Report By:

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

Report: TAB Report

Function: Test, Adjust, & Balance

Date: 09/11/2025

Completed By: National TAB

PROJECT

04-14-25 ULTA 1967 SELMA, NC

640 SAINT MARK AVE

SELMA, NC 27576

Client

Rectenwald Brothers Construction

National TAB

Project: 04-14-25 ULTA 1967 SELMA, NC

Table Of Contents

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.

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-1 no disconnect

04-14-25 ULTA 1967 SELMA, NC

Project Issue Information

Issue Name :	EF-1 no disconnect		
Description :	EF-1 does not have a disconnect. manager did not have a key to the circuit breaker so could not turn off the fan to adjust belt. Fan is in design.		
Created By :	National TAB	**Assigned To :**	National TAB - Dan Hertenstein
Status :	Open		
Priority :	InfoOnly	**Asset Tag :**	EF1
Originated Date :	07/09/2025 - Chistian Moller - National TAB		

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Project: 04-14-25 ULTA 1967 SELMA, NC

System/Unit: AHU/RTU

Asset: RTU1 AREA:

Unit Data		
	Design	**Actual**
MFG	LENNOX	LENNOX
Serial Num	-	5622J03502
Model Num	LGM156U4E	LGM156U4E
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	3
OA Filter Size 1	-	14X23
Num Final Filter 1	-	6
Final Filter Size 1	-	24X24X2

Motor Data		
	Design	**Actual**
Motor MFG	-	INTERLINK
Frame	-	56HZ
Horsepower	3HP	3HP
Motor Rpm	1750	1750
Phase	3	3
Rated Voltage	460V	460V
Rated Amperage	4A	4A

Drive Data	
	Actual
Motor Sheave Size	3-5/8
Motor Bore Size	7/8
Motor Sheave SetPt	2 TURNS OUT
Fan Sheave Size	BK95
Fan Sheave Bore	1-1/8
Belt CL Distance	21-1/4
Num of Belts	1
Belt Size	BX59
Belt Alignment	YES

Test Data		
	Design	**Actual**
SF CFM	4500	4787
SF RPM	-	910
RA CFM	3600	3848
OA CFM	900	939
RL Voltage	-	471/474/471
RL Amperage	-	5.1/4.7/5.8
SF Rotation	-	CCW
RA Damper Position	-	72%
Min OA Damper Position	-	28%
Min OA Damper Type	-	ECON
OA Enthalpy Setpt	-	5

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.36"
Fan Suction SP	-	-0.59"
Fan Discharge SP	-	0.48"
Total ESP	1.00	0.95"
Fan Total SP	-	1.07"

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

Completed By: Chistian Moller on 08/14/2025

Unit Data - PHOTO LOG

10/16/2024

10/16/2024

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Project:04-14-25 ULTA 1967 SELMA, NC

AHU/RTU

Diffuser Supply (GRD)

RTU1/

Asset									
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
SGRD1	VESTIBLE	SD-1	12"	350	1	352	352	374	106.9
SGRD2	VESTIBLE	SD-1	12"	370	1	390	390	390	105.4
SGRD3	VESTIBLE	SD-1	12"	350	1	181	181	384	109.7
SGRD4	VESTIBLE	SD-1	12"	365	1	349	349	386	105.8
SGRD5	VESTIBLE	SD-1	12"	365	1	361	361	377	103.3
SGRD6	VESTIBLE	SD-1	12"	350	1	328	328	377	107.7
SGRD7	VESTIBLE	SD-1	12"	350	1	321	321	379	108.3
SGRD8	VESTIBLE	SD-1	12"	200	1	57	57	218	109.0
SGRD9	VESTIBLE	SD-1	12"	365	1	185	185	393	107.7
SGRD10	VESTIBLE	SD-1	12"	365	1	345	345	368	100.8
SGRD11	VESTIBLE	SD-1	12"	350	1	343	343	380	108.6
SGRD12	VESTIBLE	SD-1	12"	350	1	329	329	379	108.3
SGRD13	VESTIBLE	SD-1	12"	370	1	312	312	382	103.2
Total				4500		3853	3853	4787	106.38%

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Project: 04-14-25 ULTA 1967 SELMA, NC

