Report By:

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

Report: TAB Report

Function: Test, Adjust, & Balance

Date: 01/09/2026

Completed By: National TAB

PROJECT

02-23-26 QT #1042 GASTONIA, NC

2305 N CHESTER STR

GASTONIA, NC

Client

QUIKTRIP

4705 SOUTH 129TH EAST AVENUE

TULSA, OK 74134

National TAB

Project: 02-23-26 QT #1042 GASTONIA, NC

Table Of Contents

Project Summary

Project Summary
The summary below provides a quick understanding of our scope of work and general testing procedures. Enclosed in the report are further details 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 was measured with a flow hood to establish total flow. The total flow was then adjusted via the VFD so that airflow fell within design tolerances. All diffusers on the kitchen RTU were balanced to the engineer's design flow. The diffusers on the sales floor were only adjusted when there were noticeable issues present like drafting or dampers that were found completely closed. The Hoods On outside air rate was set by first establishing the typical QT set point at the Emerson controller and then making manually adjustments on the roof. The hoods off airflow setpoint was found by adjusting the damper position at the Emerson controller until the design airflow was achieved. Outside air was measured by reading the intake air opening with a velocity grid and multiplying by the free area. After completion of TAB all overrides were released.

Kitchen Exhaust Hood & Associated Fans
The 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.

Restroom Exhaust Fans
The restroom exhaust fans were measured with a flow hood. The total flow was balanced for the fan with the exception of the new grille over the combi-oven, which was balanced to the listed design.

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 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

- EF-2 Low on Exhaust Airflow
- RTU-3: Dampers inaccessible or Not Installed
- RTU-3: Specified diffusers not installed

02-23-26 QT #1042 GASTONIA, NC

Project Issue Information

Issue Name : EF-2 Low on Exhaust Airflow

Description : EF-2 restroom/ combo-oven grille has low flow. Motor set at max on the speed dial. Currently at 42% of design. In order to bring the combi-oven exhaust into design, a larger fan will likely need to be installed.

Created By :	National TAB	**Assigned To :**	National TAB - Dan Hertenstein
Status :	Open		
Priority :	Medium	**Asset Tag :**	EF2
Originated Date :	02/26/2026 - Jearod Ferrette - National TAB		

Project Issue File Details

02/26/2026

02-23-26 QT #1042 GASTONIA, NC

Project Issue Information

Issue Name : RTU-3: Dampers inaccessible or Not Installed

Description : Diffuser 3-6 damper is inaccessible. Diffuser 3-5 does not have a damper installed. Both diffusers are higher on airflow and need to be dampened to bring other diffusers into design.

Created By :	National TAB	**Assigned To :**	National TAB - Dan Hertenstein
Status :	Open		
Priority :	Medium	**Asset Tag :**	SGRD6
Originated Date :	02/26/2026 - Jearod Ferrette - National TAB		

Project Issue File Details

02/26/2026

02/26/2026

02-23-26 QT #1042 GASTONIA, NC

Project Issue Information

Issue Name : RTU-3: Specified diffusers not installed

Description : SGRD 3-1 to 3-4 diffusers are not design style per plans / Diffuser schedule.

Created By :	National TAB	**Assigned To :**	National TAB - Dan Hertenstein
Status :	Open		
Priority :	Medium	**Asset Tag :**	RT-3
Originated Date :	02/26/2026 - Jearod Ferrette - National TAB		

Project Issue File Details

02/26/2026

NATIONAL TAB

AIR BALANCE SCHEDULE

UNIT	AREA SERVED	HOOD ON OA		HOOD OFF OA		HOOD ON EXHAUST		HOOD OFF EXHAUST	
		DESIGN	ACTUAL	DESIGN	ACTUAL	DESIGN	ACTUAL	DESIGN	ACTUAL
RTU 1	SALES	800	876	350	375				
RTU-2	SALES	800	883	350	382				
RTU-3	BOH/KITCHEN	800	876	350	375				
EF-1	WOMEN'S RR					225	224	225	224
EF-2	MEN'S RR					525	223	525	223
EF-3	HOOD					1350	1347	0	0
TOTALS		2400	2635	1050	1132	2100	1794	750	447

