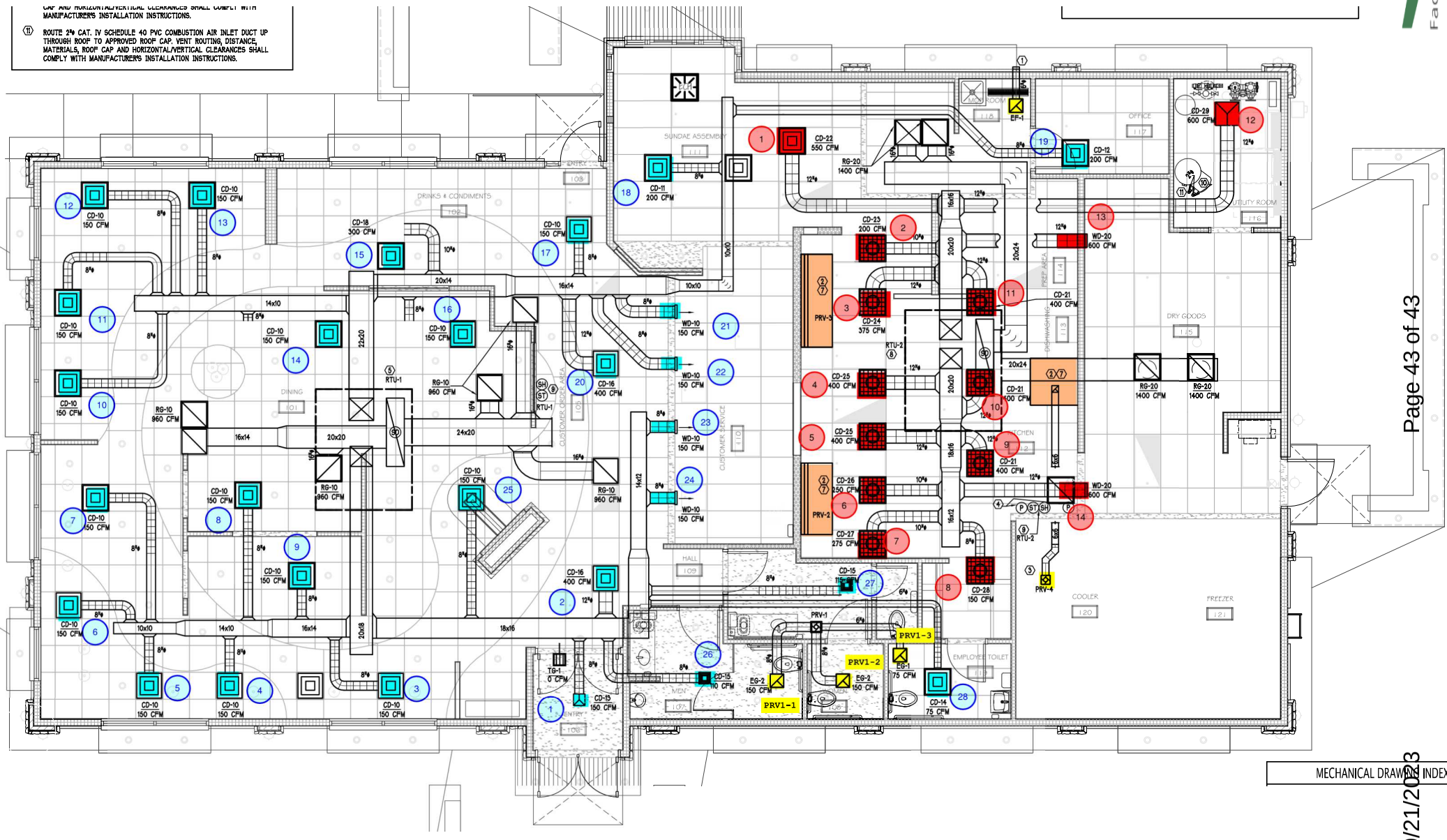
CAP AND HORIZONTAL/VERTICAL CLEARANCES SHALL COMPLY WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS.

(11) ROUTE 2" CAT. IV SCHEDULE 40 PVC COMBUSTION AIR INLET DUCT UP THROUGH ROOF TO APPROVED ROOF CAP. VENT ROUTING, DISTANCE, MATERIALS, ROOF CAP AND HORIZONTAL/VERTICAL CLEARANCES SHALL COMPLY WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS.



MECHANICAL DRAWING INDEX

Date: 9/21/2023