Report By:

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

Report: TAB Report

Function: Test, Adjust, & Balance

Date: 12/31/2025

Completed By: National TAB

PROJECT

12-29-25 QT #0450 CHANDLER, AZ

175 N MCQUEEN RD

CHANDLER, AZ 85225

Client

QUIKTRIP

4705 SOUTH 129TH EAST AVENUE

TULSA, OK 74134

National TAB

Project: 12-29-25 QT #0450 CHANDLER, AZ

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

- BACK AREA NOT BEING CONDITIONED
- EF1 NOT RUNNING
- FINAL FILTERS NOT REPLACED
- HOOD EXHAUST INEFFICIENT, GAP AT CURB

12-29-25 QT #0450 CHANDLER, AZ

Project Issue Information

Issue Name : BACK AREA NOT BEING CONDITIONED

Description : RTU2-SGRD5 duct laying atop ceiling. Humid, normally warm, area behind soda & ice machines not being conditioned. Damper was open upon arrival, recommend making sure duct is closed before decommissioning them.

Created By :	National TAB	**Assigned To :**	National TAB - Dan Hertenstein
Status :	Open		
Priority :	Medium	**Asset Tag :**	SGRD5
Originated Date :	12/31/2025 - Christine Weale - National TAB		

Project Issue File Details

01/01/2026

12-29-25 QT #0450 CHANDLER, AZ

Project Issue Information

Issue Name :	EF1 NOT RUNNING		
Description :	EF1 fan was "bound-up" upon arrival, motor was running but making very loud buzzing noise, fan not spinning. Shortly thereafter, motor completely stopped. Recommend replacing motor, ensuring fan is spinning, and not running over 7.5A. Motor may need replacement.		
Created By :	National TAB	**Assigned To :**	National TAB - Dan Hertenstein
Status :	Open		
Priority :	Urgent	**Asset Tag :**	EF1
Originated Date :	12/31/2025 - Christine Weale - National TAB		

12-29-25 QT #0450 CHANDLER, AZ

Project Issue Information

Issue Name : FINAL FILTERS NOT REPLACED

Description : ALL UNITS: FINAL FILTERS NOT REPLACED AS INSTRUCTED IN MSET. FILTERS ARE VERY DIRTY.

Created By : National TAB

Assigned To : National TAB - Dan Hertenstein

Status : Open

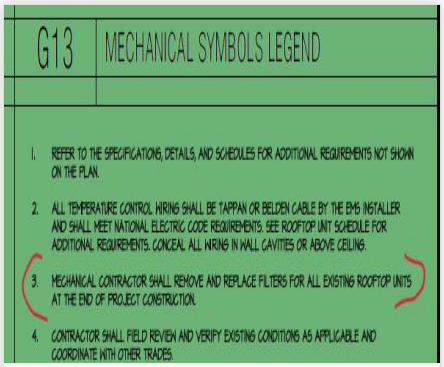
Priority : Low

Asset Tag :

Originated Date : 03/22/2026 - Christine Weale - National TAB

Project Issue File Details

03/22/2026



03/22/2026

12-29-25 QT #0450 CHANDLER, AZ

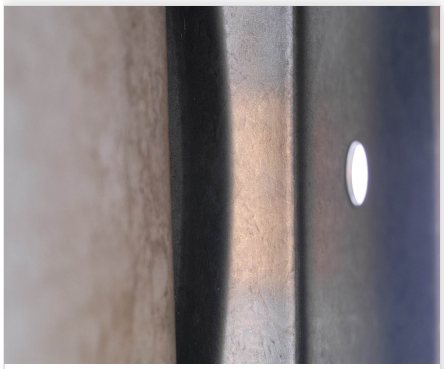
Project Issue Information

Issue Name : HOOD EXHAUST INEFFICIENT, GAP AT CURB

Description : There is a substantial space between curb top and fan base, SP= ~.33" w.c. Air is coming out of curb top instead of through duct. Air flow at filters is very low. Smoke test failed at 57.8Hz (100fpm/filter). Also appears curb may be too small, and fan base is bent. Needs correction so hood/fan can be balanced. Fan left at normal design parameters.

