

**Report By:**

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



**Report: TAB Report**  
**Function: Test, Adjust, & Balance**  
**Date: 07/09/2025**  
**Completed By: National TAB**

# **PROJECT**

**07-07-25 WAWA #6608 FISHERVILLE, VA**

GOOSE CREEK RD & TINKLING SPRING RD

FISHERVILLE, VA 22939

**Client**

Wawa  
260 West Baltimore Pike

Wawa, PA 19063

# National TAB

Project: 07-07-25 WAWA #6608 FISHERVILLE, VA

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## Project Summary

The summary below provides a quick understanding of our scope of work and general testing procedures. Enclosed in the report is further detail 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) w/ Diffusers

Each of the RTU's were measured at their terminal devices or via traverse to establish a total flow for that unit. Each RTU was adjusted to within tolerance of the engineer's design flow. Each outlet was then adjusted to within tolerance of the design flow. Outside air was measured by reading the intake air opening with a velocity grid and multiplying by the free area. The outside air damper was adjusted until the airflow was within the design requirements. Any equipment that fell outside of that tolerance is noted throughout the report.

### General Exhaust Fans w/ Grilles

The general exhaust fans were measured by reading each air device with a flow hood. The total airflow for each fan is equivalent to the sum of these readings. Fan speed was then adjusted so that the airflow was within tolerance of design. Each terminal device was balanced to within tolerance of the design volume using the installed volume dampers. Any equipment that fell outside of this tolerance is noted throughout the report.

### Ceiling Exhaust Fans

The ceiling exhaust fans were measured using a flow hood. If speed adjustment was provided, the fan speed was adjusted to within design tolerance. Any equipment that fell outside of this tolerance is noted throughout the report.

### 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.

## Issue List

- EF-3
- RTU-2 Smoke Detector



**07-07-25 WAWA #6608 FISHERVILLE, VA**

**Project Issue Information**

**Issue Name :** EF-3  
**Description :** EF-3 airflow was measured by traversing the fan's duct, airflow was found to be in design and static pressure is in design. Only concern is the fan is loud in the room recommend having mechanical service fan to check if there could be anything done about the sound.  
**Created By :** National TAB                      **Assigned To :** National TAB - Kristopher Passley  
**Status :** Open  
**Priority :** InfoOnly                                      **Asset Tag :**  
**Originated Date :** 07/09/2025 - Kristopher Passley - National TAB

Project Issue File Details



07/09/2025



07/09/2025

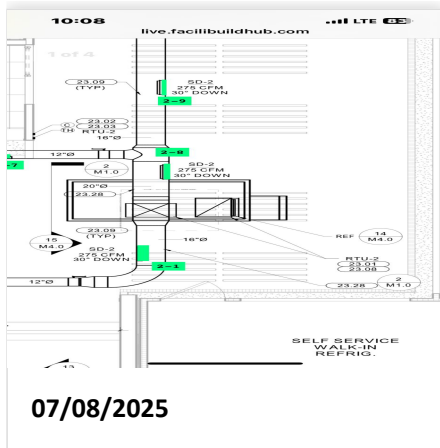


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Project Issue Information

**Issue Name :** RTU-2 Smoke Detector  
**Description :** Smoke detector not located on RTU-2 supple side. Recommend installing as per plan.  
**Created By :** National TAB **Assigned To :** National TAB - Kristopher Passley  
**Status :** Open  
**Priority :** High **Asset Tag :**  
**Originated Date :** 07/08/2025 - Kristopher Passley - National TAB

Project Issue File Details



KEYNOTES	
#	NOTE
23.01	SUPPLY AND RETURN DUCT UP TO RTU ON ROOF. TRANSITION AS REQUIRED. FIELD VERIFY DUCT ROUTING PRIOR TO FABRICATION. PROVIDE FLEX CONNECTION FOR VIBRATION ISOLATION.
23.02	MOUNT REMOTE TEMPERATURE/HUMIDITY SENSOR IN AREA SHOWN AT 60" AFF. COORDINATE EXACT LOCATION WITH TENANT CONSTRUCTION MANAGER. THE ENTIRE CONTROL SYSTEM SHALL BE PROVIDED COMPLETE IN EVERY RESPECT BY THE MECHANICAL CONTRACTOR.
23.03	WALL MOUNTED CO2 SENSOR TO RTU-2. SENSOR TO MONITOR CO2 LEVELS THROUGH REMOTE BAS. SENSOR BY WAWA BAS VENDOR.
23.04	UNDERCUT DOOR 1" FOR AIR PASSAGE.
23.05	EXHAUST DUCT ROUTED TO FAN ON ROOF. COORDINATE ROUTING OF DUCT WITH ALL DISCIPLINES. PROVIDE TRANSITIONS AND FITTING AS REQUIRED.
23.07	PROVIDE A CABINET STYLE EXHAUST FAN. EXHAUST DUCT SHALL BE GALVANIZED STEEL. PROVIDE SIDEWALL VENT WITH SCREEN AND FLAPPER DAMPER. CROWN MODEL 5403R EQUAL. EXHAUST FAN SHALL MAINTAIN REQUIREMENTS. FIELD VERIFY AIR INTAKE. MEET REQUIREMENTS PRIOR TO BID. SEAL ALL PENETRATION WEATHER TIGHT. PRE-PAINT VENT COVER TO MATCH SIDING.
23.08	HVAC UNIT MANUFACTURER TO PROVIDE 200V SMOKE DETECTORS FOR SUPPLY AND RETURN WITH AUXILIARY CONTACTS AS SHOWN. UPON ACTIVATION THE SMOKE DETECTORS SHALL SHUT DOWN THE AIR DISTRIBUTION SYSTEM TO WHICH IT IS CONNECTED AND ACTIVATE A VISIBLE AND AUDIBLE SUPERVISORY SIGNAL AT A CONSTANTLY ATTENDED LOCATION VIA THE SPRINKLER/FIRE ALARM PANEL. SMOKE DETECTORS SHALL ALSO BE FURNISHED WITH WALL MOUNTED REMOTE TEST STATION WITH KEYS RESET. REMOTE SD TEST SUPERVISORY SIGNAL SHALL BE LED TYPE WITH AUDIBLE BEEPING ALERT.
23.09	PROVIDE MOBIL AIRFLOW'S DOUBLE WALL INSULATED SPIRAL DUCT FOR HIGH TEMPERATURE DUCT AND FITTINGS WITH SUBMITTAL DRAWING TYPE. FLANGES CHANGE CONNECTIONS ARE NOT ALLOWED.
23.11	PROVIDE REMOTE TEST STATION FOR SMOKE DETECTORS WITH AUDIBLE AND VISUAL ALARM WITH KEYS RESET. MOUNT TEST STATION 48 INCHES AFF. MOUNT AUDIBLE AND VISUAL ALARM IN CONSTANTLY ATTENDED LOCATION. CONSTANTLY ATTENDED LOCATION IS NOT ALLOWED WHERE DUCT SMOKE DETECTOR ACTIVATES THE BUILDING'S ALARM SYSTEM.
23.28	ROUTE DUCTWORK AS HIGH AS POSSIBLE PARALLEL TO STRUCTURE.
23.29	ROUTE DUCTWORK WITHIN THE JOIST SPACE. COORDINATE THRU WEBBING. REF 3-411.0 TYP.