System/Unit: AHU/RTU

Asset: RTU2 AREA:

Unit Data		
	Design	**Actual**
MFG	LENNOX	LENNOX
Serial Num	-	5622K03089
Model Num	LGM156U4M	LGM156U4M
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	3
OA Filter Size 1	-	14X23
Num Final Filter 1	-	6
Final Filter Size 1	-	24X24X2

Motor Data		
	Design	**Actual**
Motor MFG	-	INTERLINK
Frame	-	56HZ
Horsepower	3HP	3HP
Motor Rpm	1750	1750
Phase	3	3
Rated Voltage	460V	460V
Rated Amperage	4A	4A

Drive Data	
	Actual
Motor Sheave Size	3-5/8
Motor Bore Size	7/8
Motor Sheave SetPt	3 TURNS OUT
Fan Sheave Size	BK72
Fan Sheave Bore	1-1/8
Belt CL Distance	21-1/4
Num of Belts	1
Belt Size	BX55
Belt Alignment	YES

Test Data		
	Design	**Actual**
SF CFM	4800	4785
SF RPM	-	NR
RA CFM	3745	3719
OA CFM	1055	1066
RL Voltage	-	476/474/473
RL Amperage	-	4.0/3.1/2.8
SF Rotation	-	CCW
RA Damper Position	-	72%
Min OA Damper Position	-	28%
Min OA Damper Type	-	ECON
OA Enthalpy Setpt	-	5

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.345"
Fan Suction SP	-	-0.54"
Fan Discharge SP	-	0.43"
Total ESP	1.00"	0.885"
Fan Total SP	-	0.97"

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

Completed By: Chistian Moller on 08/14/2025

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Project:04-14-25 ULTA 1967 SELMA, NC

AHU/RTU

Diffuser Supply (GRD)

RTU2/

Asset									
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
SGRD1	SALES	SD1	8"	200	1	140	140	198	99.0
SGRD2	SALES	SD1	8"	200	1	144	144	212	106.0
SGRD3	SALES	SD1	8"	200	1	145	145	202	101.0
SGRD4	SALES	SD1	8"	200	1	129	129	206	103.0
SGRD5	SALES	SD1	8"	200	1	156	156	200	100.0
SGRD6	SALES	SD1	8"	200	1	134	134	193	96.5
SGRD7	SALES	SD1	8"	200	1	141	141	217	108.5
SGRD8	SALES	SD1	8"	200	1	159	159	189	94.5
SGRD9	SALES	SD1	8"	200	1	103	103	203	101.5
SGRD10	SALES	SD1	8"	200	1	176	176	181	90.5
SGRD11	SALES	SD1	8"	200	1	147	147	190	95.0
SGRD12	SALES	SD1	8"	200	1	146	146	194	97.0
SGRD13	SALES	SD1	8"	200	1	146	146	199	99.5
SGRD14	SALES	SD1	8"	200	1	158	158	197	98.5
SGRD15	SALES	SD1	8"	200	1	146	146	211	105.5
SGRD16	SALES	SD1	8"	200	1	139	139	208	104.0
SGRD17	SALES	SD1	8"	200	1	157	157	194	97.0
SGRD18	SALES	SD1	8"	200	1	160	160	190	95.0
SGRD19	SALES	SD1	8"	200	1	166	166	197	98.5
SGRD20	SALES	SD1	8"	200	1	165	165	196	98.0
SGRD21	SALES	SD1	8"	200	1	149	149	218	109.0
SGRD22	SALES	SD1	8"	200	1	154	154	194	97.0
SGRD23	SALES	SD1	8"	200	1	142	142	188	94.0
SGRD24	SALES	SD1	8"	200	1	33	33	208	104.0
Total				4800		3435	3435	4785	99.69%

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Project: 04-14-25 ULTA 1967 SELMA, NC

System/Unit: AHU/RTU

Asset: RTU3 AREA:

Unit Data		
	Design	**Actual**
MFG	LENNOX	LENNOX
Serial Num	-	5622J06858
Model Num	LGM120U4E	LGM120U4E
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	2
OA Filter Size 1	-	14X23
Num Final Filter 1	-	4
Final Filter Size 1	-	20X25X2

