

Report By:

National TAB
1329 E. KEMPER ROAD
SUITE 4210
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Report: TAB REPORT
Function: Test, Adjust, & Balance
Date: 04/13/2023

PROJECT
04-10-23 CULVERS - WASHINGTON, MI

66233 VAN DYKE

WASHINGTON, MI 48095

Client

Accurex
PO Box 410
Schofield, WI 54476

National TAB

Project: 04-10-23 CULVERS - WASHINGTON, MI

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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

- Dampers for Diffusers 1-3 RTU-1 Inaccessible
- Diffuser 8 Missing Damper
- Inconsistent Air Flow RTU-1 Due to Duct Layout



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Project Issue Information

Issue Name : Dampers for Diffusers 1-3 RTU-1 Inaccessible
Description : Unable to balance diffusers 1-3 on RTU-1 due to dampers being located above hard ceiling, not to design according to MSET.
Created By : National TAB **Assigned To :** National TAB - Will Turnbough
Status : Open
Originated Date : 04/13/2023 - Jordan Best - National TAB



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Project Issue Information

Issue Name : Diffuser 8 Missing Damper
Description : Diffuser #8 on RTU-2 is missing a damper. Used cardboard to temporarily damper it so that balancing of other diffusers could be completed. Recommend installing damper
Created By : National TAB **Assigned To :** National TAB - Will Turnbough
Status : Open
Originated Date : 04/13/2023 - Jordan Best - National TAB



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Project Issue Information

Issue Name : Inconsistent Air Flow RTU-1 Due to Duct Layout
Description : Duct work on RTU-1 varies from plans in several different locations and excessive flex is used in places. Unable to balance all diffusers within design without being a detriment to overall unit performance.
Created By : National TAB **Assigned To :** National TAB - Will Turnbough
Status : Open
Originated Date : 04/13/2023 - Jordan Best - 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	6264	4250	4290	1900	1974	30.9%	46.0%						
RTU-2	KITCHEN	6150	5963	4250	4107	1900	1856	30.9%	48.0%						
PRV-2	HOOD 1											1500	1559		
PRV-3	HOOD 2											1500	1652		
PRV-4/EF1A	HOOD 3											350	317		
PRV-1	RESTROOM													300	282
EF-1	MOP ROOM													75	73
TOTALS		12300	12227	8500	8397	3800	3830			0	0	3350	3528	375	355

NET BUILDING AIRFLOW CALCULATION

TOTALS	DESIGN	ACTUAL
TOTAL OA	3800	3830
TOTAL EXHAUST	3725	3883
NET AIRFLOW	75	-53

DOOR TESTED	BUILDING PRESSURE MEASUREMENTS (IN. H2O)
FRONT	0.014
SIDE	-0.001
REAR	0.014
AVERAGE	0.009

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



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CheckList Information

Name : SITE PICTURES **Status :** Completed

Assigned Organization : National TAB **Asset :**

Requesting Organization : National TAB

Created Date : 04/11/2023 - Wale Odofin - National TAB

Completed Date :

CheckList Item Details

STORE FRONT

Comment:



StoreFront
04/12/2023

RTU-1

Comment:



RTU-1
04/12/2023

RTU-2

Comment:



RTU-2
04/12/2023

PRV-1

Comment:



PRV-1
04/12/2023

PRV-2

Comment:



PRV-2
04/12/2023

PRV-3

Comment:



PRV-3
04/12/2023

PRV-4

Comment:



PRV-4
04/12/2023

EF-1A

Comment:



EF-1
04/13/2023

HOOD 1

Comment:



HOOD-1
04/12/2023

HOOD 2

Comment:



HOOD-2
04/12/2023

HOOD 3

Comment:



HOOD-3
04/12/2023

PRODIGY BOARD WIRING

Comment:



RTU-1BoardWiring
04/12/2023



RTU-2BoardWiring
04/12/2023

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



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CheckList Information

Name : TECH - STEP 1: INITIAL WALKTHROUGH **Status :** Completed

Assigned Organization : National TAB **Asset :**

Requesting Organization : National TAB

Created Date : 04/11/2023 - Wale Odofin - National TAB

Completed Date :

CheckList Item Details

INITIAL SITE WALKTHROUGH

All diffusers and grilles are installed and match design?

