Report By:

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

NATIONAL TAB

Comfort. Under control.

Report: TAB RPT
Function: Test, Adjust, & Balance
Date: 7/15/2022

PROJECT

05-16 CULVERS - LOWELL, MI

WEST MAIN ST

LOWELL, MI 49331

Client

Accurex

PO Box 410

Schofield, WI 54476

National TAB

Project: 05-16 CULVERS - LOWELL, 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 recorded at +0.011" W.C. average. This pressure falls within the recommended tolerances by the International Mechanical Code of +0.02" W.C. to -0.02" W.C. The building is designed for a net positive pressure and this measurement coincides with that requirement.
The hood capture was tested at the perimeter of the hood and the cook top level with the equipment heat "off" and 100% capture was observed. Cooking equipment was not able to be turned on while the technician was on site.

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	6203	4250	4252	1900	1951	30.9%	31.5%						
RTU-2	KITCHEN	6150	6197	4250	4209	1900	1988	30.9%	32.1%						
PRV-1	RESTROOM													375	346
PRV-2	HD1 GRILL											1500	1567		
PRV-3	HD2 FRY											1500	1583		
EF-1	HD3 DISH											350	341		
EF-1A	MOP ROOM													75	71
TOTALS		12300	12400	8500	8461	3800	3939			0	0	3350	3491	450	417

NET BUILDING AIRFLOW CALCULATION

TOTALS	DESIGN	ACTUAL
TOTAL OA	3800	3939
TOTAL EXHAUST	3800	3908
NET AIRFLOW	0	31

DOOR TESTED	BUILDING PRESSURE MEASUREMENTS (IN. H20)
FRONT	0.016
SIDE	
REAR	0.008
AVERAGE	**0.012**

FINAL CHECKS

ACTUAL NET AIRFLOW COINCIDES WITH DESIGN: ✓

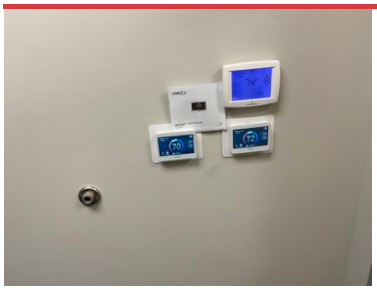
MEASURED PRESSURES COINCIDES WITH ACTUAL NET AIRFLOW: ✓

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

NOTES:

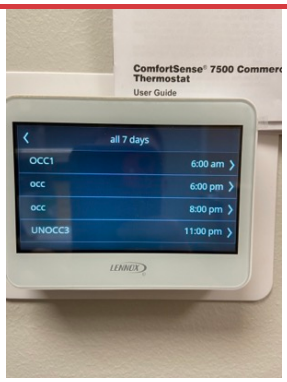
STORE FRONT

ROOF LAYOUT



STAT LOCATIONS

KITCHEN RTU



KITCHEN SCHEDULE

KITCHEN OCCUPIED

KITCHEN UNOCCUPIED

DINING RTU

DINING SCHEDULE

DINING OCCUPIED

DINING UNOCCUPIED

GRIDDLE FAN

FRYER FAN

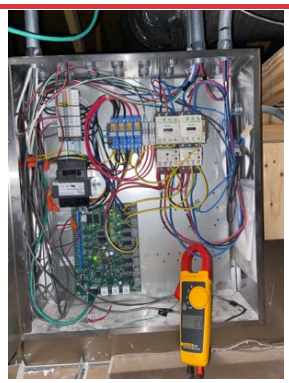
DISH FAN

RESTROOM FAN

GRIDDLE HOOD

FRYER HOOD

DISH HOOD



CONTROL PANEL

05-16 CULVERS - LOWELL, MI

CheckList Information

Name :	TECH - STEP 1: INITIAL WALKTHROUGH	**Status :**	Submitted
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		