### AIR BALANCE SCHEDULE

UNIT	AREA SERVED	HVAC SUPPLY		HVAC RETURN		HVAC OUTDOOR		OA %		HOOD MAKE-UP		HOOD EXHAUST		GENERAL EXH.	
		DESIGN	ACTUAL	DESIGN	ACTUAL	DESIGN	ACTUAL	DESIGN	ACTUAL	DESIGN	ACTUAL	DESIGN	ACTUAL	DESIGN	ACTUAL
RTU-1	BOH	4500	4520	3800	3820	700	700	15.6%	15.5%						
RTU-2	SALES	3400	3534	3020	3136	380	398	11.2%	11.3%						
RTU-3	FOH	2400	2378	2200	2177	200	201	8.3%	8.5%						
EF-1	RESTROOMS													375	373
EF-2	BOH													400	390
EF-3	TRASH ROOM													200	188
<b>TOTALS</b>		10300	10432	9020	9133	1280	1299			0	0	0	0	975	951

#### NET BUILDING AIRFLOW CALCULATION

TOTALS	DESIGN	ACTUAL
TOTAL OA	1280	1299
TOTAL EXHAUST	975	951
<b>NET AIRFLOW</b>	<b>305</b>	<b>348</b>

DOOR TESTED	BUILDING PRESSURE MEASUREMENTS (IN. H2O)
FRONT	0.006
SIDE	0.004
REAR	0.004
<b>AVERAGE</b>	<b>0.0047</b>

#### FINAL CHECKS

ACTUAL NET AIRFLOW COINCIDES WITH DESIGN: ✓

MEASURED PRESSURES COINCIDES WITH ACTUAL NET AIRFLOW: ✓

PRESSURE FALLS WITHIN IMC TOLERANCE OF +/-0.02" W.C. ✓

NOTES:

## CheckList List

- 01: RTU's/AHU's
- 02: LENNOX SETUP PARAMETERS
- 03: SENSOR WIRING (LENNOX)
- 04: EF'S
- 05: CLOSEOUT CHECKS



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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 :** 06/11/2025 - Tara Metcalf - National TAB

**Completed Date :** 07/10/2025 - Kristopher Passley - National TAB

CheckList Item Details

RTU's/AHU's

All diffusers and grilles are installed and match design?	Pass
---	------

Comment:

Clean filters installed?	Pass
--------------------------	------

Comment:

Economizers are assembled and functional?	Pass
---	------

Comment:

Motors are all operating below the FLA rating?	Pass
--	------

Comment:

Are belts tight?	N/A
------------------	-----

Comment:

If direct drive unit is the speed controller working?	Pass
---	------

Comment:

Is gas piping installed and valves turned on?	N/A
---	-----

Comment:

Condensate drains are installed?

Pass

Comment:

Unit free of noticeable noise and vibration

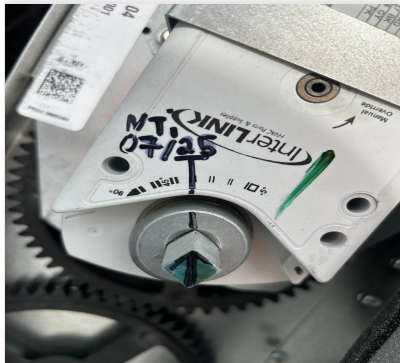
Pass

Comment:

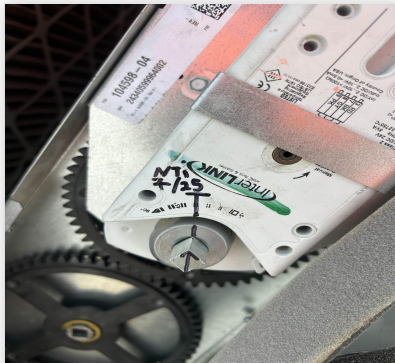
Final outside air damper position is marked with permanent marker?

Pass

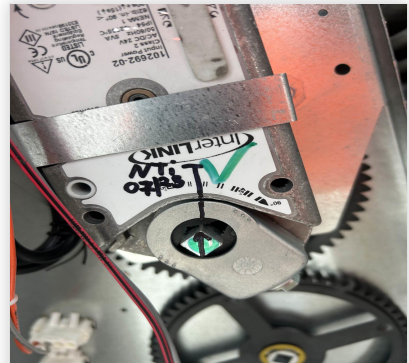
Comment:



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No alarms present?

Pass

Comment:

Any noticeable duct leakage?

Pass

Comment:

NONE

Total supply and OA flows are balanced within +/-5% and supply & return diffusers within +/-10%?