Comment:

YES

Perforated diffusers are installed on the cook line? (4-ways will disrupt hood capture)

Comment:

YES

All hood filters installed and accounted for?

Comment:

YES

Hoods are wired and have power?

Comment:

YES

Thermostats have power?

Comment:

YES

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

Comment:

YES



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CheckList Information

Name : TECH - STEP 2: UNIT DATA AND EVAL **Status :** Completed

Assigned Organization : National TAB **Asset :**

Requesting Organization : National TAB

Created Date : 04/11/2023 - Wale Odofin - National TAB

Completed Date :

CheckList Item Details

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

RTU's/AHU's

Economizers are assembled and functional?

Comment:

YES

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.)

Comment:

YES

Motors are all operating below the FLA rating?

Comment:

YES

Are belts tight?

Comment:

YES

If direct drive unit is the speed controller working.

Comment:

NA

Is gas piping installed and valves turned on?

Comment:

YES

Unit free of noticeable noise and vibration

Comment:

YES

EF's

Rotation is correct?

Comment:

YES

Belts are tight?

Comment:

YES

Grease cup installed on hood fan?

Comment:

YES

Hinge kit installed installed on hood fan?

Comment:

YES

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

Comment:

YES

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

Comment:

YES

There is no major leakage around base of fan?

Comment:

NO

Is the motor operating below the motor FLA rating?

Comment:

YES

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

Comment:

YES

Unit free of noticeable noise and vibration?

Comment:

YES

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

Comment:

YES

HOODS

Kitchen equipment installed in proper places?

Comment:

YES

Can kitchen equipment be turned on for final smoke test?

Comment:

YES

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

Comment:

YES

DOCUMENTATION

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

Comment:

YES



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CheckList Information

Name : TECH - STEP 3: TEST, ADJUST AND BALANCE **Status :** Completed

Assigned Organization : National TAB **Asset :**

Requesting Organization : National TAB

Created Date : 04/11/2023 - Wale Odofin - National TAB

Completed Date :

CheckList Item Details

TEST, ADJUST, AND BALANCE ALL EQUIPMENT:

DURING TESTING MAKE NOTE OF THE FOLLOWING:

Is space free of drafting?

Comment:

YES

Is space comfortable in all areas?

Comment:

YES

Is the space free of ventilation noise?

Comment:

YES

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

Comment:

NA



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CheckList Information

Name : TECH - STEP 4: FINAL TESTS **Status :** Completed

Assigned Organization : National TAB **Asset :**

Requesting Organization : National TAB

Created Date : 04/11/2023 - Wale Odofin - National TAB

Completed Date :

CheckList Item Details

FINAL TESTS

HOOD CAPTURE TEST

List equipment turned on for testing

Comment:

GRIDDLE

List smoke candle type used

Comment:

S102

Smoke test capture - Perimeter of hood

Comment:

YES

- [Open](#) SmokecaptureHD1.MOV
04/13/2023

Smoke test capture - Top of cooking surface

Comment:

YES, VIDEOS UPLOADED TO OTHER CATEGORY

WITNESS

Date test was completed

Comment:

TAB tech name / Firm

Comment:

Jordan Best / NTAB

Site super name / Firm

Comment:

Mike/Wolverine Building

Owner representative name / Firm (if Applicable)

Comment:

NA/NA

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

Comment:

0.014 /.0019

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:

YES

PRODIGY SETTINGS FOR RTU'S

Parameter 65 set to 0

Comment:

YES

Parameter 78 set to 0

Comment:

YES

Parameter 105 set to 6

Comment:

YES

Parameter 156 set to 70 (Dining unit only)

Comment:

YES

Parameter 156 set to 65 (Kitchen Unit Only)

Comment:

YES

Parameter 170 set to 75 (Dining Unit Only)

Comment:

YES

Parameter 170 set to 70 (Kitchen Unit Only)

Comment:

YES

Parameter 131 set to the same % as OA minimum position?

