Report By:

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

Report: TAB Report

Function: Test, Adjust, & Balance

Date: 01/22/2026

Completed By: National TAB

PROJECT

02-02-26 QT #1044 KANNAPOLIS, NC

2790 LANE STR

KANNAPOLIS, NC

Client

QUIKTRIP

4705 SOUTH 129TH EAST AVENUE

TULSA, OK 74134

National TAB

Project: 02-02-26 QT #1044 KANNAPOLIS, NC

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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

- Hood End Panels Not Installed

02-02-26 QT #1044 KANNAPOLIS, NC

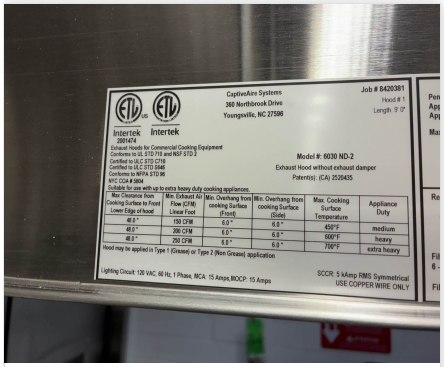
Project Issue Information

Issue Name : Hood End Panels Not Installed

Description : The hood end panels are not installed as per the Hood Schedule.

Created By :	National TAB	**Assigned To :**	National TAB - Dan Hertenstein
Status :	Open		
Priority :	Low	**Asset Tag :**	HD1
Originated Date :	02/05/2026 - Alex Bauer - National TAB		

Project Issue File Details



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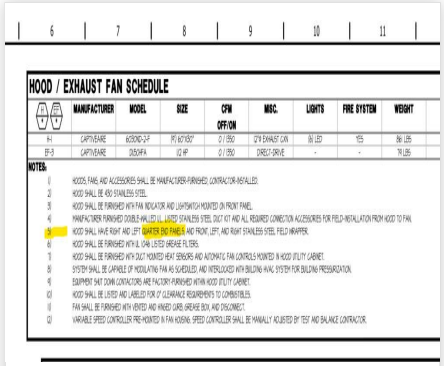

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NATIONAL TAB

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	870	883	420	396				
RTU-2	SALES	870	897	420	438				
RTU-3	BOH/KITCHEN	870	862	420	424				
RTU-4	STORAGE	100	98	100	98				
EF-1	MEN'S RR					600	572	600	572
EF-2	WOMEN'S RR					400	386	400	386
EF-3	HOOD					1350	1432	0	0
TOTALS		2710	2740	1360	1356	2350	2390	1000	958

HOODS ON

NET AIRFLOW CALCULATION

TOTALS	DESIGN	ACTUAL
TOTAL OA	2710	2740
TOTAL EXHAUST	2350	2390
NET AIRFLOW	360	350

DOOR TESTED	BUILDING PRESSURE MEASUREMENTS
FRONT	0.0101
SIDE	0.0055
REAR	0.0011
AVERAGE	**0.0056**

HOODS OFF

NET AIRFLOW CALCULATION

TOTALS	DESIGN	ACTUAL
TOTAL OA	1360	1356
TOTAL EXHAUST	1000	958
NET AIRFLOW	360	398

DOOR TESTED	BUILDING PRESSURE MEASUREMENTS
FRONT	0.0041
SIDE	0.0066
REAR	0.0036
AVERAGE	**0.0048**

NOTES:

See issues list.

CheckList List

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

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CheckList Information

Name :	01: RTU’s/AHU’s	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	01/22/2026 - Trinity Dodds - National TAB		
Completed Date :	02/05/2026 - Alex Bauer - 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:	

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CheckList Information

Name :	02: Exhaust Fans	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	01/22/2026 - Trinity Dodds - National TAB		
Completed Date :	02/05/2026 - Alex Bauer - 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:	

Notes/Comments :

See issues list.

Date :02/05/2026

02-02-26 QT #1044 KANNAPOLIS, NC

CheckList Information

Name :	03: Hoods	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	01/22/2026 - Trinity Dodds - National TAB		
Completed Date :	02/05/2026 - Alex Bauer - 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?	Fail
Comment:	

Notes/Comments :

See issues list.