CheckList Item Details

INITIAL SITE WALKTHROUGH

All diffusers and grilles are installed and match design?	Yes
Perforated diffusers are installed on the cook line? (4-ways will disrupt hood capture)	Yes
All hood filters installed and accounted for?	Yes
Hoods are wired and have power?	Yes
Thermostats have power?	Yes
Have trades/general contractor been notified about any issues and are they created on FaciliBuild?	TRADES HAVE BEEN NOTIFIED
On the cookline diffusers neck is there 18" (12" minimum) straight rigid duct run attached?	YES

Notes/Comments :

05-16 CULVERS - LOWELL, MI

CheckList Information

Name :	TECH - STEP 2: UNIT DATA AND EVAL	**Status :**	Submitted
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	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
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
Motors are all operating below the FLA rating?	Yes
Are belts tight?	BELTS ARE TIGHT
If direct drive unit is the speed controller working.	
Is gas piping installed and valves turned on?	Yes
Unit free of noticeable noise and vibration	Yes
EF's	
Rotation is correct?	Yes
Belts are tight?	BELTS ARE TIGHT
Grease cup installed on hood fan?	Yes
Hinge kit installed installed on hood fan?	No
Lean grease rated fans back. Is grease duct installation adequate and is duct ran all the way to the base of the fan?	No
Flex conduit is long enough so that fan can be completely tilted back?	No
There is no major leakage around base of fan?	Yes
Is the motor operating below the motor FLA rating?	Yes

For restroom fan(s) is the back draft damper installed and can it fully open?	Yes
Unit free of noticeable noise and vibration?	Yes
The hood exhaust fans are installed in correct positions and are not switched?	Yes
HOODS	
Kitchen equipment installed in proper places?	Yes
Can kitchen equipment be turned on for final smoke test?	Yes
Second stage Grease Grabber filters are installed on the griddle hood?	Yes
DOCUMENTATION	
Have trades/general contractor been notified about any issues and are they created on FaciliBuild?	Yes

Notes/Comments :

05-16 CULVERS - LOWELL, MI

CheckList Information

Name :	TECH - STEP 3: TEST, ADJUST AND BALANCE	**Status :**	Submitted
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		

CheckList Item Details

TEST, ADJUST, AND BALANCE ALL EQUIPMENT:

DURING TESTING MAKE NOTE OF THE FOLLOWING:

Is space free of drafting?	Yes
Is space comfortable in all areas?	Yes
Is the space free of ventilation noise?	Yes
If deviations from design were necessary to resolve 1-3 what were they? Otherwise put "NA".	NA

Notes/Comments :

05-16 CULVERS - LOWELL, MI

CheckList Information

Name :	TECH - STEP 4: FINAL TESTS	**Status :**	Submitted
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		

CheckList Item Details

FINAL TESTS	
HOOD CAPTURE TEST	
List equipment turned on for testing	ALL
List smoke candle type used	45 SEC SMOKE EMITTER
Smoke test capture - Perimeter of hood	100%
Smoke test capture - Top of cooking surface	100%
WITNESS	
Date test was completed	05/17/2022
TAB tech name / Firm	AUSTIN MCFALL/NATIONAL TAB
Site super name / Firm	NA/NA
Owner representative name / Firm (if Applicable)	NA/NA
Building pressure at front & back doors (All Systems On)	FRONT:0.016://BACK:0.007"
ADDITIONAL	
Do actual net building airflow, design net building airflow, and pressure coincide? If not why? (All three should either be positive or negative)	
Thermostats are programmed?	Yes
PRODIGY SETTINGS FOR RTU'S	
Parameter 65 set to 0	Yes
Parameter 78 set to 0	
Parameter 105 set to 6	Yes
Parameter 156 set to 70 (Dining unit only)	Yes

Parameter 156 set to 65 (Kitchen Unit Only)	Yes
Parameter 170 set to 75 (Dining Unit Only)	Yes
Parameter 170 set to 70 (Kitchen Unit Only)	Yes
Parameter 131 set to the same % as OA minimum position?	Yes
Parameter 117 set to the same % as OA minimum position?	Yes

Notes/Comments :