Comment:

YES

Parameter 117 set to the same % as OA minimum position?

Comment:

YES

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Project: 04-10-23 CULVERS - WASHINGTON, MI

System/Unit: AHU/RTU



Comfort. Under control.

Asset: RTU1

AREA:

Unit Data		
	Design	Actual
MFG	LENNOX	LENNOX
Serial Num	-	5622F06872
Model Num	13H15	LGH180H4BS4Y
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	3
OA Filter Size 1	-	24"X16"
Num Final Filter 1	-	6
Final Filter Size 1	-	24"X24"2"

Motor Data		
	Design	Actual
Motor MFG	-	INTERLINK
Frame	-	184TZ
Horsepower	-	5
Motor Rpm	-	1765
Phase	3	3
Rated Voltage	208	208-230
Rated Amperage	-	15.8-14.6

Drive Data		
	Design	Actual
Motor Sheave Size	-	4"
Motor Sheave SetPt	-	5 TURNS OUT
Fan Sheave Size	-	7"
Belt CL Distance	-	21"
Num of Belts	-	1
Belt Size	-	BX55
Belt Alignment	-	GOOD

Test Data		
	Design	Actual
SF CFM	6150	6264
SF RPM	-	734
RA CFM	4250	4329
OA CFM	1900	1974
RL Voltage	-	214.9/216.9/212.7
RL Amperage	-	6.85/7.27/7.88
SF Rotation	-	CCW
RA Damper Position	-	54%
Min OA Damper Position	-	46%
Min OA Damper Type	-	ECON
OA Enthalpy Setpt	-	12

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.45"
Fan Suction SP	-	-0.72"
Fan Discharge SP	-	0.87"
Total ESP	-	1.32"
Fan Total SP	-	1.59"

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

Completed By: Jordan Best on 04/13/2023

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Project:04-10-23 CULVERS - WASHINGTON, MI

AHU/RTU



Comfort. Under control.

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	282	174	172	114.7
SGRD2	REST.RM	CD15	8"	150	1	220	207	193	128.7
SGRD3	REST.RM	CD15	8"	150	1	250	229	217	144.7
SGRD4	DINING	CD10	8"	150	1	221	245	188	125.3
SGRD5	DINING	CD10	8"	150	1	132	133	162	108.0
SGRD6	DINING	CD10	8"	150	1	235	200	189	126.0
SGRD7	DINING	CD10	8"	150	1	266	278	206	137.3
SGRD8	DINING	CD10	8"	150	1	266	211	179	119.3
SGRD9	DINING	CD10	8"	150	1	278	191	184	122.7
SGRD10	DINING	CD10	8"	150	1	242	241	227	151.3
SGRD11	DINING	CD10	8"	150	1	262	222	150	100.0
SGRD12	DINING	CD10	8"	150	1	312	258	232	154.7
SGRD13	DINING	CD10	8"	150	1	245	208	185	123.3
SGRD14	DINING	CD10	8"	150	1	215	192	177	118.0
SGRD15	DINING	CD18	10"	300	1	154	133	318	106.0
SGRD16	DINING	CD10	8"	150	1	182	154	134	89.3
SGRD17	DINING	CD10	12"	450	1	459	407	454	100.9
SGRD18	DINING	CD10	8"	150	1	303	262	198	132.0
SGRD19	DINING	CD10	8"	150	1	262	229	201	134.0
SGRD20	DINING	CD16	12"	450	1	475	419	387	86.0
SGRD21	C. SERVICE	CD17	10"	350	1	352	307	299	85.4
SGRD22	C. SERVICE	CD17	10"	350	1	373	303	313	89.4
SGRD23	C. SERVICE	CD17	10"	350	1	379	333	343	98.0
SGRD24	C. SERVICE	CD17	10"	350	1	356	282	304	86.9
SGRD25	DRIVE THRU	CD11	10"	500	1	370	313	464	92.8
SGRD26	OFFICE	CD12	12"	200	1	207	172	188	94.0
Total				5850		7298	6303	6264	107.08%

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Project: 04-10-23 CULVERS - WASHINGTON, MI

System/Unit: AHU/RTU



Comfort. Under control.