Date :02/05/2026

02-02-26 QT #1044 KANNAPOLIS, NC

CheckList Information

Name :	04: Final Tests	**Status :**	Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	01/22/2026 - Trinity Dodds - National TAB		
Completed Date :	02/05/2026 - Alex Bauer - National TAB		

CheckList Item Details

FINAL CHECKS

HOOD CAPTURE TEST

List kitchen equipment turned on for testing

Comment:

OVEN, FRYER.

List smoke candle type used

Comment:

SMOKE PELLET.

Smoke test capture % - Perimeter of hood

Comment:

100%

Smoke test capture % - Top of cooking surface

Comment:

100%

WITNESS

Date test was completed	02/05/2026

Comment:

TAB tech name / Firm

Comment:

ALEX BAUER/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:

See issues list.

National TAB

Project: 02-02-26 QT #1044 KANNAPOLIS, NC

System/Unit: AHU/RTU

Asset: RT-1 AREA:SALES FLOOR

Unit Data	
	Actual
MFG	AAON
Serial Num	201612-ANEK15007
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	19.5X46.5X2

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

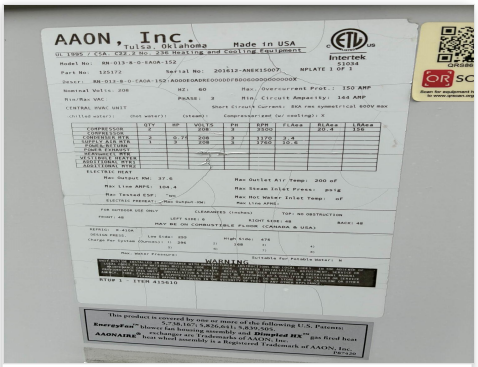
Test Data		
	Design	**Actual**
SF CFM	4200	4236
SF RPM	-	968
OA CFM (Hoods On)	870	883
OA CFM (Hoods Off)	420	396
RL Voltage	-	79.9 VFD
RL Amperage	-	7.50 VFD
VFD Max SetPt	-	33 Hz
OA Damper Position (Hoods On)	-	46%
OA Damper Position (Hoods Off)	-	35%

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.38”
Fan Suction SP	-	-0.54”
Fan Discharge SP	-	0.35”
Total ESP	-	0.73”
Fan Total SP	-	0.89”

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

Completed By: Alex Bauer on 02/05/2026

Unit Data - PHOTO LOG



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Project: 02-02-26 QT #1044 KANNAPOLIS, NC

System/Unit: AHU/RTU

Asset: RT-2 AREA:SALES FLOOR

Unit Data	
	Actual
MFG	AAON
Serial Num	201612-ANEK15008
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	19.5X46.5X2

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	3958
SF RPM	-	997
OA CFM (Hoods On)	870	897
OA CFM (Hoods Off)	420	438
RL Voltage	-	86.1 VFD
RL Amperage	-	7.63 VFD
VFD Max SetPt	-	34 Hz
OA Damper Position (Hoods On)	-	46%
OA Damper Position (Hoods Off)	-	29%

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.37”
Fan Suction SP	-	-0.53”
Fan Discharge SP	-	0.39”
Total ESP	-	0.76”
Fan Total SP	-	0.92”

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

Completed By: Alex Bauer on 02/05/2026

Unit Data - PHOTO LOG

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Project: 02-02-26 QT #1044 KANNAPOLIS, NC

System/Unit: AHU/RTU

Asset: RT-3 AREA:KITCHEN

Unit Data	
	Actual
MFG	AAON
Serial Num	201612-ANEK15009
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	19.5X46.5X2

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	4153
SF RPM	-	1179
OA CFM (Hoods On)	870	862
OA CFM (Hoods Off)	420	424
RL Voltage	-	125 VFD
RL Amperage	-	8.79 VFD
VFD Max SetPt	-	40.2 Hz
OA Damper Position (Hoods On)	-	46%
OA Damper Position (Hoods Off)	-	32%

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.55”
Fan Suction SP	-	-0.73”
Fan Discharge SP	-	0.40”
Total ESP	-	0.95”
Fan Total SP	-	1.13”