Pass

Comment:

IN TEST MODE, TEST THE FOLLOWING:

Cooling mode is operational? Record EAT/LAT for each unit:

**Comment:**

RTU-1 EAT 72 LAT 51 RTU-2 EAT 70 LAT 52 RTU-3 EAT 72 LAT 52

---

**Heating mode is operational? Record EAT/LAT for each unit:**

Pass

---

**Comment:**

RTU-1 NA RTU-2 EAT 72 LAT 82 RTU-3 EAT 73 LAT 92

---

**Dehumidification mode is operational? (Feel dehumidification coil with your hand. Is it hot?) Record EAT/LAT for each unit:**

Pass

---

**Comment:**

RTU-1 EAT 71 LAT 62 48% RTU-2 EAT 69 LAT 60 48% RTU-3 EAT 73 LAT 67 45%

---



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**CheckList Information**

**Name :** 02: LENNOX SETUP PARAMETERS **Status :** Completed  
**Assigned Organization :** National TAB **Asset :**  
**Requesting Organization :** National TAB  
**Created Date :** 06/11/2025 - Tara Metcalf - National TAB  
**Completed Date :** 07/10/2025 - Kristopher Passley - National TAB

**CheckList Item Details**

**UNIT ID CONFIGURATIONS**

**BACNET CONFIGURATION: GO TO SETTINGS>GENERAL>CONFIGURATION ID1 POSITION 5 SET TO "N".** Pass

**Comment:**

**NETWORK CONFIGURATION: GO TO SETUP>NETWORK INTEGRATION, SET TO BACNET IP** Pass

**Comment:**

**CONTROL MODE: SET CONTROL MODE TO ROOM SENSOR: CO2, TEMP & HUMIDITY (PER UNIT, AS NEEDED).** Pass

**Comment:**

**INDIVIDUAL PARAMETER CONFIGURATIONS (MECHANICAL CONTRACTOR TO DEFINE / AS APPLICABLE):**

**PARAMETER 105 DEHUMID MODE: 7 NO CONDITIONS** Pass

**Comment:**

**PARAMETER 106 DEHUMID SETPOINT: 50, THIS IS A CENTERED SET POINT (+/-)** Yes

**Comment:**

**PARAMETER 107 DEHUMID DEADBAND: 3 (DEFAULT) THIS IS THE ACTUAL +/- VALUE** Pass

Comment:

PARAMETER 117 CO2 DAMPER MAX OPEN: 50%

Pass

Comment:

PARAMETER 118 CO2 START OPEN PPM: 1500

Pass

Comment:

SET 1200 AS PER PLAN

PARAMETER 119 CO2 MAX OPEN PPM: 1500

Pass

Comment:

PARAMETER 137 OCCHET SET POINT: 68 (BACK UP)

Pass

Comment:

PARAMETER 131 SET TO THE SAME % AS THE MINMIUM OA DAMPER SETPOINT

Pass

Comment:

PARAMETER 139 OCC COOLING SET POINT: 72 (BACK UP)

Pass

Comment:

PARAMETER 154 OCC BLOWER MODE: ON-CONTINUOUS 1

Pass

Comment:

CFM VALUES / MSAV FAN SPEEDS (AIR BALANCER TO DEFINE / IF APPLICABLE):

OA DAMPER SET TO SAME POSITION IN ALL FAN SPEEDS?

Pass

Comment:

ALL FAN SPEEDS SET TO THE SAME CFM VALUE (ENTER SETPOINTS BELOW)

Pass

Comment:

HEAT CFM VALUE: PER THE HVAC SCHEDULE

Pass

Comment:

RTU-1 NA RTU-2 58% RTU-3 64%

**HIGH COOL CFM VALUE: THE HIGH COOL CFM VALUE**

Pass

**Comment:**

RTU-1 81% RTU-2 58% RTU-3 64%

**LOW COOL CFM VALUE: MATCH THE HIGH COOL CFM VALUE**

Pass

**Comment:**

RTU-1 81% RTU-2 58% RTU-3 64%

**VENTILATION CFM VALUE: MATCH THE HIGH COOL CFM VALUE**

Pass

**Comment:**

RTU-1 81% RTU-2 58% RTU-3 64%



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CheckList Information

**Name :** 03: SENSOR WIRING (LENNOX) **Status :** Completed

**Assigned Organization :** National TAB **Asset :**

**Requesting Organization :** National TAB

**Created Date :** 06/11/2025 - Tara Metcalf - National TAB

**Completed Date :** 07/09/2025 - Kristopher Passley - National TAB

CheckList Item Details

COMBINATION TEMPERATURE/HUMIDITY SENSOR

Sensors are installed where shown on the drawing? Pass

Comment:

2 conductor shielded cable has one wire landed to Vin, one to GND, and the shield wire is not connected. Pass

Comment:

For second shielded cable, one wire is landed to Vout and the shield wire is not connected. Pass

Comment:

Verify that the CORE or Prodigy controller is sensing a relative humidity (record the reading) Pass

Comment:



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CheckList Information

**Name :** 04: EF'S **Status :** Completed

**Assigned Organization :** National TAB **Asset :**

**Requesting Organization :** National TAB

**Created Date :** 06/11/2025 - Tara Metcalf - National TAB

**Completed Date :** 07/10/2025 - Kristopher Passley - National TAB

CheckList Item Details

EF's

Rotation is correct?	Pass
----------------------	------

Comment:

Belts are tight (if applicable)?	Pass
----------------------------------	------

Comment:

Speed controller installed and functional (if applicable)?	N/A
--	-----

Comment:

There is no major leakage around base of fan?	Pass
---	------

Comment:

Is the motor operating below the motor FLA rating?	Pass
--	------

Comment:

Back draft damper installed and can it fully open?	Pass
--	------

Comment:

Unit free of noticeable noise and vibration?	Pass
--	------

**Comment:**

---

**Total exhaust flow balanced within +/-5% and grilles are within +/-10%?**

Pass

---

**Comment:**

---



07-07-25 WAWA #6608 FISHERVILLE, VA

**CheckList Information**

**Name :** 05: CLOSEOUT CHECKS **Status :** Completed

**Assigned Organization :** National TAB **Asset :**

**Requesting Organization :** National TAB

**Created Date :** 06/11/2025 - Tara Metcalf - National TAB

**Completed Date :** 07/10/2025 - Kristopher Passley - National TAB

**CheckList Item Details**

**SPACE COMFORT**

**Is space free of drafting?** Pass

**Comment:**

**Is space comfortable in all areas?** Pass

**Comment:**

**Is the space free of ventilation noise?** Pass

**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)** Pass

**Comment:**

# National TAB

Project: 07-07-25 WAWA #6608 FISHERVILLE, VA

## System/Unit: AHU/RTU



Asset: RTU1

AREA:BOH

Unit Data		
	Design	Actual
MFG	LENNOX	LENNOX
Serial Num	-	5624L02336
Model Num	LGT150H4E	LCT150H4EN2Y
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	2
OA Filter Size 1	-	14 1/8"X22 7/8"
Num Final Filter 1	-	4
Final Filter Size 1	-	20"X25"X2"

Test Data		
	Design	Actual
SF CFM	4500	4520
SF RPM	-	1447
MOTOR RPM	-	1447
RA CFM	3800	3820
OA CFM	700	700
RL Voltage	-	211/209/212
RL Amperage	-	4.2/4.3/4.3
SF System SetPt	-	81%
RA Damper Position	-	69%
RA Damper Type	-	ECONOMIZER
OA Damper Position	-	29%
OA Damper Type	-	ECONOMIZER

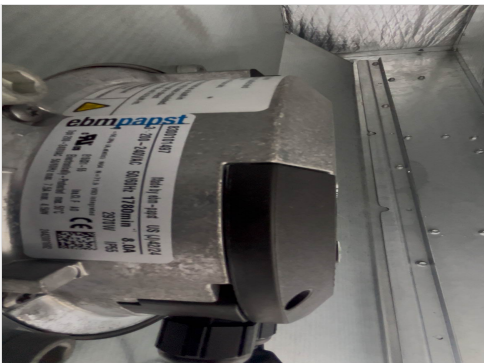
Motor Data		
	Design	Actual
Motor MFG	-	EBMPAPST
Frame	-	IP55
Horsepower	3.75	3.8
Motor Rpm	-	1780
Phase	3	3
Rated Voltage	208	200-240
Rated Amperage	-	8.0

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.31"
Fan Suction SP	-	-0.91"
Fan Discharge SP	-	-0.20"
Total ESP	.70"	0.51"
Fan Total SP	-	1.11"

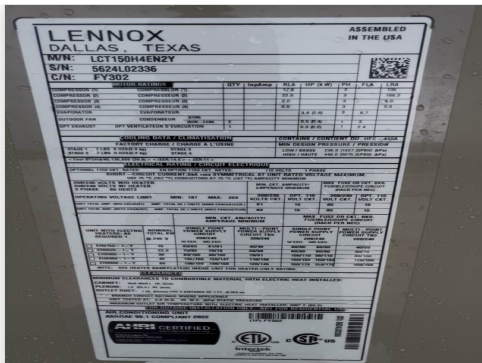
Drive Data	
	Actual
Motor Sheave SetPt	DD

Completed By: Kristopher Passley on 07/09/2025

### Unit Data - PHOTO LOG



07/09/2025



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# National TAB

Project:07-07-25 WAWA #6608 FISHERVILLE, VA  
AHU/RTU



**Diffuser Supply (GRD)**

**RTU1/BOH**

Asset									
Asset Name	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
SGRD1	TRASH/STAGING	SD1	10"	300	1	543	373	302	100.7
SGRD2	BOH	SD6	10"	400	1	522	493	399	99.8
SGRD3	FOOD SERVICE	SD6	10"	425	1	598	521	422	99.3
SGRD4	BOH	SD6	10"	500	1	671	622	504	100.8
SGRD5	FOOD SERVICE	SD6	10"	425	1	453	540	438	103.1
SGRD6	BOH	SD6	10"	400	1	426	499	404	101.0
SGRD7	BOH	SD6	10"	400	1	530	497	403	100.8
SGRD8	FOOD SERVICE	SD6	10"	425	1	470	548	444	104.5
SGRD9	FOOD SERVICE	SD6	10"	425	1	425	497	408	96.0
SGRD10	BOH	SD6	10"	425	1	432	505	409	96.2
SGRD11	ELECTRICAL ROOM	SD1	10"	375	1	448	477	387	103.2
Total				4500		5518	5572	4520	100.44%

**Diffuser Ret/Exh (GRD)**

**RTU1/BOH**

Asset									
Asset Name	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
EGRD1	BOH	RG1	14"	865	1	597	681	781	90.3
EGRD2	BOH	RG1	14"	865	1	645	741	785	90.8
EGRD3	BOH	RG1	14"	870	1	753	865	785	90.2
EGRD4	BOH	RG-1	16"	1200	1	1445	1156	1084	90.3
Total				3800		3440	3443	3435	90.39%

Completed By: Kristopher Passley on 07/11/2025

# National TAB

Project: 07-07-25 WAWA #6608 FISHERVILLE, VA

System/Unit: AHU/RTU



Asset: RTU2

AREA:SALES

Unit Data		
	Design	Actual
MFG	LENNOX	LENNOX
Serial Num	-	5624L01988
Model Num	LGT102H4E	LCT102H4EG2Y
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	2
OA Filter Size 1	-	14 1/8"X22 7/8"
Num Final Filter 1	-	4
Final Filter Size 1	-	20"X25"X2"

Test Data		
	Design	Actual
SF CFM	3400	3534
SF RPM	-	825
MOTOR RPM	-	825
RA CFM	3020	3136
OA CFM	380	398
RL Voltage	-	209/211/211
RL Amperage	-	1.9/2.1/2.0
SF System SetPt	-	58%
RA Damper Position	-	70%
RA Damper Type	-	ECONOMIZER
OA Damper Position	-	30%
OA Damper Type	-	ECONOMIZER