Asset: RTU2

AREA:

Unit Data		
	Design	Actual
MFG	LENNOX	LENNOX
Serial Num	-	5622F07240
Model Num	13H15	LGH210H4BS3Y
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	3
OA Filter Size 1	-	24"X16"
Num Final Filter 1	-	6
Final Filter Size 1	-	24"X24"X2

Motor Data		
	Design	Actual
Motor MFG	-	NIDEC MOTOR CORP
Frame	-	184TZ
Horsepower	-	5
Motor Rpm	-	1765
Phase	3	3
Rated Voltage	208	208-230
Rated Amperage	-	15.8-14.6

Drive Data		
	Design	Actual
Motor Sheave Size	-	5"
Motor Sheave SetPt	-	6 TURNS OUT
Fan Sheave Size	-	9.5"
Fan Sheave Bore	-	1"
Belt CL Distance	-	21"
Num of Belts	-	1
Belt Size	-	BX61
Belt Alignment	-	GOOD

Test Data		
	Design	Actual
SF CFM	6150	5963
SF RPM	-	687.8
RA CFM	4250	4107
OA CFM	1900	1856
RL Voltage	-	212.6/214.9/217.1
RL Amperage	-	7.22/7.33/8.63
SF Rotation	-	CCW
RA Damper Position	-	52%
Min OA Damper Position	-	48%
Min OA Damper Type	-	ECON
OA Enthalpy Setpt	-	12

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.36"
Fan Suction SP	-	-0.58"
Fan Discharge SP	-	0.67"
Total ESP	-	1.03"
Fan Total SP	-	1.25"

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

Completed By: Jordan Best on 04/13/2023

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Project:04-10-23 CULVERS - WASHINGTON, MI

AHU/RTU



Comfort. Under control.

Diffuser Supply (GRD)

RTU2/

Asset									
Asset Name	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
SGRD1	KITCHEN	CD	10"	200	1	363	290	204	102.0
SGRD2	KITCHEN	CD	12"	375	1	316	192	379	101.1
SGRD3	KITCHEN	CD	12"	400	1	736	505	438	109.5
SGRD4	KITCHEN	CD	12"	400	1	780	584	441	110.3
SGRD5	KITCHEN	CD	10"	250	1	313	257	243	97.2
SGRD6	KITCHEN	CD	10"	275	1	297	272	277	100.7
SGRD7	SUNDAE	CD	10"	600	1	421	350	552	92.0
SGRD8	KITCHEN	CD	10"	600	1	555	318	482	80.3
SGRD9	KITCHEN	CD	12"	350	1	370	531	412	117.7
SGRD10	KITCHEN	CD	12"	350	1	646	535	349	99.7
SGRD11	DISHWASHING	CD	12"	350	1	587	585	348	99.4
SGRD12	DRY GOODS	CD	12"	600	1	555	420	608	101.3
SGRD13	DRY GOODS	CD	8"	200	1	548	179	204	102.0
SGRD14	TOILET	CD	8"	75	1	257	169	70	93.3
SGRD15	UTILITY ROOM	CD	12"	600	1	181	321	451	75.2
SGRD16	UTILITY ROOM	CD	12"	600	1	422	428	511	85.2
Total				6225		7347	5936	5969	95.89%

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Project: 04-10-23 CULVERS - WASHINGTON, MI

System/Unit: FAN - Exhaust



Comfort. Under control.

Asset: EF1

AREA:

Unit Data		
	Design	Actual
MFG	ACCUREX	ACCUREX
Model Num	XCR-B80	XCR-B80
Serial Num	-	22002135
Type	CEILING	CEILING
Configuration	VERTICAL	VERTICAL

Test Data		
	Design	Actual
CFM	75	73
Fan Rotation	-	CCW
System SetPt	-	5
RL Voltage	-	NA
RL Amperage	-	0.13
Fan Discharge SP	-	ATM

Motor Data		
	Design	Actual
Motor MFG	-	GREENHECK
Frame	-	60HZ
Horsepower	-	NA
Motor Rpm	900	900
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	0.16
Service Factor	-	NA

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Project: 04-10-23 CULVERS - WASHINGTON, MI

System/Unit: FAN - Exhaust



Comfort. Under control.