HOODS ON

NET AIRFLOW CALCULATION

TOTALS	DESIGN	ACTUAL
TOTAL OA	2400	2635
TOTAL EXHAUST	2100	1794
NET AIRFLOW	300	841

DOOR TESTED	BUILDING PRESSURE MEASUREMENTS
FRONT	0.0003
SIDE	0.001
REAR	0.0022
AVERAGE	**0.0012**

HOODS OFF

NET AIRFLOW CALCULATION

TOTALS	DESIGN	ACTUAL
TOTAL OA	1050	1132
TOTAL EXHAUST	750	447
NET AIRFLOW	300	685

DOOR TESTED	BUILDING PRESSURE MEASUREMENTS
FRONT	0.0007
SIDE	0.0019
REAR	0.0026
AVERAGE	**0.0017**

NOTES:

WIND AND RAIN ON DAY OF SERVICE.

CheckList List

- 01: RTU’s/AHU’s
- 02: Exhaust Fans
- 03: Hoods
- 04: Final Tests

02-23-26 QT #1042 GASTONIA, NC

CheckList Information

Name :	01: RTU’s/AHU’s	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	01/06/2026 - Trinity Dodds - National TAB		
Completed Date :	02/26/2026 - Jearod Ferrette - National TAB		

CheckList Item Details

RTU's/AHU's

Evaporator coils are clean?	Pass
Comment:	
Condenser coils are clean?	Pass
Comment:	
Gas piping is installed and valves are turned on?	N/A
Comment:	
Unit free of noticeable noise and vibration	Pass
Comment:	

02-23-26 QT #1042 GASTONIA, NC

CheckList Information

Name :	02: Exhaust Fans	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	01/06/2026 - Trinity Dodds - National TAB		
Completed Date :	02/26/2026 - Jearod Ferrette - National TAB		

CheckList Item Details

EF's

Hinge kit installed installed on hood fan?	Pass
Comment:	
Flex conduit is long enough so that fan can be completely tilted back?	Pass
Comment:	
No major leakage around the fan base	Pass
Comment:	
Unit is free of noise and vibration	Pass
Comment:	

02-23-26 QT #1042 GASTONIA, NC

CheckList Information

Name :	03: Hoods	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	01/06/2026 - Trinity Dodds - National TAB		
Completed Date :	02/26/2026 - Jearod Ferrette - National TAB		

CheckList Item Details

HOODS

Hood is free of alarms?	Pass
Comment:	
Hood is free of damage?	Pass
Comment:	
End panels are installed per prototype?	Pass
Comment:	

02-23-26 QT #1042 GASTONIA, NC

CheckList Information

Name :	04: Final Tests	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	01/06/2026 - Trinity Dodds - National TAB		
Completed Date :	02/26/2026 - Jearod Ferrette - National TAB		

CheckList Item Details

FINAL CHECKS

HOOD CAPTURE TEST

List kitchen equipment turned on for testing

Comment:

FRYER, PIZZA OVEN

List smoke candle type used

Comment:

STAFF TRAINING IN THE KITCHEN, SMOKE CAPTURE 100%

Smoke test capture % - Perimeter of hood

Comment:

100%

Smoke test capture % - Top of cooking surface

Comment:

100%

WITNESS

Date test was completed	02/26/2026

Comment:

TAB tech name / Firm

Comment:

JEAROD FERRETTE/ NTAB

Site super name / Firm

Comment:

NA

Owner representative name / Firm (if Applicable)

Comment:

NA

BUILDING PRESSURE

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

Comment:

FRONT 0.0003, SIDE 0.001, REAR 0.0022

Notes/Comments :

WIND AND RAIN ON DAY OF SERVICE.