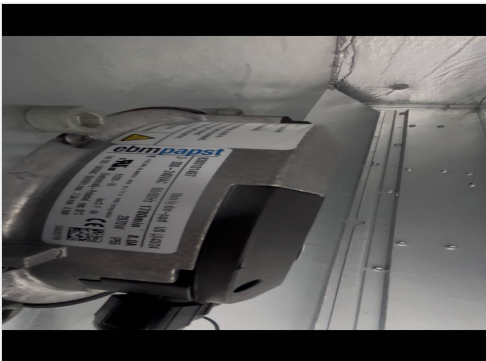
Motor Data		
	Design	Actual
Motor MFG	-	EBMPAPST
Frame	-	IP55
Horsepower	3.75	3.8
Motor Rpm	-	1780
Phase	3	3
Rated Voltage	208	200-240
Rated Amperage	-	8.0

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.18"
Fan Suction SP	-	-0.44"
Fan Discharge SP	-	0.41
Total ESP	1.00"	0.59"
Fan Total SP	-	0.85"

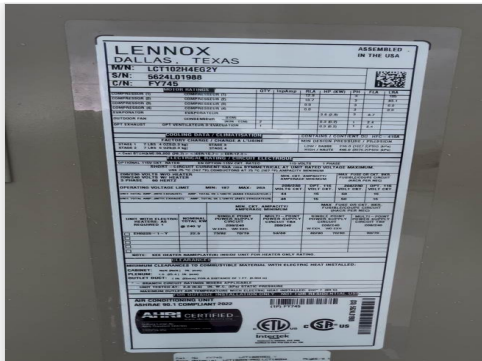
Drive Data	
	Actual
Motor Sheave SetPt	DD

Completed By: Kristopher Passley on 07/09/2025

## Unit Data - PHOTO LOG



07/09/2025



07/09/2025



07/09/2025

# National TAB

Project:07-07-25 WAWA #6608 FISHERVILLE, VA  
AHU/RTU



**Diffuser Supply (GRD)**

**RTU2/SALES**

Asset									
Asset Name	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
SGRD1	RETAIL	SD2	16"	275	0.67	670	440	281	102.2
SGRD2	RETAIL	SD2	12"	300	0.67	583	480	290	96.7
SGRD3	RETAIL	SD2	12"	275	0.67	628	442	274	99.6
SGRD4	RETAIL	SD2	12"	275	0.67	511	438	283	102.9
SGRD5	RETAIL	SD2	12"	275	0.67	450	438	288	104.7
SGRD6	RETAIL	SD2	12"	275	0.67	539	427	283	102.9
SGRD7	RETAIL	SD2	12"	275	0.67	363	447	285	103.6
SGRD8	RETAIL	SD2	12"	275	0.67	627	436	284	103.3
SGRD9	RETAIL	SD2	12"	275	0.67	743	444	275	100.0
SGRD10	DELIVERY ROOM	SD1	12"	250	1	170	208	247	98.8
SGRD11	MENS RR	SD5	8"	150	1	197	200	144	96.0
SGRD12	VESTIBLLE	SD5	8"	200	1	215	245	201	100.5
SGRD13	HALLWAY	SD5	8"	200	1	215	245	296	148.0
SGRD14	WOMENS RR	SD5	8"	100	1	205	205	103	103.0
Total				3400		6116	5095	3534	103.94%

Completed By: Kristopher Passley on 07/09/2025

# National TAB

Project: 07-07-25 WAWA #6608 FISHERVILLE, VA

## System/Unit: AHU/RTU



Asset: RTU3

AREA:FOH

Unit Data		
	Design	Actual
MFG	LENNOX	LENNOX
Serial Num	-	5624L05232
Model Num	LGT072H4E	LCT072H4EG1Y
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	14 1/8"X29 1/4"
Num Final Filter 1	-	4
Final Filter Size 1	-	20"X20"X2"

Test Data		
	Design	Actual
SF CFM	2400	2378
SF RPM	-	2112
MOTOR RPM	-	2112
RA CFM	2200	2177
OA CFM	200	201
RL Voltage	-	211/212/209
RL Amperage	-	1.6/1.6/1.6
SF System SetPt	-	64%
RA Damper Position	-	78%
RA Damper Type	-	ECONOMIZER
OA Damper Position	-	22%
OA Damper Type	-	ECONOMIZER

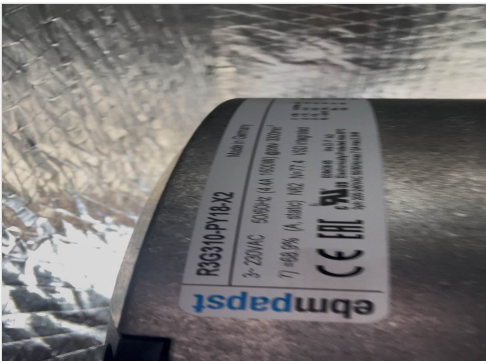
Motor Data		
	Design	Actual
Motor MFG	-	EBMPAPST
Frame	-	N62
Horsepower	1	1.5
Motor Rpm	-	3300
Phase	3	3
Rated Voltage	208	230
Rated Amperage	-	4.4

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.19"
Fan Suction SP	-	-0.38"
Fan Discharge SP	-	0.30"
Total ESP	.50"	0.49"
Fan Total SP	-	0.69"

Drive Data	
	Actual
Motor Sheave SetPt	DD

Completed By: Kristopher Passley on 07/09/2025

### Unit Data - PHOTO LOG



07/09/2025



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07/09/2025

# National TAB

Project:07-07-25 WAWA #6608 FISHERVILLE, VA  
AHU/RTU



**Diffuser Supply (GRD)**

**RTU3/FOH**

<b>Asset</b>									
<b>Asset Name</b>	<b>Location</b>	<b>Type</b>	<b>Size</b>	<b>DESIGN CFM</b>	<b>AK</b>	<b>CFM(1)</b>	<b>CFM(2)</b>	<b>FINAL CFM</b>	<b>% to design</b>
SGRD1	FOH	SD2	14"	450	0.67	563	563	434	96.4
SGRD2	FOH	SD2	14"	450	0.67	663	561	434	96.4
SGRD3	FOH	SD2	14"	450	0.67	630	574	443	98.4
SGRD4	FOH	SD2	18"	450	0.67	601	575	444	98.7
SGRD5	VESTIBLE	SD2	8"	250	1	253	346	272	108.8
SGRD6	OFFICE	SD1	8"	150	1	250	192	152	101.3
SGRD7	ASSOCIATE AREA	SD1	8"	200	1	197	251	199	99.5
<b>Total</b>				2400		3157	3062	2378	99.08%