National TAB

Project: 05-16 CULVERS - LOWELL, MI

System/Unit: AHU/RTU

Asset: RTU1 AREA:DINING

Unit Data		
	Design	**Actual**
MFG	LENNOX	LENNOX
Serial Num	-	5622C02462
Model Num	NA	LGH180H4
Type	-	RTU
Configuration	-	VERTICAL
Num OA Filters 1	-	3
OA Filter Size 1	-	12.75X23.25
Num Final Filter 1	-	6
Final Filter Size 1	-	24X24X2

Motor Data		
	Design	**Actual**
Motor MFG	-	INTERLINK
Frame	-	56HZ
Horsepower	-	3.0
Motor Rpm	-	1750
Phase	3	3
Rated Voltage	208	208
Rated Amperage	-	8.0

Drive Data		
	Design	**Actual**
Motor Sheave Size	-	VL40
Motor Bore Size	-	1”
Motor Sheave SetPt	-	MINIMUM
Fan Sheave Size	-	BK42
Fan Sheave Bore	-	1.375”
Belt CL Distance	-	21”
Num of Belts	-	1
Belt Size	-	BX55
Belt Alignment	-	GOOD

Test Data		
	Design	**Actual**
SF CFM	6150	6203
SF RPM	-	753
RA CFM	4250	4252
OA CFM	1900	1951
RL Voltage	-	208/209/209
RL Amperage	-	6.7/6.7/6.7
SF Rotation	-	CW
RA Damper Position	-	75%
Min OA Damper Position	-	25%
Min OA Damper Type	-	ECON
OA Enthalpy Setpt	-	NA
Brake Horse Power	-	2.51

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.54”
Fan Suction SP	-	-0.76”
Fan Discharge SP	-	0.26”
Total ESP	-	1.02”
Fan Total SP	-	0.80”

General		
	Design	**Actual**
Fan Rotation Correct	-	CORRECT
Unit Filters Clean	-	CLEAN
Condensate Drain Installed	-	INSTALLED

Completed By: Austin McFall

Notes:

National TAB

Project:05-16 CULVERS - LOWELL, MI

AHU/RTU

Diffuser Supply (GRD)

RTU1/DINING

Asset							
SGRD1	**Location**	**Type**	**DESIGN CFM**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
	CD13	CD13	150	79		141	94.0
SGRD2	**Location**	**Type**	**DESIGN CFM**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
	CD15	CD15	150	221		163	108.7
SGRD3	**Location**	**Type**	**DESIGN CFM**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
	CD15	CD15	150	185		141	94.0
SGRD4	**Location**	**Type**	**DESIGN CFM**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
	CD16	CD16	450	407		415	92.2
SGRD5	**Location**	**Type**	**DESIGN CFM**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
	CD10	CD10	150	191		159	106.0
SGRD6	**Location**	**Type**	**DESIGN CFM**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
	CD10	CD10	150	188		161	107.3
SGRD7	**Location**	**Type**	**DESIGN CFM**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
	CD10	CD10	150	166		159	106.0
SGRD8	**Location**	**Type**	**DESIGN CFM**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
	CD10	CD10	150	209		160.	106.7
SGRD9	**Location**	**Type**	**DESIGN CFM**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
	CD10	CD10	150	52		159	106.0
SGRD10	**Location**	**Type**	**DESIGN CFM**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
	CD10	CD10	150	162		163	108.7
SGRD11	**Location**	**Type**	**DESIGN CFM**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
	CD10	CD10	150	183		159	106.0
SGRD12	**Location**	**Type**	**DESIGN CFM**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
	CD10	CD10	150	148		155	103.3
SGRD13	**Location**	**Type**	**DESIGN CFM**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
	CD10	CD10	150	180		162	108.0
SGRD14	**Location**	**Type**	**DESIGN CFM**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
	CD10	CD10	150	179		158	105.3
SGRD15	**Location**	**Type**	**DESIGN CFM**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
	CD10	CD10	150	164		157	104.7
SGRD16	**Location**	**Type**	**DESIGN CFM**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
	CD10	CD10	150	207		159	106.0
SGRD17	**Location**	**Type**	**DESIGN CFM**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
	CD10	CD10	150	228		163	108.7
SGRD18	**Location**	**Type**	**DESIGN CFM**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
	CD10	CD10	150	167		155	103.3
SGRD19	**Location**	**Type**	**DESIGN CFM**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
	CD10	CD10	150	218		163	108.7
SGRD20	**Location**	**Type**	**DESIGN CFM**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
	CD18	CD18	300	293		288	96.0
SGRD21	**Location**	**Type**	**DESIGN CFM**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
	CD10	CD10	150	208		159	106.0
SGRD22	**Location**	**Type**	**DESIGN CFM**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
	CD16	CD16	450	414		477	106.0

