Report By:

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

Report: TAB Report

Function: Test, Adjust, & Balance

Date: 02/09/2026

Completed By: National TAB

PROJECT

02-09-26 QT #0432 PHOENIX, AZ

4075 S. 32nd St

Phoenix, AZ 85040

Client

QUIKTRIP

4705 SOUTH 129TH EAST AVENUE

TULSA, OK 74134

National TAB

Project: 02-09-26 QT #0432 PHOENIX, 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

- DAMPERS NOT INSTALLED
- EF1 NOT RUNNING
- EF2 - NO MOTOR SPEED CONTROLLER
- INACCESSBILE DAMPER
- RTU1 ECON DAMPER DOESN'T RESPOND TO PC

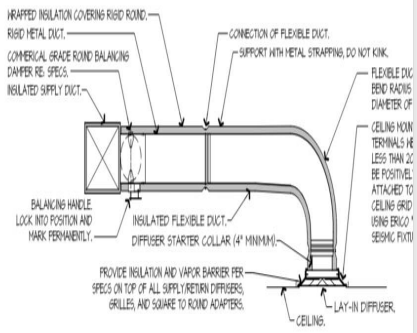
Project Issue Information

Issue Name : DAMPERS NOT INSTALLED

Description : No dampers have been installed so kitchen ducts can be balanced. Duct also not installed properly, there should be hard duct, then flex; only flex is installed.

Created By :	National TAB	**Assigned To :**	National TAB - Dan Hertenstein
Status :	Open		
Priority :	Urgent	**Asset Tag :**	RT-3
Originated Date :	02/11/2026 - Christine Weale - National TAB		

Project Issue File Details



02/11/2026

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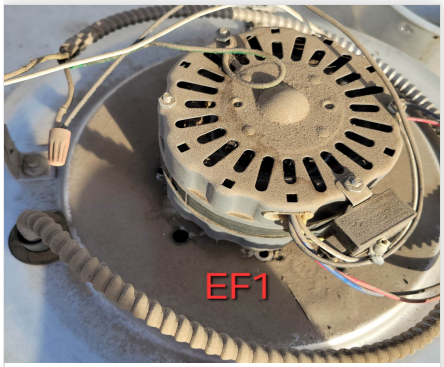
Project Issue Information

Issue Name : EF1 NOT RUNNING

Description : EF1 is not running at all, does not have a shut off switch, and does not have a motor speed controller installed.

Created By :	National TAB	**Assigned To :**	National TAB - Dan Hertenstein
Status :	Open		
Priority :	Urgent	**Asset Tag :**	EF1
Originated Date :	02/11/2026 - Christine Weale - National TAB		

Project Issue File Details



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02-09-26 QT #0432 PHOENIX, AZ

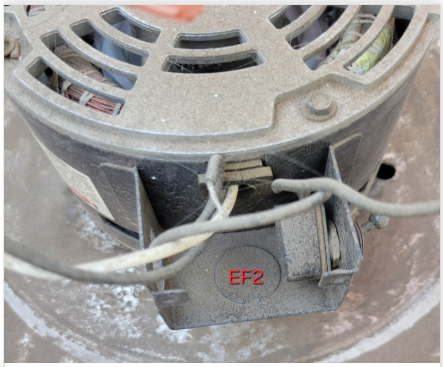
Project Issue Information

Issue Name : EF2 - NO MOTOR SPEED CONTROLLER

Description : EF2, exhaust for the men's RR, also does not have a motor speed controller installed. It is running too low and cannot be balanced.

Created By :	National TAB	**Assigned To :**	National TAB - Dan Hertenstein
Status :	Open		
Priority :	Urgent	**Asset Tag :**	EF2
Originated Date :	02/11/2026 - Christine Weale - National TAB		

Project Issue File Details



02/11/2026

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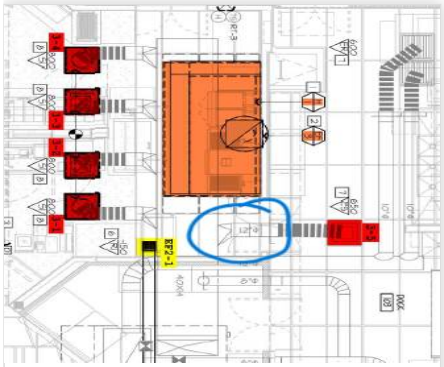
Project Issue Information

Issue Name : INACCESSBILE DAMPER

Description : SGRD3-5 is not installed per GRD and the duct goes over the supply and somewhere past the supply instead of coming from it, therefore damper is inaccessible (no tiles to move to see where it goes.