Created By :	National TAB	**Assigned To :**	National TAB - Dan Hertenstein
Status :	Open		
Priority :	Urgent	**Asset Tag :**	EF3
Originated Date :	12/31/2025 - Christine Weale - National TAB		

Project Issue File Details



03/13/2026

03/13/2026

01/01/2026

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	834	350	378				
RTU-2	SALES	800	866	350	376				
RTU-3	BOH/KITCHEN	800	859	350	378				
EF-1	RR/JANITOR					750	0	750	0
EF-3	HOOD					1350	1300	0	0
TOTALS		2400	2559	1050	1132	2100	1300	750	0

HOODS ON

NET AIRFLOW CALCULATION

TOTALS	DESIGN	ACTUAL
TOTAL OA	2400	2559
TOTAL EXHAUST	2100	1300
NET AIRFLOW	300	1259

DOOR TESTED	BUILDING PRESSURE MEASUREMENTS
FRONT	
SIDE	
REAR	
AVERAGE	

HOODS OFF

NET AIRFLOW CALCULATION

TOTALS	DESIGN	ACTUAL
TOTAL OA	1050	1132
TOTAL EXHAUST	750	0
NET AIRFLOW	300	1132

DOOR TESTED	BUILDING PRESSURE MEASUREMENTS
FRONT	
SIDE	
REAR	
AVERAGE	

NOTES:

BALANCE COULD NOT BE COMPLETED DUE TO MALFUNCTIONING EXHAUSTS, EF3 NOT FINAL, SEE 'REMARKS'.

CheckList List

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

12-29-25 QT #0450 CHANDLER, AZ

CheckList Information

Name :	01: RTU’s/AHU’s	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	10/01/2025 - Trinity Dodds - National TAB		
Completed Date :	03/13/2026 - Christine Weale - 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?	Pass
Comment:	
Unit free of noticeable noise and vibration	Pass
Comment:	

12-29-25 QT #0450 CHANDLER, AZ

CheckList Information

Name :	02: Exhaust Fans	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	10/01/2025 - Trinity Dodds - National TAB		
Completed Date :	03/13/2026 - Christine Weale - 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	Fail
Comment:	
Unit is free of noise and vibration	Pass
Comment:	

12-29-25 QT #0450 CHANDLER, AZ

CheckList Information

Name :	03: Hoods	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	10/01/2025 - Trinity Dodds - National TAB		
Completed Date :	03/13/2026 - Christine Weale - 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:	

12-29-25 QT #0450 CHANDLER, AZ

CheckList Information

Name :	04: Final Tests	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	10/01/2025 - Trinity Dodds - National TAB		
Completed Date :	03/22/2026 - Christine Weale - National TAB		

CheckList Item Details

FINAL CHECKS

HOOD CAPTURE TEST

List kitchen equipment turned on for testing

Comment:

All

List smoke candle type used

Comment:

45S, S102

Smoke test capture % - Perimeter of hood

Comment:

50 or less, video shows perimeter only since only it failed initial smoke test.

Smoke test capture % - Top of cooking surface

Comment:

100

WITNESS

Date test was completed	12/31/2025

Comment:

TAB tech name / Firm

Comment:

Christine Weale, NTI

Site super name / Firm

Comment:

T-Built

Owner representative name / Firm (if Applicable)

Comment:

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)	N/A

Comment:

Notes/Comments :

EF3 FUNCTIONAL BUT COULDN'T BE BALANCED DUE TO POOR INSTALLATION. SEE 'REMARKS'.

Date :03/22/2026

National TAB

Project: 12-29-25 QT #0450 CHANDLER, AZ

System/Unit: AHU/RTU

Asset: RT-1 AREA:SALES FLOOR

Unit Data	
	Actual
MFG	AAON
Serial Num	202108-ANEK22510
Model Num	RN-013-8-0-EA0A-152
Num OA Filters 1	1
OA Filter Size 1	45X22
Num Final Filter 1	2
Final Filter Size 1	46X19.5X2

Motor Data	
	Actual
Motor MFG	NL
Frame	NL
Horsepower	3.0
Motor Rpm	1760
Phase	3
Rated Voltage	208
Rated Amperage	10.6