SGRD23	**Location**	**Type**	**DESIGN CFM**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
	WD10	WD10	350	284		333	95.1
SGRD24	**Location**	**Type**	**DESIGN CFM**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
	WD10	WD10	350	277		336	96.0
SGRD25	**Location**	**Type**	**DESIGN CFM**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
	WD10	WD10	350	220		319	91.1
SGRD26	**Location**	**Type**	**DESIGN CFM**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
	WD10	WD10	350	255		317	90.6
SGRD27	**Location**	**Type**	**DESIGN CFM**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
	CD11	CD11	500	346		455	91.0
SGRD28	**Location**	**Type**	**DESIGN CFM**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
	CD12	CD12	200	169		190	95.0
SGRD29	**Location**	**Type**	**DESIGN CFM**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
	CD14	CD14	75	199		77	102.7

Completed By:Brianna Biggs on

Asset	Notes

National TAB

Project: 05-16 CULVERS - LOWELL, MI

System/Unit: AHU/RTU

Asset: RTU2 AREA:KITCHEN

Unit Data		
	Design	**Actual**
MFG	LENNOX	LENNOX
Serial Num	-	5622D00934
Model Num	NA	LGH210H
Type	-	RTU
Configuration	-	VERTICAL
Num OA Filters 1	-	3
OA Filter Size 1	-	12.75X23.25
Num Final Filter 1	-	6
Final Filter Size 1	-	24X24X2

Motor Data		
	Design	**Actual**
Motor MFG	-	INTERLINK
Frame	-	56HZ
Horsepower	-	3.0
Motor Rpm	-	1750
Phase	3	3
Rated Voltage	208	208
Rated Amperage	-	8.0

Drive Data		
	Design	**Actual**
Motor Sheave Size	-	VM50
Motor Bore Size	-	0.875”
Motor Sheave SetPt	-	4 TURNS OPEN
Fan Sheave Size	-	BK72
Fan Sheave Bore	-	1.5”
Belt CL Distance	-	20.875”
Num of Belts	-	1
Belt Size	-	BX55
Belt Alignment	-	GOOD

Test Data		
	Design	**Actual**
SF CFM	6150	6197
SF RPM	-	816
RA CFM	4250	4209
OA CFM	1900	1988
RL Voltage	-	210/209/209
RL Amperage	-	7.3/7.3/7.3
SF Rotation	-	CW
RA Damper Position	-	70%
Min OA Damper Position	-	30%
Min OA Damper Type	-	ECON
OA Enthalpy Setpt	-	NA
Brake Horse Power	-	2.73

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.90
Fan Suction SP	-	-1.04”
Fan Discharge SP	-	0.24”
Total ESP	-	1.14”
Fan Total SP	-	1.28”

General		
	Design	**Actual**
Fan Rotation Correct	-	CORRECT
Unit Filters Clean	-	CLEAN
Condensate Drain Installed	-	INSTALLED

Completed By: Austin McFall

Notes:RESOLVED - DIFFUSERS 1-1 & 1-2 CANNOT BALANCE WITHIN DESIGN. DUCTWORK WAS MODIFIED WHERE THEY HAD TO CONNECT A FLEX IN ORDER TO GET PAST THE WOODEN TRUSSES AND THEN BACK TO HARD DUCT. DAMPERS ARE 100% OPEN