Created By :	National TAB	**Assigned To :**	National TAB - Dan Hertenstein
Status :	Open		
Priority :	Medium	**Asset Tag :**	SGRD3
Originated Date :	02/11/2026 - Christine Weale - National TAB		

Project Issue File Details



02/11/2026

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02-09-26 QT #0432 PHOENIX, AZ

Project Issue Information

Issue Name :	RTU1 ECON DAMPER DOESN'T RESPOND TO PC		
Description :	RTU1 econ damper had to be manually set to Hood 'ON'. Actuator doesn't respond to PC at all.		
Created By :	National TAB	**Assigned To :**	National TAB - Dan Hertenstein
Status :	Open		
Priority :	Low	**Asset Tag :**	RT-1
Originated Date :	03/17/2026 - Christine Weale - National TAB		

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	832	350	344				
RTU-2	SALES	800	825	350	351				
RTU-3	BOH/KITCHEN	800	825	350	351				
EF-1	WOMEN'S RR					225	0	225	0
EF-2&EF-4	MEN'S RR					525	434	525	434
EF-3	HOOD					1350	1395	0	0
TOTALS		2400	2482	1050	1046	2100	1829	750	434

HOODS ON

NET AIRFLOW CALCULATION

TOTALS	DESIGN	ACTUAL
TOTAL OA	2400	2482
TOTAL EXHAUST	2100	1829
NET AIRFLOW	300	653

DOOR TESTED	BUILDING PRESSURE MEASUREMENTS
FRONT	
SIDE	
REAR	
AVERAGE	

HOODS OFF

NET AIRFLOW CALCULATION

TOTALS	DESIGN	ACTUAL
TOTAL OA	1050	1046
TOTAL EXHAUST	750	434
NET AIRFLOW	300	612

DOOR TESTED	BUILDING PRESSURE MEASUREMENTS
FRONT	
SIDE	
REAR	
AVERAGE	

NOTES:

EF-1 not functioning, EF-2 no MSC, balance could not be completed. Final measurements not available.

CheckList List

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

02-09-26 QT #0432 PHOENIX, AZ

CheckList Information

Name :	01: RTU’s/AHU’s	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	02/09/2026 - Trinity Dodds - National TAB		
Completed Date :	03/17/2026 - 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:	

02-09-26 QT #0432 PHOENIX, AZ

CheckList Information

Name :	02: Exhaust Fans	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	02/09/2026 - Trinity Dodds - National TAB		
Completed Date :	03/17/2026 - 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	Pass
Comment:	
Unit is free of noise and vibration	Pass
Comment:	

02-09-26 QT #0432 PHOENIX, AZ

CheckList Information

Name :	03: Hoods	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	02/09/2026 - Trinity Dodds - National TAB		
Completed Date :	03/17/2026 - 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:	

02-09-26 QT #0432 PHOENIX, AZ

CheckList Information

Name :	04: Final Tests	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	02/09/2026 - Trinity Dodds - National TAB		
Completed Date :	03/17/2026 - Christine Weale - National TAB		

CheckList Item Details

FINAL CHECKS

HOOD CAPTURE TEST

List kitchen equipment turned on for testing

Comment:

All on

List smoke candle type used

Comment:

45s, S102

Smoke test capture % - Perimeter of hood

Comment:

100

Smoke test capture % - Top of cooking surface

Comment:

100 - except when dual oven fan is on, it pushes smoke out of the side.

WITNESS

Date test was completed	02/10/2026

Comment:	
TAB tech name / Firm	
Comment:	
Site super name / Firm	
Comment:	
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:	

02-09-26 QT #0432 PHOENIX, AZ

CheckList Information

Name :	05: Smoke Detector	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	02/03/2026 - Trinity Dodds - National TAB		
Completed Date :	03/17/2026 - Christine Weale - National TAB		

CheckList Item Details

Smoke Detector Manufacturer:

Comment:

System Sensor

Smoke Detector Model:

Comment:

AD4S

Accpetable Pressure Range Rating:

Comment:

0.01 to .1" w.c.

Actual Measured Pressure Range:

Comment:

Didn't measure due to 1st test fail.

Smoke Detector Shutdown? Fail

Comment:

RTU1: SNSR1 (duct) maint. code - fail

Notes/Comments :

Check RTU3 sensor lights on smoke alarm control panel when fixing RTU1 failed sensor.