Test Data		
	Design	**Actual**
SF CFM	4200	4509
SF RPM	-	45 HZ
OA CFM (Hoods On)	800	834
OA CFM (Hoods Off)	350	378
RL Voltage	-	152
RL Amperage	-	7.75
VFD Max SetPt	-	75.0
VFD Min SetPt	-	24.0
OA Damper Position (Hoods On)	-	46.0
OA Damper Position (Hoods Off)	-	0 + 0.1"

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.60"
Fan Suction SP	-	-0.86"
Fan Discharge SP	-	0.30"
Total ESP	-	0.90"
Fan Total SP	-	1.16"

General	
	Actual
Fan Rotation Correct	YES
Unit Filters Clean	NO
Condensate Drain Installed	YES

Completed By: Christine Weale on 03/21/2026

Unit Data - PHOTO LOG

03/12/2026

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National TAB

Project: 12-29-25 QT #0450 CHANDLER, AZ

System/Unit: AHU/RTU

Asset: RT-2 AREA:SALES FLOOR

Unit Data	
	Actual
MFG	AAON
Serial Num	202108-ANEK22509
Model Num	RN-013-8-0-EA0A-152
Num OA Filters 1	1
OA Filter Size 1	45X22
Num Final Filter 1	2
Final Filter Size 1	46X19.5X2

Motor Data	
	Actual
Motor MFG	NL
Frame	NL
Horsepower	3.0
Motor Rpm	1760
Phase	3
Rated Voltage	208
Rated Amperage	10.6

Test Data		
	Design	**Actual**
SF CFM	4200	4558
SF RPM	-	45 HZ
OA CFM (Hoods On)	800	866
OA CFM (Hoods Off)	350	376
RL Voltage	-	151.3
RL Amperage	-	7.58
VFD Max SetPt	-	75.0
VFD Min SetPt	-	24.0
OA Damper Position (Hoods On)	-	46.0
OA Damper Position (Hoods Off)	-	0 + 0.1"

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.68"
Fan Suction SP	-	-0.95"
Fan Discharge SP	-	0.20"
Total ESP	-	0.88"
Fan Total SP	-	1.15"

General	
	Actual
Fan Rotation Correct	YES
Unit Filters Clean	NO
Condensate Drain Installed	YES

Completed By: Christine Weale on 03/21/2026

Unit Data - PHOTO LOG

03/12/2026

03/12/2026

National TAB

Project: 12-29-25 QT #0450 CHANDLER, AZ

System/Unit: AHU/RTU

Asset: RT-3 AREA:BOH/KITCHEN

Unit Data	
	Actual
MFG	AAON
Serial Num	202108-ANEK22511
Model Num	RN-013-8-0-EA0A-152
Num OA Filters 1	1
OA Filter Size 1	45X22
Num Final Filter 1	2
Final Filter Size 1	46X19.5X2

Motor Data	
	Actual
Motor MFG	NL
Frame	NL
Horsepower	3.0
Motor Rpm	1760
Phase	3
Rated Voltage	208
Rated Amperage	10.6

Test Data		
	Design	**Actual**
SF CFM	4200	4142
SF RPM	-	45 HZ
OA CFM (Hoods On)	800	859
OA CFM (Hoods Off)	350	378
RL Voltage	-	151.6
RL Amperage	-	7.72
VFD Max SetPt	-	75.0
VFD Min SetPt	-	24.0
OA Damper Position (Hoods On)	-	46.0
OA Damper Position (Hoods Off)	-	0 + 0.1"

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.61"
Fan Suction SP	-	-0.89"
Fan Discharge SP	-	0.33"
Total ESP	-	0.94"
Fan Total SP	-	1.22"

General	
	Actual
Fan Rotation Correct	YES
Unit Filters Clean	NO
Condensate Drain Installed	YES