Motor Data		
	Design	**Actual**
Motor MFG	-	NL
Frame	-	NL
Horsepower	3.75HP	3.75HP
Motor Rpm	NL	NL
Phase	3	3
Rated Voltage	460V	460V
Rated Amperage	NL	NL

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

Test Data		
	Design	**Actual**
SF CFM	3200	3241
SF RPM	-	2940
RA CFM	2375	2347
OA CFM	825	901
RL Voltage	-	478/477/477
RL Amperage	-	1.1/1.3/1.2
SF Rotation	-	CCW
RA Damper Position	-	71%
Min OA Damper Position	-	29%
Min OA Damper Type	-	ECON
OA Enthalpy Setpt	-	5

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.11"
Fan Suction SP	-	-0.67"
Fan Discharge SP	-	0.53"
Total ESP	1.00"	0.64"
Fan Total SP	-	1.2"

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

Completed By: Chistian Moller on 08/14/2025

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Project:04-14-25 ULTA 1967 SELMA, NC

AHU/RTU

Diffuser Supply (GRD)

RTU3/

Asset									
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
SGRD1	SALES	SD1	10"	275	1	362	333	273	99.3
SGRD2	SALES	SD1	10"	275	1	412	372	284	103.3
SGRD3	SALES	SD1	10"	275	1	343	315	266	96.7
SGRD4	SALON	SD1	10"	350	1	321	287	382	109.1
SGRD5	SALON	SD1	10"	350	1	306	277	374	106.9
SGRD6	SALES	SD1	10"	275	1	285	257	286	104.0
SGRD7	SALES	SD1	10"	275	1	371	340	301	109.5
SGRD8	SALES	SD1	10"	275	1	360	332	252	91.6
SGRD9	RR	SD1	6"	75	1	81	81	74	98.7
SGRD10	CORRIDOR	SD1	8"	100	1	183	168	97	97.0
SGRD11	RR	SD1	6"	75	1	101	92	76	101.3
SGRD12	CLOSET	SD1	12"	600	1	426	392	576	96.0
Total				3200		3551	3246	3241	101.28%

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Project: 04-14-25 ULTA 1967 SELMA, NC

System/Unit: AHU/RTU

Asset: RTU4 AREA:

Unit Data		
	Design	**Actual**
MFG	LENNOX	LENNOX
Serial Num	-	5623C07665
Model Num	LGM048U4E	LGM048U4E
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	14.5x14.5
Num Final Filter 1	-	4
Final Filter Size 1	-	20X20X2

Motor Data		
	Design	**Actual**
Motor MFG	-	NL
Frame	-	NL
Horsepower	1.5	1.5
Motor Rpm	NL	NL
Phase	3	3
Rated Voltage	460	460
Rated Amperage	2.3	2.3

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

Test Data		
	Design	**Actual**
SF CFM	1200	1179
SF RPM	-	NR
RA CFM	1000	992
OA CFM	200	186
RL Voltage	-	476/473/474
RL Amperage	-	.9/1.0/1.1
SF Rotation	-	CCW
RA Damper Position	-	100%
Min OA Damper Position	-	.25”
Min OA Damper Type	-	ECON
OA Enthalpy Setpt	-	5

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.65"
Fan Suction SP	-	-0.744"
Fan Discharge SP	-	0.42"
Total ESP	1.00"	1.394"
Fan Total SP	-	1.164"

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

Completed By: Chistian Moller on 08/14/2025

Notes:
RTU-4 IN ALARM CODE 244 (BLOWER DIFFERENTIAL PRESURE SENSOR ERROR) UNABLE TO SLOW UNIT DOWN. ECONOMIZER BLOCKED, UNABLE TO SET OA.