Date :03/17/2026

National TAB

Project: 02-09-26 QT #0432 PHOENIX, AZ

System/Unit: AHU/RTU

Asset: RT-1 AREA:SALES FLOOR

Unit Data	
	Actual
MFG	AAON
Serial Num	201212-ANEL07924
Model Num	RN-015-8-0-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	5.0
Motor Rpm	1760
Phase	3
Rated Voltage	208
Rated Amperage	16.7

Test Data		
	Design	**Actual**
SF CFM	4200	4277
SF RPM	-	33 HZ
OA CFM (Hoods On)	800	832
OA CFM (Hoods Off)	350	344
RL Voltage	-	73.3
RL Amperage	-	8.24
VFD Max SetPt	-	55.0
VFD Min SetPt	-	24.0
OA Damper Position (Hoods On)	-	0.5"
OA Damper Position (Hoods Off)	-	0.1" @ACTUATOR

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

Completed By: Christine Weale on 03/17/2026

Unit Data - PHOTO LOG

03/13/2026

National TAB

Project: 02-09-26 QT #0432 PHOENIX, AZ

System/Unit: AHU/RTU

Asset: RT-2 AREA:SALES FLOOR

Unit Data	
	Actual
MFG	AAON
Serial Num	201212-ANE07925
Model Num	RN-015-8-0-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	5.0
Motor Rpm	1760
Phase	3
Rated Voltage	208
Rated Amperage	16.7

Test Data		
	Design	**Actual**
SF CFM	4200	4271
SF RPM	-	33 HZ
OA CFM (Hoods On)	800	825
OA CFM (Hoods Off)	350	351
RL Voltage	-	73.0
RL Amperage	-	8.0
VFD Max SetPt	-	55.0
VFD Min SetPt	-	24.0
OA Damper Position (Hoods On)	-	0.5"
OA Damper Position (Hoods Off)	-	0.1" @ACTUATOR

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

Completed By: Christine Weale on 03/17/2026

National TAB

Project: 02-09-26 QT #0432 PHOENIX, AZ

System/Unit: AHU/RTU

Asset: RT-3 AREA:BOH/KITCHEN

Unit Data	
	Actual
MFG	AAON
Serial Num	201212-ANEK07813
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	4274
SF RPM	-	42 HZ
OA CFM (Hoods On)	800	825
OA CFM (Hoods Off)	350	351
RL Voltage	-	136.0
RL Amperage	-	8.56
VFD Max SetPt	-	70.0
VFD Min SetPt	-	24.0
OA Damper Position (Hoods On)	-	30.0
OA Damper Position (Hoods Off)	-	10.0

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

Completed By: Christine Weale on 03/17/2026

Notes:
BALANCED FOR TOTAL FLOW, SEE 'REMARKS'.

Written By: Christine Weale on 03/17/2026

National TAB

Project:02-09-26 QT #0432 PHOENIX, 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	739	739	739	92.4
SGRD2	SUPPORT SERVICE	SI	12"	800	1	805	805	805	100.6
SGRD3	DOCK	ES	12"	800	1	789	789	789	98.6
SGRD4	WORKROOM	ES	12"	800	1	703	703	703	87.9
SGRD5	WORKROOM	ES	12"	850	1	977	977	977	114.9
SGRD6	WORKROOM	ES	8"	350	1	261	261	261	74.6
Total				4400		4274	4274	4274	97.14%

National TAB

Project: 02-09-26 QT #0432 PHOENIX, AZ

System/Unit: FAN - Exhaust

Asset: EF1 AREA:WOMEN'S RR

Unit Data		
	Design	**Actual**
MFG	NA	COOK
Model Num	NA	90ACEH-90C15DH
Serial Num	-	100SE43761
Type	-	DOWNBLAST
Configuration	-	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	DAYTON
Frame	-	NL
Horsepower	-	0.125
Motor Rpm	-	1550
Phase	-	1
Voltage (rated)	-	115
Amperage (rated)	-	2.6
Service Factor	-	NL

Test Data		
	Design	**Actual**
CFM	225	58
Fan RPM	-	0
Fan Rotation	-	CCW
Motor RPM	-	0
System SetPt	-	NA
RL Voltage	-	0
RL Amperage	-	0

