

Report By:

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Report: TAB Report
Function: Test, Adjust, & Balance
Date: 03/24/2026
Completed By: National TAB

PROJECT
03-23-26 QT #1749 CARTERSVILLE, GA

5619 HWY 20

CARTERSVILLE, GA

Client

QUIKTRIP
4705 SOUTH 129TH EAST AVENUE
TULSA, OK 74134

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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.

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	846	350	364				
RTU-2	SALES	800	743	350	337				
RTU-3	BOH/KITCHEN	800	839	350	371				
EF-1	RR/JANITOR					750	721	750	721
EF-3	HOOD					1350	1310	0	0
TOTALS		2400	2428	1050	1072	2100	2031	750	721

HOODS ON

NET AIRFLOW CALCULATION

TOTALS	DESIGN	ACTUAL
TOTAL OA	2400	2428
TOTAL EXHAUST	2100	2031
NET AIRFLOW	300	397

DOOR TESTED	BUILDING PRESSURE MEASUREMENTS
FRONT	0.0107
SIDE	0.0114
REAR	0.0054
AVERAGE	0.0092

HOODS OFF

NET AIRFLOW CALCULATION

TOTALS	DESIGN	ACTUAL
TOTAL OA	1050	1072
TOTAL EXHAUST	750	721
NET AIRFLOW	300	351

DOOR TESTED	BUILDING PRESSURE MEASUREMENTS
FRONT	0.0043
SIDE	0.0091
REAR	0.0064
AVERAGE	0.0066

NOTES:

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 : 03/06/2026 - Trinity Dodds - National TAB
Completed Date : 03/24/2026 - Sagar Patel - 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 : 03/06/2026 - Trinity Dodds - National TAB

Completed Date : 03/24/2026 - Sagar Patel - 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:



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CheckList Information

Name : 03: Hoods **Status :** Completed
Assigned Organization : National TAB **Asset :**
Requesting Organization : National TAB
Created Date : 03/06/2026 - Trinity Dodds - National TAB
Completed Date : 03/24/2026 - Sagar Patel - 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? N/A

Comment:



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CheckList Information

Name : 04: Final Tests **Status :** Completed

Assigned Organization : National TAB **Asset :**

Requesting Organization : National TAB

Created Date : 03/06/2026 - Trinity Dodds - National TAB

Completed Date : 03/24/2026 - Sagar Patel - National TAB

CheckList Item Details

FINAL CHECKS

HOOD CAPTURE TEST

List kitchen equipment turned on for testing

Comment:

Fryer and Oven

List smoke candle type used

Comment:

45 Second Smoke Emitter

Smoke test capture % - Perimeter of hood

Comment:

95%

Smoke test capture % - Top of cooking surface

Comment:

100%

WITNESS

Date test was completed

03/24/2026

Comment:

Video

TAB tech name / Firm

Comment:

Sagar Patel / National TAB Intelligence

Site super name / Firm

Comment:

Not on Site

Owner representative name / Firm (if Applicable)

Comment:

N/A

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:



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Project: 03-23-26 QT #1749 CARTERSVILLE, GA

System/Unit: AHU/RTU

Asset: RTU-1

AREA:SALES FLOOR

Unit Data	
	Actual
MFG	AAON
Serial Num	202407-ANEK31584
Model Num	RN-013-8-0-HA0A-152
Num OA Filters 1	1
OA Filter Size 1	22X45
Num Final Filter 1	4
Final Filter Size 1	20X25X2

Motor Data	
	Actual
Motor MFG	N/L
Frame	N/L
Horsepower	3
Motor Rpm	1760
Phase	3
Rated Voltage	208
Rated Amperage	10.6

Test Data		
	Design	Actual
SF CFM	4200	4346
SF RPM	-	1355
OA CFM (Hoods On)	800	846
OA CFM (Hoods Off)	350	364
RL Voltage	-	159 VFD
RL Amperage	-	7.76 VFD
VFD Max SetPt	-	46.2 Hz
VFD Min SetPt	-	24 Hz
OA Damper Position (Hoods On)	-	46%
OA Damper Position (Hoods Off)	-	26%

Performance Data	
	Actual
MA Plenum SP	-0.54"
Fan Suction SP	-0.77"
Fan Discharge SP	0.38"
Total ESP	0.92"
Fan Total SP	1.15"

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

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Unit Data - PHOTO LOG



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Project: 03-23-26 QT #1749 CARTERSVILLE, GA

System/Unit: AHU/RTU

Asset: RTU-2

AREA:SALES FLOOR

Unit Data	
	Actual
MFG	AAON
Serial Num	202407-ANEK31582
Model Num	RN-013-8-0-HA0A-152
Num OA Filters 1	1
OA Filter Size 1	22X45
Num Final Filter 1	4
Final Filter Size 1	20X25X2

Motor Data	
	Actual
Motor MFG	N/L
Frame	N/L
Horsepower	3
Motor Rpm	1760
Phase	3
Rated Voltage	208
Rated Amperage	10.6