Written By: Chistian Moller on 07/09/2025

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Project:04-14-25 ULTA 1967 SELMA, NC

AHU/RTU

Diffuser Supply (GRD)

RTU4/

Asset									
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
SGRD1	SALON	SD1	10"	250	1	369	369	245	98.0
SGRD2	SALON	SD1	10"	250	1	372	372	242	96.8
SGRD3	SALON	SD2	8"	200	1	207	207	206	103.0
SGRD4	SALON	SD1	10"	250	1	509	509	236	94.4
SGRD5	SALON	SD1	10"	250	1	366	366	250	100.0
Total				1200		1823	1823	1179	98.25%

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Project: 04-14-25 ULTA 1967 SELMA, NC

System/Unit: FAN - Exhaust

Asset: EF1 AREA:

Unit Data		
	Design	**Actual**
MFG	LOREN COOK	LOREN COOK
Model Num	150ACEB	150ACEB
Serial Num	-	NL
Type	ROOF	ROOF
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	US MOTOR
Frame	-	NL
Horsepower	.5	.5
Motor Rpm	1725	1725
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	7.5
Service Factor	-	1.25

Drive Data	
	Actual
Motor Sheave Size	VP34S
Motor Bore Size	1/2"
Motor Sheave SetPt	1 TURN OPEN
Fan Sheave Size	3-1/4"
Fan Sheave Bore	5/8"
Belt CL Distance	5"
Num of Belts	1
Belt Size	4L200

Test Data		
	Design	**Actual**
CFM	1750	1623
Fan RPM	-	1623
Fan Rotation	-	CW
Motor RPM	-	1700
RL Voltage	-	115
RL Amperage	-	7.42
Suction ESP	-	-0.29
Discharge ESP	-	ATM
Total ESP	0.50"	0.29"

Completed By: Chistian Moller on 08/14/2025

Notes:
LOW FLOW SEE ISSUE
(Rotation incorrect) (no disconnect)

Written By: Chistian Moller on 07/09/2025

Unit Data - PHOTO LOG

01/06/2025

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Project: 04-14-25 ULTA 1967 SELMA, NC

System/Unit: FAN - Exhaust

Asset: EF2 AREA:

Unit Data		
	Design	**Actual**
MFG	LOREN COOK	LOREN COOK
Model Num	GNVF-500	GNVF-500
Serial Num	-	NL
Type	INLINE	INLINE
Configuration	VERTICAL	VERTICAL

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

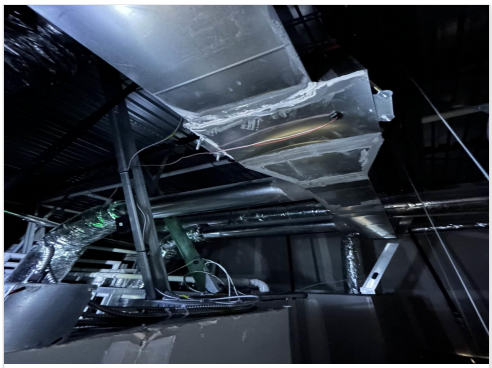
Test Data		
	Design	**Actual**
CFM	300	307
Fan RPM	-	NO ACCESS
Fan Rotation	-	CCW
Motor RPM	-	NO ACCESS
System SetPt	-	SPEED B, 7
RL Voltage	-	NO ACCESS
RL Amperage	-	NO ACCESS
Total ESP	0.50"	0.48"
Fan Inlet SP	-	0.48"
Fan Discharge SP	-	ATM

Completed By: Chistian Moller on 08/14/2025

Notes:
DAMPERS HAVE BEEN ADDED.