Completed By: Christine Weale on 03/21/2026

Unit Data - PHOTO LOG

03/12/2026

03/12/2026

National TAB

Project:12-29-25 QT #0450 CHANDLER, AZ

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	752	752	752	94.0
SGRD2	SUPPORT SERVICE	SI	12"	800	1	799	799	799	99.9
SGRD3	SUPPORT SERVICE	SI	12"	800	1	784	784	784	98.0
SGRD4	SUPPORT SERVICE	SI	12"	800	1	752	752	752	94.0
SGRD5	WORKROOM	ES	10"	500	1	521	521	521	104.2
SGRD6	WORKROOM	ES	10"	500	1	534	534	534	106.8
Total				4200		4142	4142	4142	98.62%

National TAB

Project: 12-29-25 QT #0450 CHANDLER, AZ

System/Unit: FAN - Exhaust

Asset: EF1 AREA:RR/JANITOR

Unit Data		
	Design	**Actual**
MFG	NA	CAPTIVE AIRE
Model Num	NA	DR50HFA
Serial Num	-	4997529
Type	-	DOWNBLAST
Configuration	-	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	HSSA
Frame	-	48Y
Horsepower	-	0.75
Motor Rpm	-	1625
Phase	-	1
Voltage (rated)	-	115
Amperage (rated)	-	8.4
Service Factor	-	1.0

Test Data		
	Design	**Actual**
CFM	750	0
Fan RPM	-	
Fan Rotation	-	
Motor RPM	-	
System SetPt	-	
RL Voltage	-	
RL Amperage	-	
Total ESP	-	
Fan Inlet SP	-	
Fan Discharge SP	-	

Completed By: Christine Weale on 03/21/2026

Notes:
MOTOR NONFUNCTIONAL.

Written By: Christine Weale on 03/12/2026

Diffuser Ret/Exh (GRD)

EF1/RR/JANITOR

Asset									
Asset Name	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
EGRD4	SUPPORT SERVICE	RI	8"	150					-
Total				150		0	0	0	0%

National TAB

Project: 12-29-25 QT #0450 CHANDLER, AZ

System/Unit: FAN - Exhaust

Asset: EF3 AREA:KITCHEN HD

Unit Data		
	Design	**Actual**
MFG	NA	CAPTIVEAIRE
Model Num	NA	DU50HFA
Serial Num	-	7660152
Type	UPBLAST	UPBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	NEMA(TELCO)
Frame	-	48
Horsepower	1/2	0.5
Motor Rpm	-	1800
Phase	-	1
Voltage (rated)	-	208
Amperage (rated)	-	3.8
Service Factor	-	NL

Test Data		
	Design	**Actual**
CFM	1350	1300
Fan RPM	-	1322
Fan Rotation	-	CCW
Motor RPM	-	1322
System SetPt	-	54.8 HZ
RL Voltage	-	
RL Amperage	-	
Total ESP	-	0.33"
Fan Inlet SP	-	-0.33"
Fan Discharge SP	-	ATMS

Completed By: Christine Weale on 03/21/2026

Notes:
LARGE AIR LEAKAGE AT CURB, SEE 'REMARKS'. COULD NOT BALANCE, SMOKE TEST FAILED. NO 'FINAL MEASUREMENTS' TO TAKE.

Written By: Christine Weale on 03/21/2026

Unit Data - PHOTO LOG

03/12/2026

03/12/2026

National TAB

Project: 12-29-25 QT #0450 CHANDLER, AZ

System/Unit: Kitchen Hood Type I

Asset: HD1 AREA:KITCHEN

Unit Data		
	Design	**Actual**
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	6030ND-2-F	6030ND-2-F
Job / Serial Num	-	660152
Type	-	TYPE I CANOPY
Hood length	-	108"
Hood Width	-	60"