Date :02/26/2026

National TAB

Project: 02-23-26 QT #1042 GASTONIA, NC

System/Unit: AHU/RTU

Asset: RT-1 AREA:SALES FLOOR

Unit Data	
	Actual
MFG	AAON
Serial Num	201305-ANEK08604
Model Num	RN-013-8-0-EA0A-152
Num OA Filters 1	1
OA Filter Size 1	22.5X44.5
Num Final Filter 1	2
Final Filter Size 1	56X45

Motor Data	
	Actual
Motor MFG	NA
Frame	NA
Horsepower	3
Motor Rpm	1760
Phase	3
Rated Voltage	208
Rated Amperage	10.6

Test Data		
	Design	**Actual**
SF CFM	4200	4337
SF RPM	-	DD/ 43 HZ
OA CFM (Hoods On)	800	876
OA CFM (Hoods Off)	350	375
RL Voltage	-	130 VFD
RL Amperage	-	9.4 VFD
VFD Max SetPt	-	43 HZ
OA Damper Position (Hoods On)	-	46%
OA Damper Position (Hoods Off)	-	26%

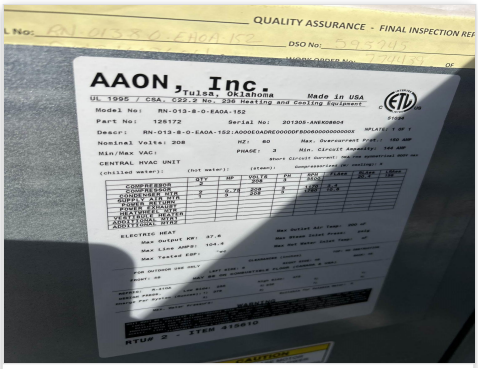
Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.41"
Fan Suction SP	-	-0.57"
Fan Discharge SP	-	0.94"
Total ESP	-	1.35"
Fan Total SP	-	1.51"

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

Completed By: Jearod Ferrette on 02/26/2026

Unit Data - PHOTO LOG

02/26/2026



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National TAB

Project: 02-23-26 QT #1042 GASTONIA, NC

System/Unit: AHU/RTU

Asset: RT-2 AREA:SALES FLOOR

Unit Data	
	Actual
MFG	AAON
Serial Num	201305-ANEK08606
Model Num	RN-013-8-0-EA0A-152
Num OA Filters 1	1
OA Filter Size 1	22.5X44.5
Num Final Filter 1	2
Final Filter Size 1	56X45

Motor Data	
	Actual
Motor MFG	NA
Frame	NA
Horsepower	3
Motor Rpm	1760
Phase	3
Rated Voltage	208
Rated Amperage	10.6

Test Data		
	Design	**Actual**
SF CFM	4200	4148
SF RPM	-	DD/ 37.2 HZ
OA CFM (Hoods On)	800	883
OA CFM (Hoods Off)	350	382
RL Voltage	-	99.1 VFD
RL Amperage	-	8.1 VFD
VFD Max SetPt	-	37.2 HZ
OA Damper Position (Hoods On)	-	46%
OA Damper Position (Hoods Off)	-	26%

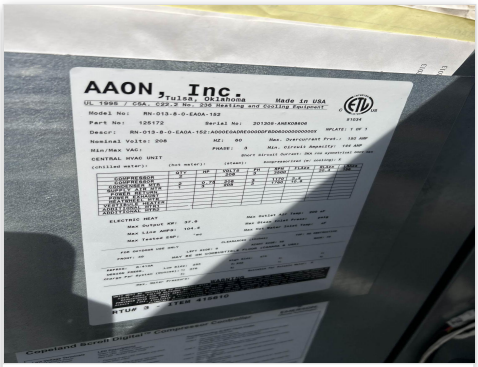
Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.37"
Fan Suction SP	-	-0.50"
Fan Discharge SP	-	0.73"
Total ESP	-	1.10"
Fan Total SP	-	1.23"