National TAB

Project:05-16 CULVERS - LOWELL, MI

AHU/RTU

Diffuser Supply (GRD)

RTU2/KITCHEN

Asset							
SGRD1	**Location**	**Type**	**DESIGN CFM**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
	SUNDAE SERVICE	CD20	600	347	456	555	92.5
SGRD2	**Location**	**Type**	**DESIGN CFM**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
	SUNDAE SERVICE	CD22	600	221	276	551	91.8
SGRD3	**Location**	**Type**	**DESIGN CFM**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
	COOKLINE	CD23	200	293	418	218	109.0
SGRD4	**Location**	**Type**	**DESIGN CFM**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
	COOKLINE	CD24	375	548	451	410	109.3
SGRD5	**Location**	**Type**	**DESIGN CFM**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
	FOOD PREP	CD25	400	462	450	437	109.3
SGRD6	**Location**	**Type**	**DESIGN CFM**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
	FOOD PREP	CD25	400	474	436	436	109.0
SGRD7	**Location**	**Type**	**DESIGN CFM**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
	COOKLINE	CD26	250	372	295	271	108.4
SGRD8	**Location**	**Type**	**DESIGN CFM**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
	COOKLINE	CD27	275	405	336	301	109.5
SGRD9	**Location**	**Type**	**DESIGN CFM**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
	HALLWAY	CD28	125	273	118	135	108.0
SGRD10	**Location**	**Type**	**DESIGN CFM**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
	DISHWASHING	CD21	350	518	415	381	108.9
SGRD11	**Location**	**Type**	**DESIGN CFM**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
	DISHWASHING	CD21	350	525		373	106.6
SGRD12	**Location**	**Type**	**DESIGN CFM**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
	FOOD PREP	CD21	350	602	382	382	109.1
SGRD13	**Location**	**Type**	**DESIGN CFM**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
	UTILITY ROOM	CD29	600	289	596	596	99.3
SGRD14	**Location**	**Type**	**DESIGN CFM**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
	DRY GOODS	WD20	600	464	553	553	92.2
SGRD15	**Location**	**Type**	**DESIGN CFM**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
	DRY GOODS	WD20	600	489	598	598	99.7

Completed By:Brianna Biggs on

Asset	Notes

National TAB

Project: 05-16 CULVERS - LOWELL, MI

System/Unit: FAN - Exhaust

Asset: EF1 AREA:HD3 DISH

Unit Data		
	Design	**Actual**
MFG	ACCUREX	ACCUREX
Model Num	XRED-095-D	XRED-095-D
Serial Num	-	19528777
Type	DOWNBLAST	DOWNBLAST
Configuration	HORIZONTAL	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	VARIGREEN
Frame	-	NL
Horsepower	0.0667	0.167
Motor Rpm	1550	350-1750
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	2.3
Service Factor	-	1.0

Test Data		
	Design	**Actual**
CFM	350	341
Fan RPM	1455	DD
Fan Rotation	-	CCW
Motor RPM	-	DD
System SetPt	-	7.0
RL Voltage	-	116
RL Amperage	-	1.88
Total ESP	0.5"	0.25”
Fan Inlet SP	-	-0.25”
Fan Discharge SP	-	ATM

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Notes:

Asset	Notes

National TAB

Project: 05-16 CULVERS - LOWELL, MI

System/Unit: FAN - Exhaust

Asset: EF-A1 AREA:

Unit Data		
	Design	**Actual**
MFG	ACCUREX	ACCUREX
Model Num	XCR-B80	XCR-B80
Serial Num	-	19527682
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	-	1.0

Test Data		
	Design	**Actual**
CFM	75	71
Fan RPM	885	900
Fan Rotation	-	CCW
Motor RPM	-	900
System SetPt	-	N/A
RL Voltage	-	116
RL Amperage	-	0.11
Total ESP	0.125"	NR
Fan Inlet SP	-	NR
Fan Discharge SP	-	NR