Asset: PRV1

AREA:RESTROOMS

Unit Data		
	Design	Actual
MFG	ACCUREX	ACCUREX
Model Num	XRED-095-D	XRED-090
Serial Num	-	21051685
Type	UPBLAST	UPBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	Actual
Motor MFG	-	VARI GREEN
Frame	-	50/60HZ
Horsepower	0.0667	0.0667"
Motor Rpm	1550	1750
Phase	1	1
Voltage (rated)	115	115-208
Amperage (rated)	-	2.1
Service Factor	-	NA

Test Data		
	Design	Actual
CFM	300	282
Fan RPM	1479	881
Fan Rotation	-	CW
Motor RPM	-	881
RL Voltage	-	120.6
RL Amperage	-	0.33
Suction ESP	-	-0.13"
Discharge ESP	-	ATM
Total ESP	0.5"	-0.13"

Completed By: Jordan Best on 04/12/2023

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Project:04-10-23 CULVERS - WASHINGTON, MI

FAN - Exhaust



Comfort. Under control.

Diffuser Ret/Exh (GRD)

PRV1/RESTROOMS

Asset									
Asset Name	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
EGRD1	MENS RESTROOM	EG-2	8"	150	1	301	197	147	98.0
EGRD2	WO. RESTROOM	EG-2	8"	150	1	259	185	135	90.0
Total				300		560	382	282	94%

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Project: 04-10-23 CULVERS - WASHINGTON, MI

System/Unit: FAN - Exhaust



Comfort. Under control.

Asset: PRV2

AREA:HOOD 1

Unit Data		
	Design	Actual
MFG	ACCUREX	ACCUREX
Model Num	XCUE-140-VG	XCUE-140-VG
Serial Num	-	21051710
Type	UPBLAST	UPBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	Actual
Motor MFG	-	VERI GREEN
Frame	-	50/60HZ
Horsepower	0.83	1
Motor Rpm	1725	1750
Phase	1	1
Voltage (rated)	115	115-208
Amperage (rated)	-	11.5
Service Factor	-	NA

Test Data		
	Design	Actual
CFM	1500	1559
Fan RPM	1702	1157
Fan Rotation	-	CW
Motor RPM	-	1157
System SetPt	-	6.5 VDC
RL Voltage	-	123.8
RL Amperage	-	3.84
Total ESP	1.8"	0.67"
Fan Inlet SP	-	0.67"
Fan Discharge SP	-	ATM

Completed By: Jordan Best on 04/12/2023

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Project: 04-10-23 CULVERS - WASHINGTON, MI

System/Unit: FAN - Exhaust



Comfort. Under control.

Asset: PRV3

AREA:HOOD 2

Unit Data		
	Design	Actual
MFG	ACCUREX	ACCUREX
Model Num	XCUE-140-VG	XCUE-140-VG
Serial Num	-	21051717
Type	UPBLAST	UPBLAST
Configuration	VERTICAL	VEFRITICAL

Motor Data		
	Design	Actual
Motor MFG	-	VARI GREEN
Frame	-	50/60HZ
Horsepower	0.46	1
Motor Rpm	1725	1750
Phase	1	1
Voltage (rated)	115	115-208
Amperage (rated)	-	11.5
Service Factor	-	NA

Test Data		
	Design	Actual
CFM	1500	1652
Fan RPM	1349	864
Fan Rotation	-	CW
Motor RPM	-	864
System SetPt	-	5 VDC
RL Voltage	-	123.8
RL Amperage	-	1.98
Total ESP	1.0"	0.30"
Fan Inlet SP	-	0.30"
Fan Discharge SP	-	ATM

Notes:
FAN SPEED SET TO MINIMUM SPEED

Written By: on

National TAB

Project: 04-10-23 CULVERS - WASHINGTON, MI

System/Unit: FAN - Exhaust



Comfort. Under control.