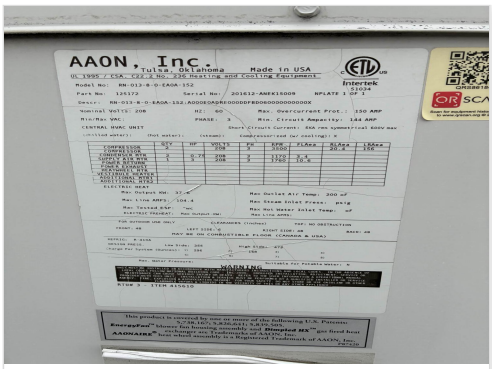
General	
	Actual
Fan Rotation Correct	YES
Unit Filters Clean	YES
Condensate Drain Installed	YES

Completed By: Alex Bauer on 02/05/2026

Notes:
[1] DAMPERS FOR 3-5, 6, AND 7 ARE NOT ACCESSIBLE. COULD NOT BALANCE TO DESIGN. NOT ANTICIPATED TO CAUSE ANY ISSUE. DIFFUSERS SERVE BOH.

Written By: Michael McDonnell on 02/11/2026

Unit Data - PHOTO LOG



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Project:02-02-26 QT #1044 KANNAPOLIS, NC

AHU/RTU

Diffuser Supply (GRD)

RT-3/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	722	722	722	90.3
SGRD2	SUPPORT SERVICE	SI	12"	800	1	804	804	804	100.5
SGRD3	SUPPORT SERVICE	SI	12"	800	1	875	875	875	109.4
SGRD4	SUPPORT SERVICE	SI	12"	800	1	739	639	739	92.4
SGRD5	WORKROOM	ES	8"	250	1	279	279	279	111.6
SGRD6	DOCK	ES	12"	600	1	504	428	504	84.0
SGRD7	DOCK	ES	8"	150	1	230	238	230	153.3
Total				4200		4153	3985	4153	98.88%

Asset	Notes	Date	Written By
SGRD5	Damper inaccessible.	02/05/2026	Alex Bauer
SGRD6	Damper inaccessible.	02/05/2026	Alex Bauer
SGRD7	Damper inaccessible.	02/05/2026	Alex Bauer

National TAB

Project: 02-02-26 QT #1044 KANNAPOLIS, NC

System/Unit: AHU/RTU

Asset: RT-4 AREA:STORAGE

Unit Data	
	Actual
MFG	AAON
Serial Num	201608-AYEF02785
Model Num	RQ-006-8-V-EA09-132
Num OA Filters 1	1
OA Filter Size 1	12X17
Num Final Filter 1	1
Final Filter Size 1	19.5X40X2

Motor Data	
	Actual
Motor MFG	NA
Frame	NA
Horsepower	2
Motor Rpm	1760
Phase	3
Rated Voltage	208
Rated Amperage	7.5

Test Data		
	Design	**Actual**
SF CFM	1250	1169
SF RPM	-	1203
OA CFM (Hoods On)	100	98
OA CFM (Hoods Off)	100	98
RL Voltage	-	122 VFD
RL Amperage	-	3.32 VFD
VFD Max SetPt	-	41 Hz
OA Damper Position (Hoods On)	-	46%
OA Damper Position (Hoods Off)	-	46%

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.49”
Fan Suction SP	-	-0.62”
Fan Discharge SP	-	0.75”
Total ESP	-	1.24”
Fan Total SP	-	1.37”

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

Completed By: Alex Bauer on 02/05/2026

Unit Data - PHOTO LOG

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Project: 02-02-26 QT #1044 KANNAPOLIS, NC

System/Unit: FAN - Exhaust

Asset: EF1 AREA:MEN'S RR/SUPPORT SERVICE

Unit Data		
	Design	**Actual**
MFG	NA	COOK
Model Num	NA	120 ACE 120C15D
Serial Num	-	410SG52691-00/0007601
Type	-	DOWNBLAST
Configuration	-	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	QUEACE
Frame	-	48Y
Horsepower	-	0.25
Motor Rpm	-	1300
Phase	-	1
Voltage (rated)	-	115
Amperage (rated)	-	3.3
Service Factor	-	NA