Completed By: Austin McFall

Notes:

Asset	Notes

National TAB

Project: 05-16 CULVERS - LOWELL, MI

System/Unit: FAN - Exhaust

Asset: PRV1 AREA:RESTROOM

Unit Data		
	Design	**Actual**
MFG	ACCUREX	ACCUREX
Model Num	XRED-095-D	XRED-095-D
Serial Num	-	19528776
Type	DOWNBLAST	DOWNBLAST
Configuration	HORIZONTAL	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	VARIGREEN
Frame	-	NL
Horsepower	0.0667	0.20
Motor Rpm	1550	300-1750
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	1.38
Service Factor	-	1.0

Test Data		
	Design	**Actual**
CFM	375	346
Fan RPM	1479	1364
Fan Rotation	-	CCW
Motor RPM	-	1364
System SetPt	-	7.0
RL Voltage	-	116
RL Amperage	-	1.0
Total ESP	0.5"	0.33”
Fan Inlet SP	-	-0.33”
Fan Discharge SP	-	ATM

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Notes:[1] FAN IS RUNNING AT MAX SPEED. BACK DRAFT DAMPER IS COMPLETELY OPEN. FACE DAMPERS INSTALLED ARE FULLY OPEN.

National TAB

Project:05-16 CULVERS - LOWELL, MI

FAN - Exhaust

Diffuser Ret/Exh (GRD)

PRV1/RESTROOM

Asset							
EGRD1	**Location**	**Type**	**DESIGN CFM**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
	EG2	8"	150	95		136	90.7
EGRD2	**Location**	**Type**	**DESIGN CFM**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
	EG2	8"	150	77		141	94.0
EGRD3	**Location**	**Type**	**DESIGN CFM**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
	EG1	8"	75	24		69	92.0

Completed By:Brianna Biggs on

Asset	Notes

National TAB

Project: 05-16 CULVERS - LOWELL, MI

System/Unit: FAN - Exhaust

Asset: PRV2 AREA:HD1 GRILL

Unit Data		
	Design	**Actual**
MFG	ACCUREX	ACCUREX
Model Num	XRUB-160XP-15	XRUB-160XP-15
Serial Num	-	19528778
Type	UPBLAST	UPBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	WEG
Frame	-	56HZ
Horsepower	0.75	1.5
Motor Rpm	1725	1760
Phase	3	3
Voltage (rated)	208	208
Amperage (rated)	-	4.20
Service Factor	-	1.0

Drive Data		
	Design	**Actual**
Motor Sheave Size	-	VP44
Motor Bore Size	-	0.625”
Motor Sheave SetPt	-	3 TURNS OPEN
Fan Sheave Size	-	2.75”
Fan Sheave Bore	-	0.875”
Belt CL Distance	-	6”
Num of Belts	-	1
Belt Size	-	AX24

Test Data		
	Design	**Actual**
CFM	1500	1567
Fan RPM	1377	2234
Fan Rotation	-	CCW
Motor RPM	-	1725
RL Voltage	-	209/209/208
RL Amperage	-	3.5/3.3/3.2
Suction ESP	-	-1.21”
Discharge ESP	-	ATM
Total ESP	1.0"	1.21”

Completed By: Brianna Biggs

Notes:

Asset	Notes

National TAB

Project: 05-16 CULVERS - LOWELL, MI

System/Unit: FAN - Exhaust

Asset: PRV3 AREA:HD2 FRY

Unit Data		
	Design	**Actual**
MFG	ACCUREX	ACCUREX
Model Num	XRUB-140-7	XRUB-140-7
Serial Num	-	19528779
Type	UPBLAST	UPBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	WEG
Frame	-	56
Horsepower	0.75	0.75
Motor Rpm	1725	1725
Phase	3	3
Voltage (rated)	208	208
Amperage (rated)	-	2.30
Service Factor	-	1.0