Test Data		
	Design	Actual
SF CFM	4200	4314
SF RPM	-	1338
OA CFM (Hoods On)	800	743
OA CFM (Hoods Off)	350	337
RL Voltage	-	159 VFD
RL Amperage	-	9.34 VFD
VFD Max SetPt	-	45.6 Hz
VFD Min SetPt	-	24 Hz
OA Damper Position (Hoods On)	-	46%
OA Damper Position (Hoods Off)	-	26%

Performance Data	
	Actual
MA Plenum SP	-0.43"
Fan Suction SP	-0.76"
Fan Discharge SP	0.35"
Total ESP	0.78"
Fan Total SP	1.11'

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

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Unit Data - PHOTO LOG



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Project: 03-23-26 QT #1749 CARTERSVILLE, GA

System/Unit: AHU/RTU

Asset: RTU-3

AREA:BOH/KITCHEN

Unit Data	
	Actual
MFG	AAON
Serial Num	202407-ANEK31583
Model Num	RN-013-8-0-HA0A-152
Num OA Filters 1	1
OA Filter Size 1	22X45
Num Final Filter 1	4
Final Filter Size 1	20X25X2

Motor Data	
	Actual
Motor MFG	N/L
Frame	N/L
Horsepower	3
Motor Rpm	1760
Phase	3
Rated Voltage	208
Rated Amperage	10.6

Test Data		
	Design	Actual
SF CFM	4200	4122
SF RPM	-	1355
OA CFM (Hoods On)	800	839
OA CFM (Hoods Off)	350	371
RL Voltage	-	159 VFD
RL Amperage	-	7.82 VFD
VFD Max SetPt	-	46.2 Hz
VFD Min SetPt	-	24 Hz
OA Damper Position (Hoods On)	-	46%
OA Damper Position (Hoods Off)	-	26%

Performance Data	
	Actual
MA Plenum SP	-0.48"
Fan Suction SP	-0.72"
Fan Discharge SP	0.41"
Total ESP	0.89
Fan Total SP	1.13"

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

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Unit Data - PHOTO LOG



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Project:03-23-26 QT #1749 CARTERSVILLE, GA

AHU/RTU

Diffuser Supply (GRD)

RTU-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	838	756	791	98.9
SGRD2	SUPPORT SERVICE	SI	12"	800	1	702	759	759	94.9
SGRD3	SUPPORT SERVICE	SI	12"	800	1	611	744	744	93.0
SGRD4	SUPPORT SERVICE	SI	12"	800	1	776	743	798	99.8
SGRD5	DOCK	ES	10"	400	1	597	457	423	105.8
SGRD6	WORKROOM	ES	10"	400	1	578	476	426	106.5
SGRD7	WORKROOM	ES	8"	200	1	43	184	181	90.5
Total				4200		4145	4119	4122	98.14%

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Project: 03-23-26 QT #1749 CARTERSVILLE, GA

System/Unit: FAN - Exhaust

Asset: EF-1

AREA:RESTROOMS/JANITOR

Unit Data	
	Actual
MFG	CAPTIVEAIRE
Model Num	DR50HFA
Serial Num	6936246
Type	DOWNBLAST
Configuration	VERTICAL

Motor Data	
	Actual
Motor MFG	TELECO GREEN
Frame	N/L
Horsepower	0.50
Motor Rpm	1800
Phase	1
Voltage (rated)	115
Amperage (rated)	8.4
Service Factor	N/L

Test Data		
	Design	Actual
CFM	750	721
Fan RPM	-	668
Fan Rotation	-	CCW
Motor RPM	-	668
System SetPt	-	36P
RL Voltage	-	[1]
RL Amperage	-	[1]
Total ESP	-	0.16"
Fan Inlet SP	-	-0.16"
Fan Discharge SP	-	ATM

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Notes:
[1] UNABLE TO READ VOLTS AND AMPS SAFELY

Written By: Sagar Patel on 03/24/2026

Unit Data - PHOTO LOG



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Project:03-23-26 QT #1749 CARTERSVILLE, GA

Diffuser Ret/Exh (GRD)

EF-1/RESTROOMS/JANITOR

Asset									
Asset Name	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
EGRD4	SUPPORT SERVICE	RI	8"	150	1	147	147	147	98.0
Total				150		147	147	147	98%

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Project: 03-23-26 QT #1749 CARTERSVILLE, GA

System/Unit: FAN - Exhaust

Asset: EF-3

AREA: KITCHEN HOOD

Unit Data		
	Design	Actual
MFG	NA	CAPTIVEAIRE
Model Num	NA	DU50HFA
Serial Num	-	7657564
Type	UPBLAST	UPBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	Actual
Motor MFG	-	TELECO GREEN
Frame	-	N/L
Horsepower	0.5	0.50
Motor Rpm	-	1800
Phase	1	1
Voltage (rated)	208	208
Amperage (rated)	-	3.8
Service Factor	-	N/L

Test Data		
	Design	Actual
CFM	1350	1310
Fan RPM	-	1196
Fan Rotation	-	CCW
Motor RPM	-	1196
System SetPt	-	52.8 Hz (66% on MSC)
RL Voltage	-	210
RL Amperage	-	1.8
Total ESP	0.75"	0.36"
Fan Inlet SP	-	-0.36"
Fan Discharge SP	-	ATM