Asset: PRV4

AREA:DISH HOOD

Unit Data		
	Design	Actual
MFG	ACCUREX	ACCUREX
Model Num	XRED-095-D	XRED-095
Serial Num	-	21051720
Type	DOWNBLAST	DOWNBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	Actual
Motor MFG	-	VARI GREEN
Frame	-	50/60HZ
Horsepower	0.0667"	0.0667"
Motor Rpm	1550	1750
Phase	1	1
Voltage (rated)	115	115-208
Amperage (rated)	-	2.1
Service Factor	-	NA

Test Data		
	Design	Actual
CFM	350	317
Fan Rotation	-	CW
System SetPt	-	4.5
RL Voltage	-	122.9
RL Amperage	-	0.38
Total ESP	0.6"	0.15"
Fan Inlet SP	-	0.15"
Fan Discharge SP	-	ATM

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Project: 04-10-23 CULVERS - WASHINGTON, MI
System/Unit: Kitchen Hood Type I



Asset: HD1

AREA:

Unit Data		
	Design	Actual
MFG	ACCUREX	ACCUREX
Model Num	XGEP-5.33S	XGEP-64.00-S
Job / Serial Num	-	21102299
Type	TYPE I	I
Hood length	64	64"
Hood Width	23	26"

Test Data Exhaust		
	Design	Actual
Filter Type	GREASE GRABBER	X-TRACTOR
Filter Size 1	16X16	16"X16"
Filter Qty 1	4	4
Filter AK factor size 1	1.53	1.53
Filter Total AK Area	6.12	6.12
Filter1 FPM	-	258
Filter2 FPM	-	255
Filter3 FPM	-	247
Filter4 FPM	-	259
Filter Ave FPM(corr)	-	254
CFM	1500	1559

Cooking Equipment		
	Design	Actual
Item 1	-	GRIDDLE

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Project: 04-10-23 CULVERS - WASHINGTON, MI

System/Unit: Kitchen Hood Type I



Comfort. Under control.

Asset: HD2

AREA:

Unit Data		
	Design	Actual
MFG	ACCUREX	ACCUREX
Model Num	XXEP-FB-6.92-S	XXEP-FB-6.92-S
Job / Serial Num	-	21102294
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	16"X16"
Filter Qty 1	5	5
Filter AK factor size 1	1.53	1.53
Filter Total AK Area	7.65	7.65
Filter1 FPM	-	224
Filter2 FPM	-	221
Filter3 FPM	-	211
Filter4 FPM	-	205
Filter5 FPM	-	219
Filter Ave FPM(corr)	-	216
CFM	1500	1652

Cooking Equipment		
	Design	Actual
Item 1	-	FRYER

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National TAB

Project: 04-10-23 CULVERS - WASHINGTON, MI

System/Unit: Kitchen Hood Type II



Comfort. Under control.

Asset: HD3

AREA:

Unit Data		
	Design	Actual
MFG	ACCUREX	ACCUREX
Model Num	XD3-3.5.S	XD3-42-.S
Serial Num	-	21102303
Type	TYPE II	TYPEII
Hood length	42	42"
Hood Width	42	42"