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

Completed By: Jearod Ferrette on 02/26/2026

Unit Data - PHOTO LOG

02/26/2026



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National TAB

Project: 02-23-26 QT #1042 GASTONIA, NC

System/Unit: AHU/RTU

Asset: RT-3 AREA:BOH/KITCHEN

Unit Data	
	Actual
MFG	AAON
Serial Num	201305-ANEK08603
Model Num	RN-013-8-0-EA0A-152
Num OA Filters 1	1
OA Filter Size 1	22.5X44.5
Num Final Filter 1	2
Final Filter Size 1	56X45

Motor Data	
	Actual
Motor MFG	NA
Frame	NA
Horsepower	3
Motor Rpm	1760
Phase	3
Rated Voltage	208
Rated Amperage	10.6

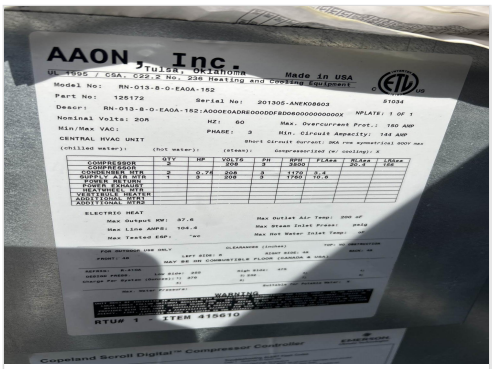
Test Data		
	Design	**Actual**
SF CFM	4200	4012
SF RPM	-	DD/ 45 HZ
OA CFM (Hoods On)	800	876
OA CFM (Hoods Off)	350	375
RL Voltage	-	141 VFD
RL Amperage	-	9.7 VFD
VFD Max SetPt	-	45 HZ
OA Damper Position (Hoods On)	-	46%
OA Damper Position (Hoods Off)	-	26%

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.51"
Fan Suction SP	-	-0.68"
Fan Discharge SP	-	0.94"
Total ESP	-	1.45"
Fan Total SP	-	1.62"

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

Completed By: Jearod Ferrette on 02/26/2026

Unit Data - PHOTO LOG



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National TAB

Project:02-23-26 QT #1042 GASTONIA, NC

AHU/RTU

Diffuser Supply (GRD)

RT-3/BOH/KITCHEN

Asset									
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
SGRD1	SUPPORT SERVICE	SI	12"	800	1	860	885	885	110.6
SGRD2	SUPPORT SERVICE	SI	12"	800	1	559	576	576	72.0
SGRD3	SUPPORT SERVICE	SI	12"	800	1	512	527	527	65.9
SGRD4	SUPPORT SERVICE	SI	12"	800	1	860	886	886	110.8
SGRD5	DOCK	ES	12"	750	1	842	867	867	115.6
SGRD6	WORKROOM	ES	8"	250	1	263	271	271	108.4
Total				4200		3896	4012	4012	95.52%

Asset	Notes	Date	Written By
SGRD5	Missing damper	02/26/2026	Jearod Ferrette
SGRD6	Damper inaccessible	02/26/2026	Jearod Ferrette

National TAB

Project: 02-23-26 QT #1042 GASTONIA, NC

System/Unit: FAN - Exhaust

Asset: EF1 AREA:WOMEN'S RR

Unit Data		
	Design	**Actual**
MFG	CAPTIVEAIRE	COOK
Model Num	DU50HFA	90 ACEH
Serial Num	-	410SE49284
Type	DOWNBLAST	DOWNBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	FASCO
Frame	-	NA
Horsepower	-	1/8
Motor Rpm	-	1600
Phase	-	1
Voltage (rated)	-	115
Amperage (rated)	-	1.7
Service Factor	-	1

Test Data		
	Design	**Actual**
CFM	225	224
Fan RPM	-	DD
Fan Rotation	-	CCW
Motor RPM	-	DD
System SetPt	-	MAX
RL Voltage	-	NA
RL Amperage	-	NA
Total ESP	-	0.16"
Fan Inlet SP	-	-0.16"
Fan Discharge SP	-	ATMO