Written By: Chistian Moller on 07/09/2025

Unit Data - PHOTO LOG



01/06/2025

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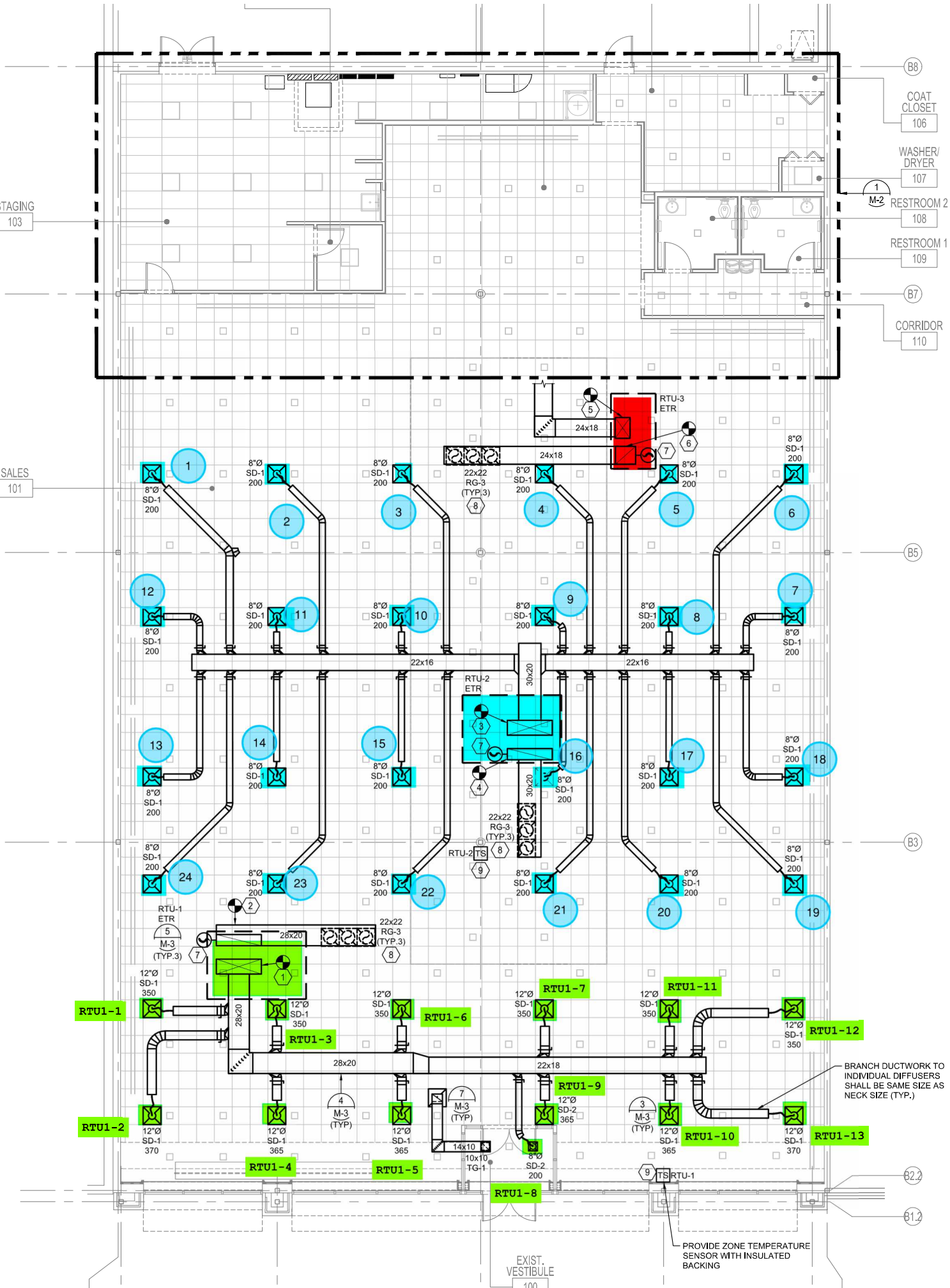
Project:04-14-25 ULTA 1967 SELMA, NC

FAN - Exhaust

Diffuser Ret/Exh (GRD)

EF2/

Asset									
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
EGRD1	RR	EAG1	10X10	150	1.0	178	178	150	100.0
EGRD2	RR	EAG1	10X10	150	1.0	173	173	157	104.7
Total				300		351	351	307	102.33%


COAT CLOSET 106
WASHER/ DRYER 107
RESTROOM 2 108
RESTROOM 1 109
CORRIDOR 110
STAGING 103
SALES 101
EXIST. VESTIBULE 100
RTU-3 ETR
RTU-2 ETR
RTU-1 ETR
RTU1-1
RTU1-2
RTU1-3
RTU1-4
RTU1-5
RTU1-6
RTU1-7
RTU1-8
RTU1-9
RTU1-10
RTU1-11
RTU1-12
RTU1-13
BRANCH DUCTWORK TO INDIVIDUAL DIFFUSERS SHALL BE SAME SIZE AS NECK SIZE (TYP.)
PROVIDE ZONE TEMPERATURE SENSOR WITH INSULATED BACKING