Completed By: Christine Weale on 03/13/2026

Notes:
UNIT NOT RUNNING, FLOW WAS JUST AIR MOVING THROUGH DUCT, SEE 'REMARKS'. MOTOR MODEL#4YU34

Written By: Christine Weale on 03/13/2026

Unit Data - PHOTO LOG

03/13/2026

National TAB

Project: 02-09-26 QT #0432 PHOENIX, AZ

System/Unit: FAN - Exhaust

Asset: EF2 AREA:MEN'S RR

Unit Data		
	Design	**Actual**
MFG	NA	CAPTIVE AIRE
Model Num	NA	101ACE-101C15D
Serial Num	-	100SE43761
Type	-	DOWNBLAST
Configuration	-	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	NBK MOTORS
Frame	-	48Y
Horsepower	-	0.125
Motor Rpm	-	1600
Phase	-	1
Voltage (rated)	-	115
Amperage (rated)	-	1.7
Service Factor	-	NL

Test Data		
	Design	**Actual**
CFM	375	255
Fan RPM	-	N/A
Fan Rotation	-	CCW
Motor RPM	-	N/A
System SetPt	-	NA
RL Voltage	-	NA
RL Amperage	-	NA

Completed By: Christine Weale on 03/13/2026

Notes:
DIDN'T TAKE FINAL MEAS. SINCE UNIT CANNOT BE BALANCED. FINAL SET POINT NOT DONE UNTIL MSC IS INSTALLED.

Written By: Christine Weale on 03/13/2026

Unit Data - PHOTO LOG

03/13/2026

National TAB

Project:02-09-26 QT #0432 PHOENIX, AZ

Diffuser Ret/Exh (GRD)

EF2/MEN'S RR

Asset									
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
EGRD1	MENS RR	EE	12X12	375	1	255	255	255	68.0
Total				375		255	255	255	68%

National TAB

Project: 02-09-26 QT #0432 PHOENIX, AZ

System/Unit: FAN - Exhaust

Asset: EF3 AREA:KITCHEN HD

Unit Data		
	Design	**Actual**
MFG	NA	CAPTIVEAIRE
Model Num	NA	DU50HFA
Serial Num	-	8257627
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	1395
Fan RPM	-	1254
Fan Rotation	-	CCW
Motor RPM	-	1254
System SetPt	-	69%
RL Voltage	-	216.8
RL Amperage	-	2.4

Completed By: Christine Weale on 03/13/2026

Unit Data - PHOTO LOG

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National TAB

Project: 02-09-26 QT #0432 PHOENIX, AZ

System/Unit: Kitchen Hood Type I

Asset: HD1 AREA:KITCHEN

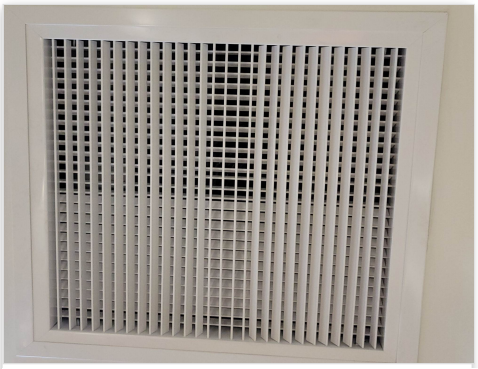
Unit Data		
	Design	**Actual**
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	6030ND-2-F	6030ND-2-F
Job / Serial Num	-	8257627
Type	TYPE I CANOPY	TYPE I CANOPY
Hood length	108"	108"
Hood Width	60"	60"

Test Data Exhaust		
	Design	**Actual**
Filter Type	-	CAPTRATE SOLO
Filter Size 1	-	16X20
Filter Qty 1	-	6
Filter AK factor size 1	-	2.08
Filter Total AK Area	-	12.48
Filter1 FPM	-	96
Filter2 FPM	-	116
Filter3 FPM	-	114
Filter4 FPM	-	118
Filter5 FPM	-	108
Filter6 FPM	-	119
Filter Ave FPM(corr)	-	111.8
CFM	1350	1395