Test Data		
	Design	**Actual**
CFM	600	572
Fan RPM	-	DD
Fan Rotation	-	CCW
Motor RPM	-	DD
System SetPt	-	65%
RL Voltage	-	NA
RL Amperage	-	0.385
Total ESP	-	0.21”
Fan Inlet SP	-	-0.21”
Fan Discharge SP	-	ATM

Completed By: Alex Bauer on 02/05/2026

Unit Data - PHOTO LOG

02/05/2026

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Diffuser Ret/Exh (GRD)

EF1/MEN'S RR/SUPPORT SERVICE

Asset									
Asset Name	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
EGRD1	SUPPORT SERVICE	RI	8"	150	1	163	127	163	108.7
Total				150		163	127	163	108.67%

National TAB

Project: 02-02-26 QT #1044 KANNAPOLIS, NC

System/Unit: FAN - Exhaust

Asset: EF2 AREA:WOMEN'S RR

Unit Data		
	Design	**Actual**
MFG	NA	COOK
Model Num	NA	90 ACEH 90C15DH
Serial Num	-	410SG26655-00/0006315
Type	-	DOWNBLAST
Configuration	-	VERTICAL

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

Test Data		
	Design	**Actual**
CFM	400	386
Fan RPM	-	DD
Fan Rotation	-	CCW
Motor RPM	-	DD
System SetPt	-	LOW
RL Voltage	-	NA
RL Amperage	-	0.549
Total ESP	-	0.24”
Fan Inlet SP	-	-0.24”
Fan Discharge SP	-	ATM

Completed By: Alex Bauer on 02/05/2026

Unit Data - PHOTO LOG

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Project: 02-02-26 QT #1044 KANNAPOLIS, NC

System/Unit: FAN - Exhaust

Asset: EF3 AREA:KITCHEN HD

Unit Data		
	Design	**Actual**
MFG	NA	CAPTIVEAIRE
Model Num	NA	DU50HFA
Serial Num	-	8420381
Type	UPBLAST	UPBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	TELCO GREEN
Frame	-	NA
Horsepower	1/2	0.50
Motor Rpm	-	1800
Phase	1	1
Voltage (rated)	208	208
Amperage (rated)	-	NA
Service Factor	-	NA

Test Data		
	Design	**Actual**
CFM	1350	1432
Fan RPM	-	1475
Fan Rotation	-	CCW
Motor RPM	-	1475
System SetPt	-	65.6 Hz
RL Voltage	-	NA
RL Amperage	-	NA
Total ESP	0.75"	0.72”
Fan Inlet SP	-	-0.72”
Fan Discharge SP	-	ATM

Completed By: Alex Bauer on 02/05/2026

Unit Data - PHOTO LOG

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National TAB

Project: 02-02-26 QT #1044 KANNAPOLIS, NC

System/Unit: Kitchen Hood Type I

Asset: HD1 AREA:GRIDDLE

Unit Data		
	Design	**Actual**
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	6030ND-2	6030ND-2
Job / Serial Num	-	8420381
Type	TYPE I CANOPY	TYPE I CANOPY
Hood length	108"	108"
Hood Width	60"	60"

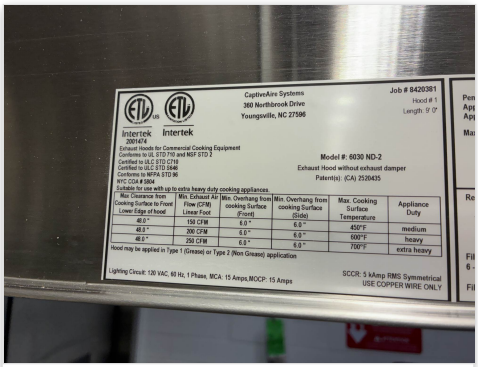
Test Data Exhaust		
	Design	**Actual**
Filter Type	CAPTRATE SOLO FILTER	BAFFLE FILTERS
Filter Size 1	16X20	16X20
Filter Qty 1	6	6
Filter AK factor size 1	2.08	2.08
Filter Total AK Area	12.48	12.48
Filter1 FPM	-	108
Filter2 FPM	-	111
Filter3 FPM	-	118
Filter4 FPM	-	131
Filter5 FPM	-	128
Filter6 FPM	-	99
Filter Ave FPM(corr)	-	115
CFM	1350	1432

