Report By:

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Report: INITIAL REPORT

Function: Test, Adjust, & Balance

Date: 02/26/2026

Completed By: National TAB

PROJECT

03-23-26 WAWA #8245 YEAGERTOWN, PA

13100 FERGUSON VALLEY ROAD

LEWISTOWN, PA 17044

Client

Wawa

260 West Baltimore Pike

Wawa, PA 19063

National TAB

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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 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

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 :**	Not Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	02/26/2026 - Natasha Louw - National TAB		

CheckList Item Details

RTU's/AHU's

All diffusers and grilles are installed and match design?

Comment:

Clean filters installed?

Comment:

Economizers are assembled and functional?

Comment:

Motors are all operating below the FLA rating?

Comment:

Are belts tight?

Comment:

If direct drive unit is the speed controller working?

Comment:

Is gas piping installed and valves turned on?

Comment:

Condensate drains are installed?

Comment:

Unit free of noticeable noise and vibration

Comment:

Final outside air damper position is marked with permanent marker?

Comment:

No alarms present?

Comment:

Any noticeable duct leakage?

Comment:

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

Comment:

Adjust side wall diffusers on spiral duct that blow towards the coffee island drop-in to prevent issues with it staying at temperature. Fan out of the deflector blades or reduce airflow as necessary to prevent drafting.

Comment:

IN TEST MODE, TEST THE FOLLOWING:

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

Comment:

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

Comment:

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

Comment:

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CheckList Information

Name :	02: LENNOX SETUP PARAMETERS	**Status :**	Not Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	02/26/2026 - Natasha Louw - National TAB		

CheckList Item Details

UNIT ID CONFIGURATIONS

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

Comment:

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

Comment:

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

Comment:

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

PARAMETER 105 DEHUMID MODE: 7 NO CONDITIONS

Comment:

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

Comment:

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

Comment:

PARAMETER 117 CO2 DAMPER MAX OPEN: 50%

Comment:

PARAMETER 118 CO2 START OPEN PPM: 1200

Comment:

PARAMETER 119 CO2 MAX OPEN PPM: 1500

Comment:

PARAMETER 137 OCCHET SET POINT: 68 (BACK UP)

Comment:

PARAMETER 131 SET TO 100%

Comment:

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

Comment:

PARAMETER 154 OCC BLOWER MODE: ON-CONTINUOUS 1

Comment:

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

OA DAMPER SET TO SAME POSITION IN ALL FAN SPEEDS?

Comment:

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

Comment:

HEAT CFM VALUE: PER THE HVAC SCHEDULE

Comment:

HIGH COOL CFM VALUE: THE HIGH COOL CFM VALUE

Comment:

LOW COOL CFM VALUE: MATCH THE HIGH COOL CFM VALUE

Comment:

VENTILATION CFM VALUE: MATCH THE HIGH COOL CFM VALUE

Comment:

SET THE POWER EXHAUST ON SETPOINT TO 20% HIGHER THAN THE MINIMUM DAMPER POSITION.

Comment:

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CheckList Information

Name :	03: SENSOR WIRING (LENNOX)	**Status :**	Not Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	02/26/2026 - Natasha Louw - National TAB		

CheckList Item Details

COMBINATION TEMPERATURE/HUMIDITY SENSOR

Sensors are installed where shown on the drawing?

Comment:

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

Comment:

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

Comment:

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

Comment:

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CheckList Information

Name : 04: EF'S **Status :** Not Completed

Assigned Organization : National TAB **Asset :**

Requesting Organization : National TAB

Created Date : 02/26/2026 - Natasha Louw - National TAB

CheckList Item Details

EF's

Rotation is correct?

Comment:

Belts are tight (if applicable)?

Comment:

Speed controller installed and functional (if applicable)?

Comment:

There is no major leakage around base of fan?

Comment:

Is the motor operating below the motor FLA rating?

Comment:

Back draft damper installed and can it fully open?

Comment:

Unit free of noticeable noise and vibration?

Comment:

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

Comment:

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CheckList Information

Name :	05: CLOSEOUT CHECKS	**Status :**	Not Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	02/26/2026 - Natasha Louw - National TAB		

CheckList Item Details

SPACE COMFORT

Is space free of drafting?

Comment:

Is space comfortable in all areas?

Comment:

Is the space free of ventilation noise?