Completed By: Kristopher Passley on 07/09/2025

# National TAB

Project: 07-07-25 WAWA #6608 FISHERVILLE, VA

## System/Unit: FAN - Exhaust



Asset: EF1

AREA:RESTROOMS

Unit Data		
	Design	Actual
MFG	GREENHECK	LOREN COOK
Model Num	GB-098-6	8OC2B-80-ACE
Serial Num	-	224SL40950-00/0000701
Type	DOWNBLAST	DOWNBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	Actual
Motor MFG	-	NIDEC MOTOR CORP.
Frame	-	60HZ
Horsepower	.167	1/6
Motor Rpm	-	1806
Phase	1	1
Voltage (rated)	120	115
Amperage (rated)	-	3.4
Service Factor	-	1.35

Drive Data	
	Actual
Motor Sheave Size	1VP34
Motor Bore Size	1/2"
Motor Sheave SetPt	2.5 TURNS
Fan Sheave Size	AK39
Fan Sheave Bore	3/4"
Belt CL Distance	4 5/8"
Num of Belts	1
Belt Size	4L200

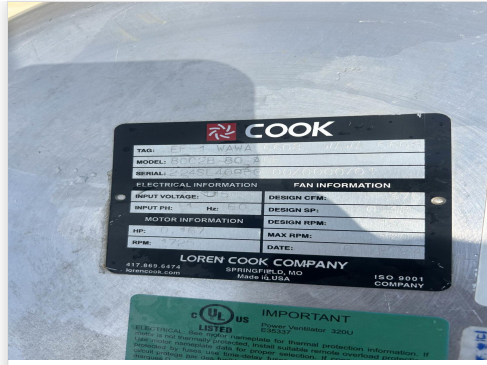
Test Data		
	Design	Actual
CFM	375	373
Fan RPM	-	1227
Fan Rotation	-	CORRECT
Motor RPM	-	1763
RL Voltage	-	120
RL Amperage	-	1.8
Suction ESP	-	-0.22"
Discharge ESP	-	ATM
Total ESP	.38"	0.22"

Completed By: Kristopher Passley on 07/09/2025

# Unit Data - PHOTO LOG



07/09/2025



07/09/2025



07/09/2025

# National TAB

Project:07-07-25 WAWA #6608 FISHERVILLE, VA

## FAN - Exhaust



### Diffuser Ret/Exh (GRD)

#### EF1/RESTROOMS

Asset									
Asset Name	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
EGRD1	MENS RR	EG1	8X8	225	1	284	234	215	95.6
EGRD2	WOMENS RR	EG1	8X8	150	1	175	164	158	105.3
Total				375		459	398	373	99.47%

Completed By: Kristopher Passley on 07/09/2025

# National TAB

Project: 07-07-25 WAWA #6608 FISHERVILLE, VA

System/Unit: FAN - Exhaust



Asset: EF2

AREA:BOH

Unit Data		
	Design	Actual
MFG	GREENHECK	LOREN COOK
Model Num	GB-098-6	80C2B-80-ACE
Serial Num	-	224SL40950-00/0002301
Type	DOWNBLAST	DOWNBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	Actual
Motor MFG	-	NIDEC MOTOR CORP.
Frame	-	60 HZ
Horsepower	.167	0.167
Motor Rpm	-	1806
Phase	1	1
Voltage (rated)	120	115
Amperage (rated)	-	3.4
Service Factor	-	1.35

Drive Data	
	Actual
Motor Sheave Size	1VP34
Motor Bore Size	1/2"
Motor Sheave SetPt	3 TURNS OUT
Fan Sheave Size	AK39
Fan Sheave Bore	3/4"
Belt CL Distance	4 7/8"
Num of Belts	1
Belt Size	4L2000

Test Data		
	Design	Actual
CFM	400	390
Fan RPM	-	1173
Fan Rotation	-	CORRECT
Motor RPM	-	1763
RL Voltage	-	121
RL Amperage	-	1.9
Suction ESP	-	-0.23"
Discharge ESP	-	ATM
Total ESP	.38"	0.23"

Completed By: Kristopher Passley on 07/09/2025



# National TAB

Project:07-07-25 WAWA #6608 FISHERVILLE, VA

## FAN - Exhaust



**Diffuser Ret/Exh (GRD)**

**EF2/BOH**

Asset									
Asset Name	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
EGRD1	BOH	RG2	8X8	200	1	254	184	200	100.0
EGRD2	FOOD SERV.	RG2	8X8	200	1	245	174	190	95.0
Total				400		499	358	390	97.5%

Completed By: Kristopher Passley on 07/09/2025

# National TAB

Project: 07-07-25 WAWA #6608 FISHERVILLE, VA

System/Unit: FAN - Exhaust



Asset: EF3

AREA:TRASHROOM

Unit Data		
	Design	Actual
MFG	GREENHECK	LOREN COOK
Model Num	SP-B200	GEMINI 180 SERIES
Serial Num	-	NL
Type	CEILING	CEILING
Configuration	VERTICAL	VERTICAL

Test Data		
	Design	Actual
CFM	200	188
Fan Rotation	-	CORRECT
System SetPt	-	MAX SPEED CONTROLLER
RL Voltage	-	120
RL Amperage	-	0.76
Total ESP	.50"	0.04"
Fan Inlet SP	-	-0.04"
Fan Discharge SP	-	ATM