Cooking Equipment	
	Actual
Item 1	FRYER
Item 2	DUAL-OVEN

Completed By: Christine Weale on 03/13/2026

Unit Data - PHOTO LOG



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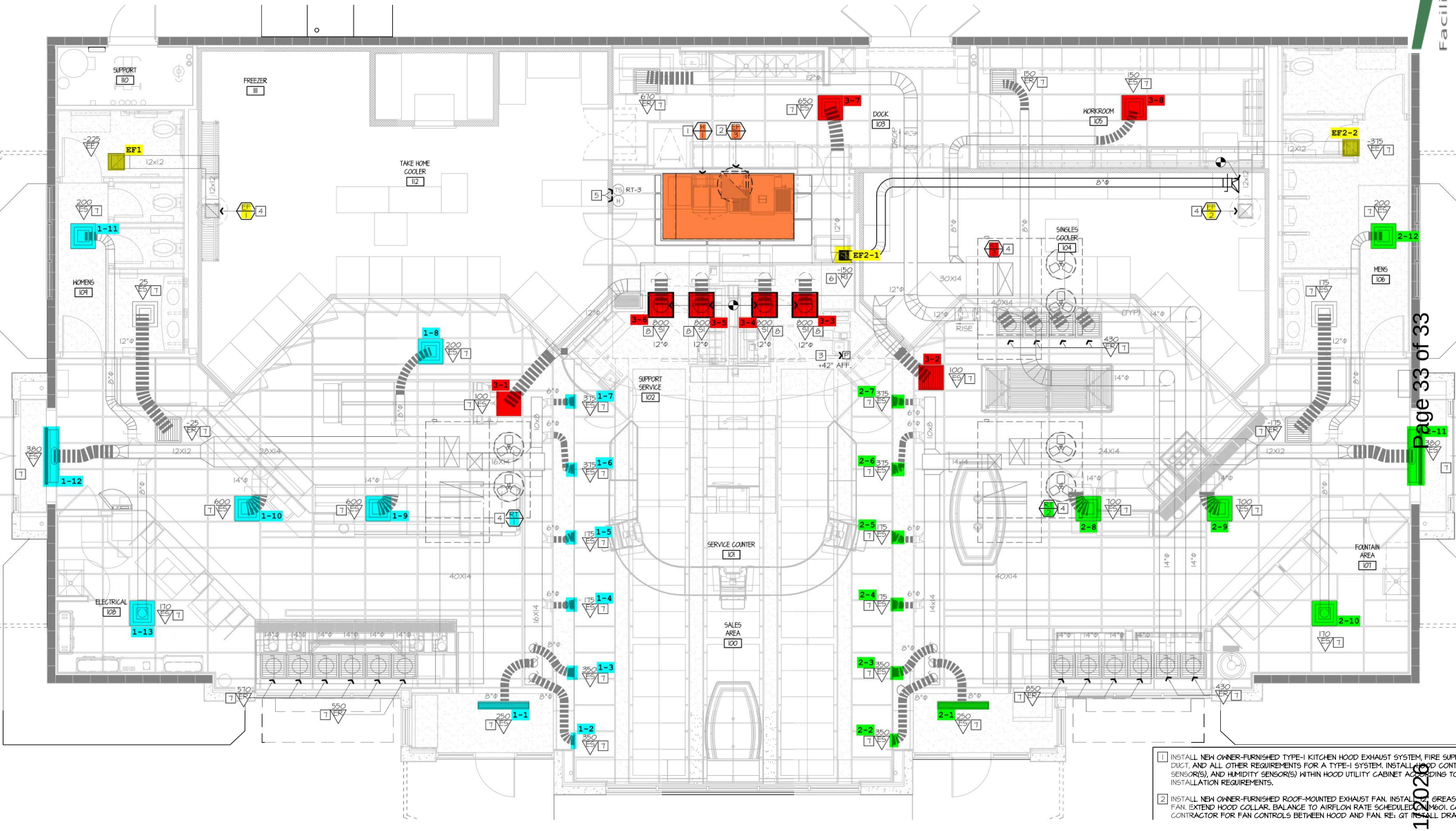

1 INSTALL NEW OWNER-FURNISHED TYPE-I KITCHEN HOOD EXHAUST SYSTEM, FIRE SUPP
DUCT, AND ALL OTHER REQUIREMENTS FOR A TYPE-I SYSTEM. INSTALL HOOD CONT
SENSOR(S), AND HUMIDITY SENSOR(S) WITHIN HOOD UTILITY CABINET AC DING TO
INSTALLATION REQUIREMENTS.

2 INSTALL NEW OWNER-FURNISHED ROOF-MOUNTED EXHAUST FAN. INSTAL GREAS
FAN. EXTEND HOOD COLLAR. BALANCE TO AIRFLOW RATE SCHEDULED ON M601. C
CONTRACTOR FOR FAN CONTROLS BETWEEN HOOD AND FAN. RE: GT INSTALL DRA

Date: 3/31/2026