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)

Comment:

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System/Unit: AHU/RTU

Asset: RTU1 AREA:RETAIL

Unit Data		
	Design	**Actual**
MFG	LENNOX ENLIGHT	LENNOX ENLIGHT
Serial Num	-	
Model Num	LGT102H4E	LGT102H4E
Type	RTU	
Configuration	VERTICAL	
Num OA Filters 1	-	
OA Filter Size 1	-	
Num OA Filters 2	-	
OA Filter Size 2	-	
Num Final Filter 1	-	
Final Filter Size 1	-	
Num Final Filter 2	-	
Final Filter Size 2	-	

Motor Data		
	Design	**Actual**
Motor MFG	-	
Frame	-	
Horsepower	3.75	
Motor Rpm	-	
Phase	3	
Rated Voltage	208	
Rated Amperage	-	
Service Factor	-	

Drive Data	
	Actual
Motor Sheave Size	
Motor Bore Size	
Motor Sheave SetPt	
Fan Sheave Size	
Fan Sheave Bore	
Belt CL Distance	
Num of Belts	
Belt Size	

Test Data		
	Design	**Actual**
SF CFM	3400	
SF RPM	-	
MOTOR RPM	-	
RA CFM	2720	
OA CFM	680	
RL Voltage	-	
RL Amperage	-	
SF System SetPt	-	
RA Damper Position	-	
RA Damper Type	-	
OA Damper Position	-	
OA Damper Type	-	

Performance Data		
	Design	**Actual**
MA Plenum SP	-	
Fan Suction SP	-	
Fan Discharge SP	-	
Total ESP	0.50"	
Fan Total SP	-	

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AHU/RTU

Diffuser Supply (GRD)

RTU1/RETAIL

Asset									
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
SGRD1	RETAIL	LD-1	10"	250					-
SGRD2	RETAIL	LD-1	10"	250					-
SGRD3	RETAIL	LD-1	10"	200					-
SGRD4	RETAIL	LD-1	10"	300					-
SGRD5	RETAIL	LD-1	10"	300					-
SGRD6	RETAIL	LD-1	10"	300					-
SGRD7	RETAIL	LD-1	10"	300					-
SGRD8	RETAIL	LD-1	10"	300					-
SGRD9	RETAIL	LD-1	10"	300					-
SGRD10	RETAIL	LD-1	10"	300					-
SGRD11	RETAIL	LD-1	10"	300					-
SGRD12	RETAIL	CD-1	10"	300					-
Total				3400		0	0	0	0%

Diffuser Ret/Exh (GRD)

RTU1/RETAIL

Asset									
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
EGRD1	FOOD SERVICE	G-1	12"	600					-
EGRD2	FOOD SERVICE	G-1	12"	600					-
EGRD3	FOOD SERVICE	G-1	12"	600					-
EGRD4	FOOD SERVICE	G-1	14"	920					-
Total				2720		0	0	0	0%

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System/Unit: AHU/RTU

Asset: RTU2 AREA:FOOD SERVICE

Unit Data		
	Design	**Actual**
MFG	LENNOX ENLIGHT	LENNOX ENLIGHT
Serial Num	-	
Model Num	LCT150H4E	LCT150H4E
Type	RTU	
Configuration	VERTICAL	
Num OA Filters 1	-	
OA Filter Size 1	-	
Num OA Filters 2	-	
OA Filter Size 2	-	
Num Final Filter 1	-	
Final Filter Size 1	-	
Num Final Filter 2	-	
Final Filter Size 2	-	

Motor Data		
	Design	**Actual**
Motor MFG	-	
Frame	-	
Horsepower	3.75	
Motor Rpm	-	
Phase	3	
Rated Voltage	208	
Rated Amperage	-	
Service Factor	-	

Drive Data	
	Actual
Motor Sheave Size	
Motor Bore Size	
Motor Sheave SetPt	
Fan Sheave Size	
Fan Sheave Bore	
Belt CL Distance	
Num of Belts	
Belt Size	

Test Data		
	Design	**Actual**
SF CFM	5000	
SF RPM	-	
MOTOR RPM	-	
RA CFM	4180	
OA CFM	820	
RL Voltage	-	
RL Amperage	-	
SF System SetPt	-	
RA Damper Position	-	
RA Damper Type	-	
OA Damper Position	-	
OA Damper Type	-	

Performance Data		
	Design	**Actual**
MA Plenum SP	-	
Fan Suction SP	-	
Fan Discharge SP	-	
Total ESP	0.50"	
Fan Total SP	-	

Diffuser Supply (GRD)

RTU2/FOOD SERVICE

Asset									
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
SGRD1	FOOD SERVICE	LD-1	12"	450					-
SGRD2	FOOD SERVICE	LD-1	12"	450					-
SGRD3	FOOD SERVICE	LD-1	12"	500					-
SGRD4	FOOD SERVICE	LD-1	12"	500					-
SGRD5	FOOD SERVICE	LD-1	12"	500					-
SGRD6	FOOD SERVICE	LD-1	12"	500					-
SGRD7	BEVERAGES	LD-1	12"	400					-
SGRD8	BEVERAGES	LD-1	12"	400					-
SGRD9	COFFEE	LD-1	12"	400					-
SGRD10	COFFEE	LD-1	12"	400					-
SGRD11	ELECTRICAL ROOM	CD-1	12"	500					-
Total				5000		0	0	0	0%