Motor Data		
	Design	Actual
Motor MFG	-	QUEACE
Frame	-	NL
Horsepower	.167	50W
Motor Rpm	-	1350
Phase	1	1
Voltage (rated)	120	115
Amperage (rated)	-	1.0

Completed By: Kristopher Passley on 07/09/2025

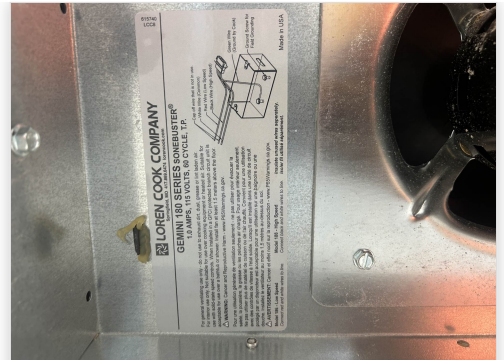
## Unit Data - PHOTO LOG



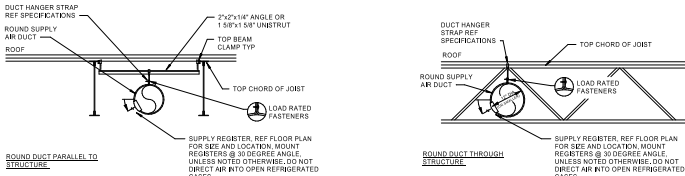
07/09/2025



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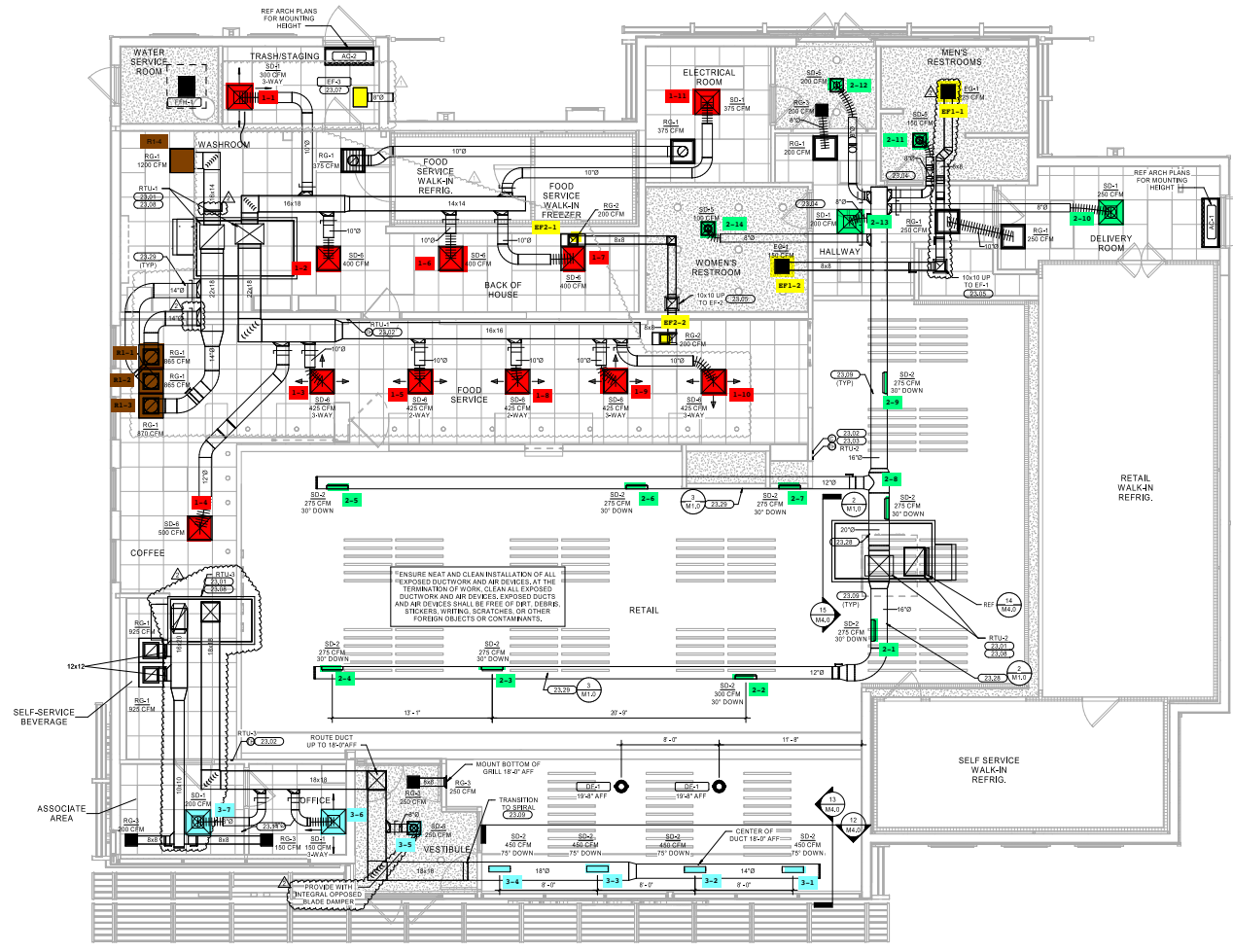
07/09/2025