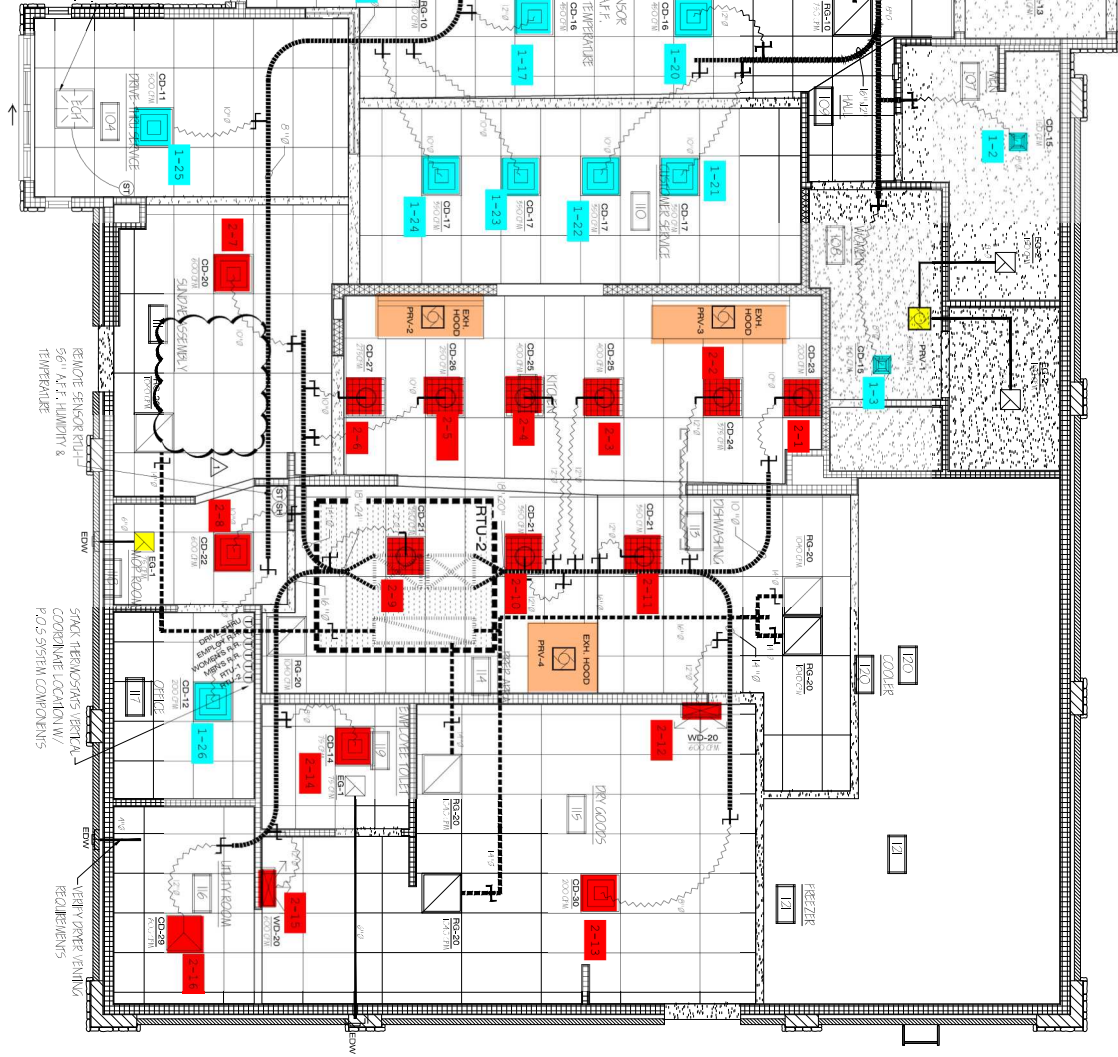
Test Data		
	Design	Actual
Exhaust CFM	350	317

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Area #	Area	Required OA (CM/SEC FT)	# of People (P)	Required OA (CM/Person)	Air Distribution Efficiency (E)	Ventilation System Eff. (V)	Required Outside Air (VAV)	Design Outside Air	COMMENTS
CDM-101	1048	0.18	104	1.75	0.8	0.9	968.64	970	1
CDM-102	135	0.06	2	5	0.8	0.9	19.3	20	1
CDM-103	45	0.06	0	0	0.8	0.9	2.7	5	1

ASHRAE STANDARD 62.1 VENTILATION REQUIREMENT SCHEDULE

FOR SUPPLY & INSTALL BY ELEC. CONTR. SEE SHEET M-2 FOR SPECS.



REMOVE SENSOR RTU-1 56" A.F.F. HANGING & TEMPERATURE

SNACK REFRIGERATOR VERTICAL COMPARTMENT LOCATIONS/ P.O.S SYSTEM COMPONENTS

VEHICLE ORDER REVIEW REQUIREMENTS