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System/Unit: AHU/RTU

Asset: RTU3 AREA:FOH

Unit Data		
	Design	**Actual**
MFG	LENNOX ENLIGHT	LENNOX ENLIGHT
Serial Num	-	
Model Num	LGT092H4E	LGT092H4E
Type	RTU	
Configuration	VERTICAL	
Num OA Filters 1	-	
OA Filter Size 1	-	
Num OA Filters 2	-	
OA Filter Size 2	-	
Num Final Filter 1	-	
Final Filter Size 1	-	
Num Final Filter 2	-	
Final Filter Size 2	-	

Motor Data		
	Design	**Actual**
Motor MFG	-	
Frame	-	
Horsepower	3.75	
Motor Rpm	-	
Phase	3	
Rated Voltage	208	
Rated Amperage	-	
Service Factor	-	

Drive Data	
	Actual
Motor Sheave Size	
Motor Bore Size	
Motor Sheave SetPt	
Fan Sheave Size	
Fan Sheave Bore	
Belt CL Distance	
Num of Belts	
Belt Size	

Test Data		
	Design	**Actual**
SF CFM	3000	
SF RPM	-	
MOTOR RPM	-	
RA CFM	2400	
OA CFM	600	
RL Voltage	-	
RL Amperage	-	
SF System SetPt	-	
RA Damper Position	-	
RA Damper Type	-	
OA Damper Position	-	
OA Damper Type	-	

Performance Data		
	Design	**Actual**
MA Plenum SP	-	
Fan Suction SP	-	
Fan Discharge SP	-	
Total ESP	0.50"	
Fan Total SP	-	

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AHU/RTU

Diffuser Supply (GRD)

RTU3/FOH

Asset									
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
SGRD1	DELIVERY ROOM	CD-1	8"	100					-
SGRD2	WATER METER ROOM	CD-1	8"	100					-
SGRD3	BACK ENTRANCE	CD-3	8"	100					-
SGRD4	MENS RR	CD-3	8"	125					-
SGRD5	WOMENS RR	CD-3	8"	125					-
SGRD6	ENTRANCE	CD-2	10"	300					-
SGRD7	RETAIL	LD-1	10"	370					-
SGRD8	RETAIL	LD-1	10"	370					-
SGRD9	RETAIL	LD-1	10"	370					-
SGRD10	RETAIL	LD-1	10"	370					-
SGRD11	RETAIL	LD-1	10"	370					-
SGRD12	ASSOCIATES ROOM	CD-1	8"	150					-
SGRD13	OFFICE	CD-1	8"	150					-
Total				3000		0	0	0	0%

Diffuser Ret/Exh (GRD)

RTU3/FOH

Asset									
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
EGRD1	CLOSET	G-1	14"	800					-
EGRD2	RETAIL	G-1	14"	800					-
EGRD3	RETAIL	G-1	14"	800					-
Total				2400		0	0	0	0%

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System/Unit: FAN - Exhaust

Asset: EF1 AREA:RESTROOM

Unit Data		
	Design	**Actual**
MFG	PENNBARRY	PENNBARRY
Model Num	DX10R	DX10R
Serial Num	-	
Type	DOWNBLAST	
Configuration	VERTICAL	

Motor Data		
	Design	**Actual**
Motor MFG	-	
Frame	-	
Horsepower	0.08	
Motor Rpm	-	
Phase	1	
Voltage (rated)	120	
Amperage (rated)	-	
Service Factor	-	

Test Data		
	Design	**Actual**
CFM	350	
Fan RPM	1550	
Fan Rotation	-	
Motor RPM	-	
System SetPt	-	
RL Voltage	-	
RL Amperage	-	
Total ESP	0.250"	
Fan Inlet SP	-	
Fan Discharge SP	-	

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FAN - Exhaust

Diffuser Ret/Exh (GRD)

EF1/RESTROOM

Asset									
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
EGRD1	WOMENS RR	G-2	8"	175					-
EGRD2	MENS RR	G-2	8"	175					-
Total				350		0	0	0	0%

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System/Unit: FAN - Exhaust

Asset: EF2 AREA:BOH

Unit Data		
	Design	**Actual**
MFG	PENNBARRY	PENNBARRY
Model Num	DX16S	DX16S
Serial Num	-	
Type	DOWNBLAST	
Configuration	VERTICAL	

Motor Data		
	Design	**Actual**
Motor MFG	-	
Frame	-	
Horsepower	0.33	
Motor Rpm	-	
Phase	1	
Voltage (rated)	120	
Amperage (rated)	-	
Service Factor	-	

Test Data		
	Design	**Actual**
CFM	1400	
Fan RPM	1300	
Fan Rotation	-	
Motor RPM	-	
System SetPt	-	
RL Voltage	-	
RL Amperage	-	
Total ESP	0.375"	
Fan Inlet SP	-	
Fan Discharge SP	-	

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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	FOOD SERVICE	G-1	12"	400					-
EGRD2	FOOD SERVICE	G-1	12"	500					-
EGRD3	FOOD SERVICE	G-1	12"	400					-
EGRD4	STAGING ROOM	G-1	8"	100					-
Total				1400		0	0	0	0%