Cooking Equipment	
	Actual
Item 1	OVEN
Item 2	FRYER

Completed By: Alex Bauer on 02/05/2026

Unit Data - PHOTO LOG

02/05/2026



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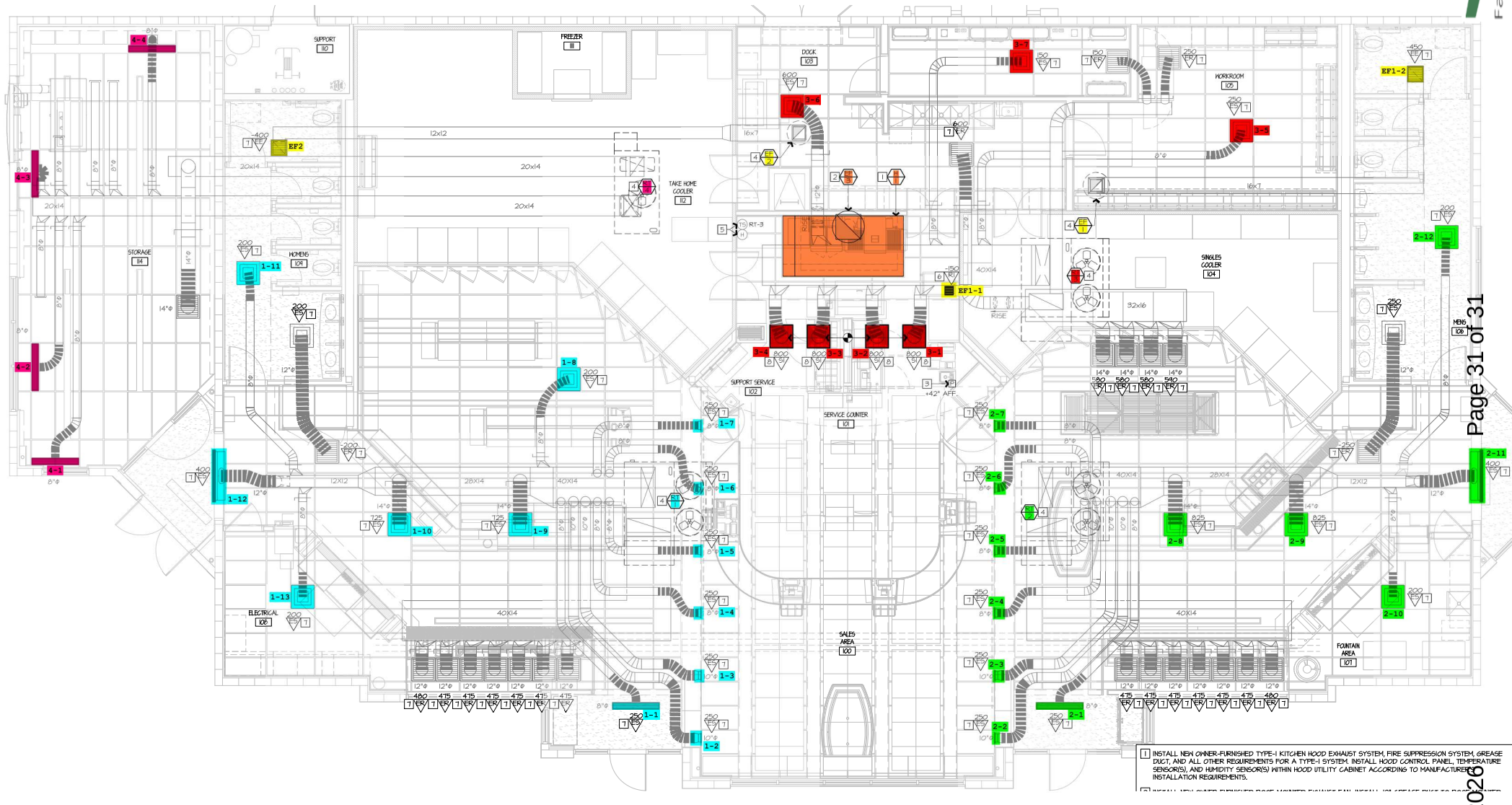

Date: 2/11/2026