Completed By: Jearod Ferrette on 02/26/2026

Unit Data - PHOTO LOG

02/25/2026

National TAB

Project: 02-23-26 QT #1042 GASTONIA, NC

System/Unit: FAN - Exhaust

Asset: EF2 AREA:MEN'S RR/COMBI

Unit Data		
	Design	**Actual**
MFG	CAPTIVEAIRE	COOK
Model Num	DU50HFA	120 ACE
Serial Num	-	410SE51527
Type	-	DOWNBLAST
Configuration	-	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	FASCO
Frame	-	NA
Horsepower	-	1/4
Motor Rpm	-	1550
Phase	-	1
Voltage (rated)	-	115
Amperage (rated)	-	3.2
Service Factor	-	1

Test Data		
	Design	**Actual**
CFM	525	223
Fan RPM	-	DD
Fan Rotation	-	CCW
Motor RPM	-	DD
System SetPt	-	MAX
RL Voltage	-	NA
RL Amperage	-	NA
Total ESP	-	0.15"
Fan Inlet SP	-	-0.15"
Fan Discharge SP	-	ATMO

Completed By: Jearod Ferrette on 02/26/2026

Notes:
LOW ON AIRFLOW, UNABLE TO BRING COMBI-OVEN GRILLE INTO DESIGN - SEE ISSUE

Written By: Michael McDonnell on 03/26/2026

Unit Data - PHOTO LOG

02/25/2026

National TAB

Project:02-23-26 QT #1042 GASTONIA, NC

Diffuser Ret/Exh (GRD)

EF2/MEN'S RR/COMBI

Asset									
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
EGRD1	SUPPORT SERVICE	RI	8"	150	1	73	73	73	48.7
Total				150		73	73	73	48.67%

National TAB

Project: 02-23-26 QT #1042 GASTONIA, NC

System/Unit: FAN - Exhaust

Asset: EF3 AREA:KITCHEN HD

Unit Data		
	Design	**Actual**
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	DU50HFA	DU50HFA
Serial Num	-	7657310
Type	UPBLAST	UPBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	HSSA
Frame	-	48
Horsepower	1/2	1/2
Motor Rpm	-	1800
Phase	-	1
Voltage (rated)	-	208
Amperage (rated)	-	3.6
Service Factor	-	1

Test Data		
	Design	**Actual**
CFM	1350	1347
Fan RPM	-	1209
Fan Rotation	-	CCW
Motor RPM	-	1209
System SetPt	-	52.8
RL Voltage	-	NA
RL Amperage	-	NA
Total ESP	-	0.32”
Fan Inlet SP	-	-0.32”
Fan Discharge SP	-	ATMO

Completed By: Jearod Ferrette on 02/26/2026

Unit Data - PHOTO LOG

02/25/2026

02/25/2026

National TAB

Project: 02-23-26 QT #1042 GASTONIA, NC

System/Unit: Kitchen Hood Type I

Asset: HD1 AREA:GRIDDLE

Unit Data		
	Design	**Actual**
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	6030ND-2-F	6030ND-2-F
Job / Serial Num	-	7657310
Type	TYPE I CANOPY	TYPE I CANOPY
Hood length	108"	108"
Hood Width	60"	60"