2 EXPOSED DUCT SUPPORT AND GRILLE

3 EXPOSED DUCT SUPPORT AND GRILLE

KEYNOTES	
2301	SUPPLY AND RETURN DUCT UP TO RTU ON ROOF. TRANSITION AS REQUIRED. FIELD VERIFY DUCT ROUTING PRIOR TO FABRICATION. PROVIDE ELEC CONNECTION FROM RTU TO ISOLATION.
2302	MOUNT REMOTE TEMPERATURE/HUMIDITY SENSOR IN AREA SHOWN AT 8' AFF. COORDINATE DUCT LOCATION WITH TENANT CONSTRUCTION MANAGER. THE ENTIRE CONTROL SYSTEM SHALL BE PROVIDED COMPLETE IN EVERY RESPECT BY THE MECHANICAL CONTRACTOR.
2303	WALL MOUNTED CO2 SENSOR TO RTU-2. SENSOR TO MONITOR CO2 LEVELS THROUGH REMOTE BAS. SENSOR BY WAWA BAS SENSOR.
2304	UNDERLIFT DOOR 1' FOR AIR PASSAGE.
2305	EXHAUST DUCT ROUTED TO EXHAUST STACK. COORDINATE ROUTING OF DUCT WITH ALL DISCIPLINES. PROVIDE TRANSITIONS AND FITTINGS AS REQUIRED.
2307	PROVIDE A CABINET STYLE EXHAUST FAN. EXHAUST DUCT SHALL BE GALVANNEED STEEL. PROVIDE SEPARATE VENT WITH SCREEN AND FLAPPER DAMPER. CROWN MODEL 340 OR EQUAL. EXHAUST FAN SHALL MAINTAIN 10' CLEARANCE FOR AN OUTSIDE AIR RETAIN. MUST MEET LOCAL CODE REQUIREMENTS. FIELD VERIFY ALL ROUTING AND REQUIREMENTS PRIOR TO BEING FULLY PERMITTED. WEATHER TIGHT, PREHANG VENT COVER TO MATCH FINISH.
2308	WALL MOUNT VOLUME CONTROLLER TO CONTROL CO2 SMOKE DETECTORS FOR SUPPLY AND RETURN WITH AUXILIARY CONTACTS AS SHOWN. UPON ACTIVATION, THE SMOKE DETECTORS SHALL SHUT DOWN THE AIR DISTRIBUTION SYSTEM TO WHICH IT IS CONNECTED AND ACTIVATE A VIBRATE AND ACCEL. SUPERSEDE SIGNAL AT A CONSTANTLY MOUNTED DETECTOR SHALL ALSO BE FURNISHED WITH WALL MOUNTED REMOTE TEST STATION WITH REMOTE RESET. REMOTE SO TEST SUPERSEDE VIBRATE SIGNAL SHALL BE LED TYPE WITH AUDIBLE BEEPING ALERT.
2309	PROVIDE WALL AIRFLOW'S DOUBLE-WALL INSULATED SPIRAL DUCT OR EQUAL, INCL. 1" INSUL. REFERENCE COMPANY CONNECTIONS. PROVIDE PROTECTIVE DUCT FINISH WITH SUPPLY AIR CONNECTION. AIR TYPE FLANGE-TO-FLANGE CONNECTION TYPES ARE NOT ALLOWED.
2311	PROVIDE REMOTE TEST STATION FOR SMOKE DETECTORS WITH AUDIBLE AND VIBRAL ALARM WITH VENT RESET. MOUNT TEST STATION IN UNOCCUPIED AREA. PROVIDE ALARM CONSTANTLY ATTENDED LOCATION. CONSTANTLY ATTENDED LOCATION IS NOT REQUIRED WHERE DUCT SMOKE DETECTOR ACTIVATES THE BUILDING'S ALARM SYSTEM.
2328	ROUTE ELECTRICWORK AS HIGH AS POSSIBLE PARALLEL TO STRUCTURE. REF AM-2 TYPE.
2329	ROUTE ELECTRICWORK WITH THE JOIST SPACE. COORDINATE THROUGHING. REF SMI-1 TYPE.



HVAC LEGEND	
[Symbol]	NEW RECTANGULAR OR ROUND DUCT
[Symbol]	FLEXIBLE DUCT
[Symbol]	SUPPLY AIR DUCTWORK UP THROUGH PLAN
[Symbol]	RETURN AIR DUCTWORK UP THROUGH PLAN
[Symbol]	EXHAUST AIR DUCTWORK UP THROUGH PLAN
[Symbol]	90° ELBOW WITH TURNING VANES
[Symbol]	MANUAL AIR VOLUME CONTROL DAMPER
[Symbol]	4 WAY SUPPLY DIFFUSER
[Symbol]	3 WAY SUPPLY DIFFUSER
[Symbol]	2 WAY OPPOSED SUPPLY DIFFUSER
[Symbol]	2 WAY CORNER SUPPLY DIFFUSER
[Symbol]	RETURN AIR DEVICE
[Symbol]	EXHAUST AIR DEVICE
[Symbol]	AIR CURTAIN
[Symbol]	LINEAR SLOT DIFFUSER WITH FLUW COMBINATION TEMPERATURE/HUMIDITY SENSOR
[Symbol]	TEMPERATURE SENSOR
[Symbol]	CO2 SENSOR
[Symbol]	TYPE MARK
[Symbol]	RTU-2
[Symbol]	MECHANICAL EQUIPMENT TAG
[Symbol]	CONDENSATE PIPING
[Symbol]	ROOF MOUNTED EXHAUST FAN
[Symbol]	RIKE EXHAUST FAN
[Symbol]	RTU-3
[Symbol]	PACKAGED ROOFTOP AIR CONDENSER

1 HVAC FLOOR PLAN 1/4" = 1'-0"

**HFA**  
HFA-AE, L.T.D.  
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1705 S. Wilshire Blvd., Suite 3  
Beverly Hills, California 90212  
www.hfa.com

EXHIBIT FOR REVIEW  
PROJECT: 2023-03-03  
DATE: 07/18/24  
BY: [Signature]  
FOR: [Signature]

**WAWA**  
STORE NUMBER: 8688  
ADDRESS: WASHINGTON SPRING RD  
FISHERVILLE, VA 22603  
JOB NUMBER: 22020002

ISSUE BLOCK		
1	REV 1	03/20/24
2	REV 2	07/18/24

CHECKED BY: MJS  
DRAWN BY: SGB  
DOCUMENT DATE: 07/18/24  
PROJECT: 899844  
PROJECT CYCLE: 2023-03-03  
PLAN ISSUE: CNST SET

REGISTERED PROFESSIONAL ENGINEER  
RYAN VAUGHN  
L.C. 00110

HVAC FLOOR PLAN

SHEET: M1.0