Drive Data		
	Design	**Actual**
Motor Sheave Size	-	VP34
Motor Bore Size	-	0.625”
Motor Sheave SetPt	-	MINIMUM
Fan Sheave Size	-	AK41
Fan Sheave Bore	-	0.75”
Belt CL Distance	-	5.25”
Num of Belts	-	1
Belt Size	-	3621

Test Data		
	Design	**Actual**
CFM	1500	1583
Fan RPM	1377	1015
Fan Rotation	-	CCW
Motor RPM	-	1725
RL Voltage	-	209/209/208
RL Amperage	-	1.6/1.6/1.6
Suction ESP	-	-0.56”
Discharge ESP	-	ATM
Total ESP	1.0"	0.56”

Completed By: Austin McFall

Notes:

Asset	Notes

National TAB

Project: 05-16 CULVERS - LOWELL, MI

System/Unit: Kitchen Hood Type I

Asset: HD1 AREA:GRILL

Unit Data		
	Design	**Actual**
MFG	ACCUREX	ACCUREX
Model Num	XGEP-64-S	XGEP-64-S
Job / Serial Num	-	19568686
Type	-	TYPE I CANOPY
Hood length	-	64”
Hood Width	-	23”

Test Data Exhaust		
	Design	**Actual**
Filter Type	-	X-TRACTOR
Filter Size 1	-	16X16
Filter Qty 1	-	4
Filter AK factor size 1	-	1.53
Filter Total AK Area	-	6.12
Filter1 FPM	-	280
Filter2 FPM	-	256
Filter3 FPM	-	233
Filter4 FPM	-	253
Filter Ave FPM(corr)	-	256
CFM	-	1567

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

Performance Data		
	Design	**Actual**
Smoke Generation Type	-	45 SEC SMOKE EMITTER
Hood Capture %	-	YES
End Panels Installed (Y/N)	-	YES

General		
	Design	**Actual**
Third Party Witness	-	VIDEO TAPED
Third Party Company	-	VIDEO TAPED
Tech Witness	-	AUSTIN MCFALL

Completed By: Austin McFall

Notes:

Asset	Notes

National TAB

Project: 05-16 CULVERS - LOWELL, MI

System/Unit: Kitchen Hood Type I

Asset: HD2 AREA:FRYER

Unit Data		
	Design	**Actual**
MFG	ACCUREX	ACCUREX
Model Num	XXEP-83-S	XXEP-83-S
Job / Serial Num	-	1956878
Type	-	TYPE I
Hood length	-	83”
Hood Width	-	23”

Test Data Exhaust		
	Design	**Actual**
Filter Type	-	XTRACTOR
Filter Size 1	-	16X16
Filter Qty 1	-	5
Filter AK factor size 1	-	1.53
Filter Total AK Area	-	7.65
Filter1 FPM	-	218
Filter2 FPM	-	198
Filter3 FPM	-	195
Filter4 FPM	-	199
Filter5 FPM	-	225
Filter Ave FPM(corr)	-	207
CFM	-	1583

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

Performance Data		
	Design	**Actual**
Smoke Generation Type	-	45 SEC SMOKE EMITTER
Hood Capture %	-	100%
End Panels Installed (Y/N)	-	YES

General		
	Design	**Actual**
Third Party Witness	-	VIDEO TAPED
Third Party Company	-	VIDEO TAPED
Tech Witness	-	AUSTIN MCFALL

Completed By: Austin McFall

Notes:

Asset	Notes

National TAB

Project: 05-16 CULVERS - LOWELL, MI

System/Unit: Kitchen Hood Type II

Asset: HD3 AREA:DISH

Unit Data		
	Design	**Actual**
MFG	ACCUREX	ACCUREX
Model Num	XD3-42-S	XD3-42-S
Serial Num	-	19568686
Type	TYPE II CCANOPY	TYPE II
Hood length	42"	42”
Hood Width	42"	42”

Test Data		
	Design	**Actual**
Exhaust CFM	350	341

Completed By: Austin McFall

Notes:

Asset	Notes