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Unit Data - PHOTO LOG



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Project: 03-23-26 QT #1749 CARTERSVILLE, GA

System/Unit: Kitchen Hood Type I

Asset: HD-1

AREA: KITCHEN HOOD

Unit Data		
	Design	Actual
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	6030ND-2-F	6030ND-2-F
Job / Serial Num	-	7657564
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	-	98
Filter2 FPM	-	108
Filter3 FPM	-	106
Filter4 FPM	-	112
Filter5 FPM	-	107
Filter6 FPM	-	99
Filter Ave FPM(corr)	-	105
CFM	1350	1310

Cooking Equipment	
	Actual
Item 1	FRYER
Item 2	OVEN

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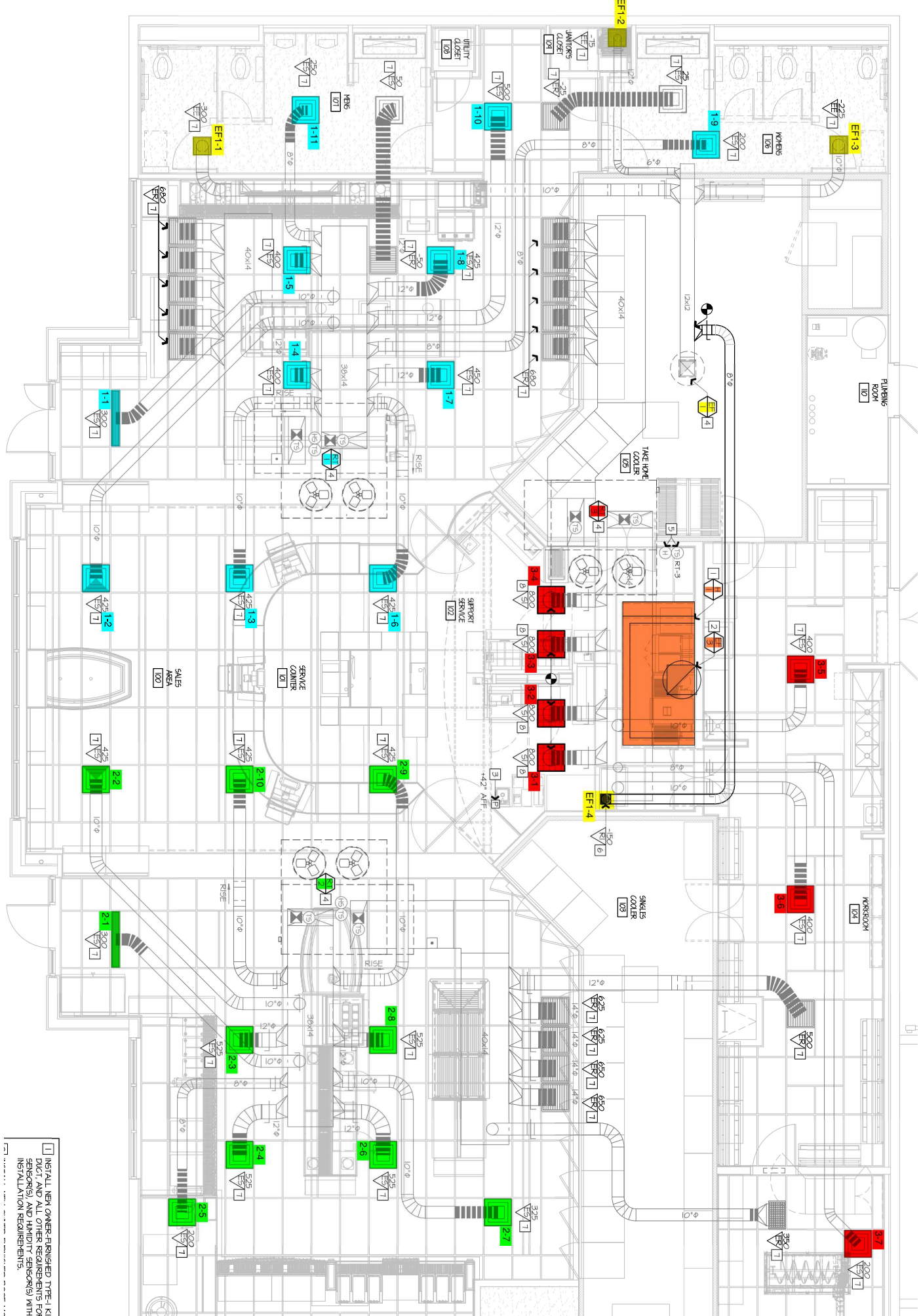
Unit Data - PHOTO LOG



03/24/2026



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□ INSTALL NEW OWNER-FURNISHED TYPE-KITCHEN HOOD EXHAUST DUCT AND ALL OTHER REQUIREMENTS FOR ALL 100-157-157 SENSORS) AND HANGING SENSORS) WITH H200 UTILITIES INSTALLATION REQUIREMENTS.