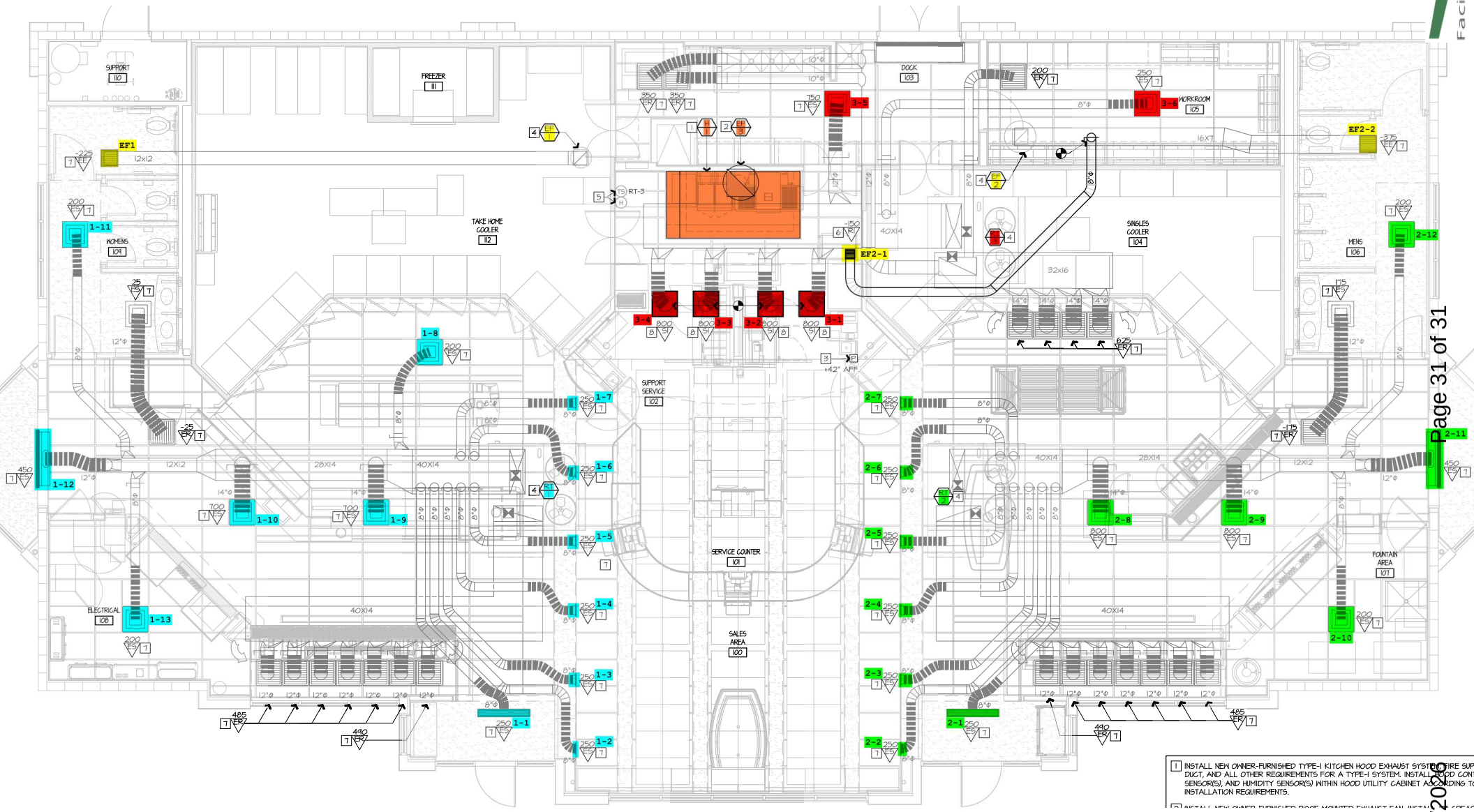
Test Data Exhaust		
	Design	**Actual**
Filter Type	CAPTRATE SOLO FILTER	CAPTRATE SOLO FILTER
Filter Size 1	20X16	20X16
Filter Qty 1	6	6
Filter AK factor size 1	2.08	2.08
Filter Total AK Area	12.48	12.48
Filter1 FPM	-	106
Filter2 FPM	-	111
Filter3 FPM	-	123
Filter4 FPM	-	108
Filter5 FPM	-	103
Filter6 FPM	-	101
Filter Ave FPM(corr)	-	108
CFM	1350	1347

Cooking Equipment	
	Actual
Item 1	FRYER
Item 2	PIZZA OVEN

Completed By: Jearod Ferrette on 02/26/2026

Unit Data - PHOTO LOG

02/25/2026



Date: 3/26/2026