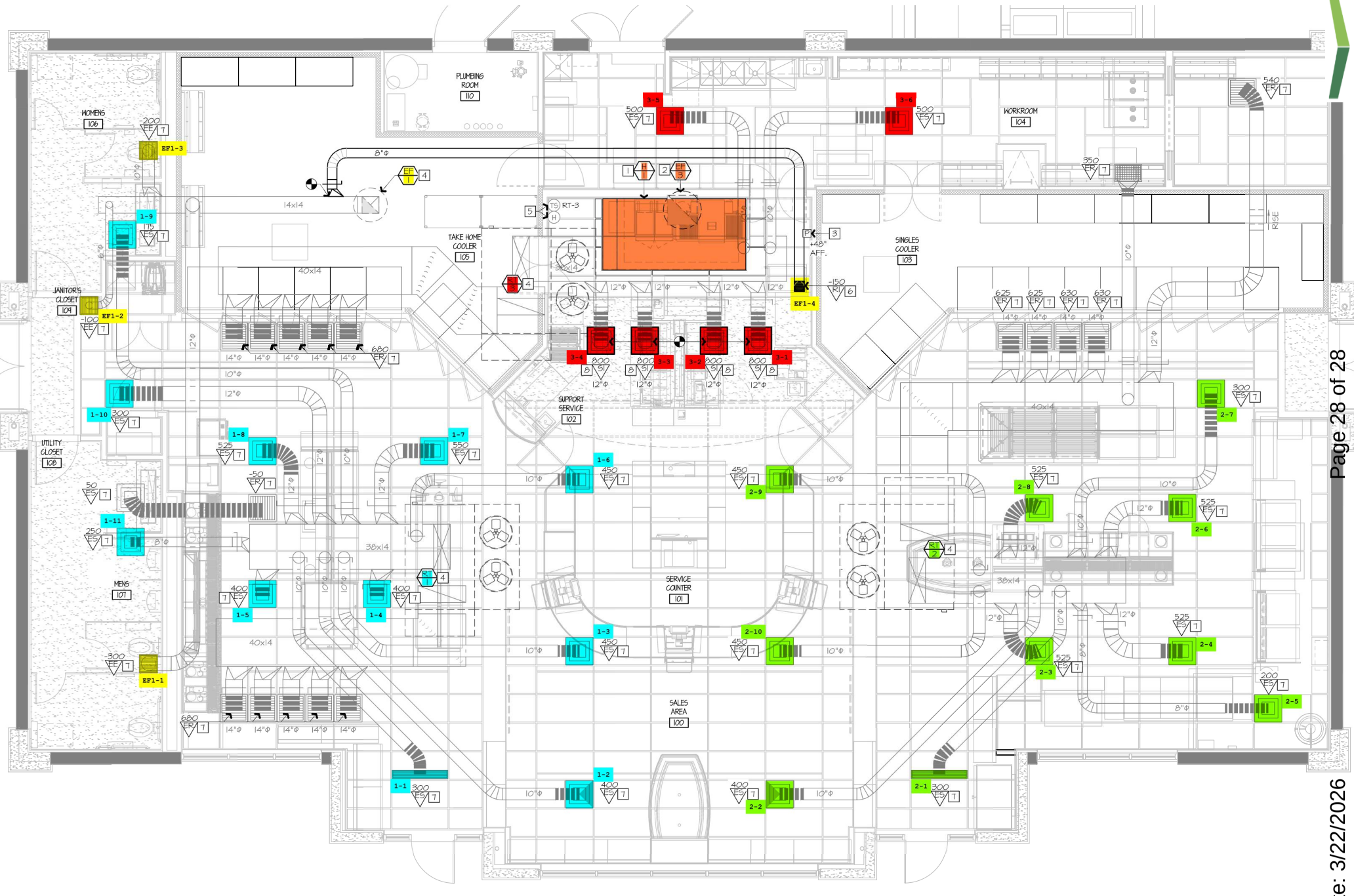
Test Data Exhaust		
	Design	**Actual**
Filter Type	-	CAPTRATE SOLO
Filter Size 1	-	16X20
Filter Qty 1	-	6
Filter AK factor size 1	-	2.08
Filter Total AK Area	-	12.48
Filter1 FPM	-	100
Filter2 FPM	-	108
Filter3 FPM	-	112
Filter4 FPM	-	104
Filter5 FPM	-	95
Filter6 FPM	-	106
Filter Ave FPM(corr)	-	104.2
CFM	1350	1300

Cooking Equipment	
	Actual
Item 1	FRYER
Item 2	DUAL-OVEN

Completed By: Christine Weale on 03/12/2026

Notes:
EF3 LARGE AIR LEAK, SEE 'REMARKS'.

Written By: Christine Weale on 03/12/2026



Date: 3/22/2026