Report By:

National TAB
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Report: TAB REPORT

Function: Test, Adjust, & Balance

Date: 10/16/2023

PROJECT

10-09-23 FREDDY'S - COVINGTON, GA

12200 Town Center Drive

Covington , GA 30014

Client

JRI Hospitality Management

621 Westport Blvd

Salina, KS 67401

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Project: 10-09-23 FREDDY'S - COVINGTON, GA

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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.

DOAS w/ Diffusers

Each of the DOAS were measured at their terminal devices or via traverse to establish a total flow for that unit. Each DOAS 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.

Kitchen Exhaust Hood & Associated Fans

Each 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. . Any EF's that fell outside of this 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 of -0.02" wc to +0.02" wc 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.

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Project: 10-09-23 FREDDY'S - COVINGTON, GA

System/Unit: AHU/RTU

Asset: DOAS1 AREA:KITCHEN

Unit Data		
	Design	**Actual**
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Serial Num	-	5258134
Model Num	CASRTU3-I.250-15-20T-DOAS	CASRTU3-I.300-15-20T
Type	DOAS	DOAS
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	4
OA Filter Size 1	-	16X25X2
Num Final Filter 1	-	8
Final Filter Size 1	-	20X25X2

Motor Data		
	Design	**Actual**
Motor MFG	-	TECO WESTINGHOUSE
Frame	-	145T
Horsepower	2.00	2
Motor Rpm	-	1740
Phase	3	3
Rated Voltage	208	230
Rated Amperage	-	5.48

Drive Data		
	Design	**Actual**
Motor Sheave Size	-	DD
Motor Bore Size	-	DD
Motor Sheave SetPt	-	62HZ
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	2650	2709
SF RPM	-	1798
RA CFM	0	0
OA CFM	2650	2709
RL Voltage	-	212
RL Amperage	-	5.4
SF Rotation	-	CCW
RA Damper Position	-	0%
Min OA Damper Position	-	100%
Min OA Damper Type	-	ECONOMIZER

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.0741”
Fan Suction SP	-	-0.7528”
Fan Discharge SP	-	0.2731”
Total ESP	0.500	0.3473"
Fan Total SP	-	1.02"

General		
	Design	**Actual**
Fan Rotation Correct	-	YES
Unit Filters Clean	-	YES
Condensate Drain Installed	-	NO

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Project:10-09-23 FREDDY'S - COVINGTON, GA

AHU/RTU

Diffuser Supply (GRD)

DOAS1/KITCHEN

Asset									
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
DOAS1-SGRD1	KITCHEN	SD-3	10"	285	1	278	281	281	98.6
DOAS1-SGRD2	KITCHEN	SD-3	10"	285	1	297	262	262	91.9
DOAS1-SGRD3	KITCHEN	SD-3	10"	285	1	340	305	305	107.0
DOAS1-SGRD4	KITCHEN	SD-3	10"	285	1	299	305	305	107.0
DOAS1-SGRD5	KITCHEN	SD-3	10"	280	1	310	278	278	99.3
DOAS1-SGRD6	KITCHEN	SD-3	10"	280	1	346	282	282	100.7
DOAS1-SGRD7	KITCHEN	SD-3	10"	280	1	310	302	302	107.9
DOAS1-SGRD8	KITCHEN	SD-3	10"	285	1	333	293	293	102.8
DOAS1-SGRD9	KITCHEN	SD-3	10"	285	1	231	292	292	102.5
DOAS1-SGRD10	KITCHEN	SD-4	8"	100	1	122	109	109	109.0
Total				2650		2866	2709	2709	102.23%

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Project: 10-09-23 FREDDY'S - COVINGTON, GA

System/Unit: AHU/RTU

Asset: RTU1 AREA:DINING

Unit Data		
	Design	**Actual**
MFG	LENNOX	CARRIER
Serial Num	-	2123P42616
Model Num	LGH150	48FCDM14A2A5A0A0A0
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	36.5X20.5
Num Final Filter 1	-	4
Final Filter Size 1	-	20X20X2

Motor Data		
	Design	**Actual**
Motor MFG	-	NL
Frame	-	NL
Horsepower	5	NL
Motor Rpm	-	NL
Phase	3	3
Rated Voltage	208	208
Rated Amperage	-	7.5

Drive Data		
	Design	**Actual**
Motor Sheave Size	-	DD
Motor Bore Size	-	DD
Motor Sheave SetPt	-	7.8VDC
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	4850	4245
SF RPM	-	1807
RA CFM	3850	3342
OA CFM	1000	903
RL Voltage	-	215.1/215.3/213.5
RL Amperage	-	7.5/7.5/7.4
SF Rotation	-	CCW
RA Damper Position	-	5.5V
Min OA Damper Position	-	4.5V
Min OA Damper Type	-	ECONOMIZER

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.8949”
Fan Suction SP	-	-1.2799”
Fan Discharge SP	-	0.7431”
Total ESP	1.0"	1.638"
Fan Total SP	-	2.023"

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

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Project:10-09-23 FREDDY'S - COVINGTON, GA

AHU/RTU

Diffuser Supply (GRD)

RTU1/DINING

Asset									
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
RTU1-SGRD1	DINING	SD-1	12"	520	1	539	495	506	97.3
RTU1-SGRD2	DINING	SD-1	12"	520	1	557	532	537	103.3
RTU1-SGRD3	DINING	SD-1	12"	500	1	376	367	390	78.0
RTU1-SGRD4	DINING	SD-1	12"	500	1	594	597	477	95.4
RTU1-SGRD5	DINING	SD-1	12"	520	1	562	557	539	103.7
RTU1-SGRD6	DINING	SD-1	12"	520	1	429	136	426	81.9
RTU1-SGRD7	DINING	SD-1	14"	520	1	459	490	424	81.5
RTU1-SGRD8	DINING	SD-1	12"	500	1	376	417	360	72.0
RTU1-SGRD9	DINING	SD-1	12"	500	1	457	512	450	90.0
RTU1-SGRD10	RR	SD-5	6"	100	1	33	70		-
RTU1-SGRD11	RR	SD-5	6"	100	1	49	85	85	85.0
RTU1-SGRD12	RR	SD-5	6"	50	1	64		51	102.0
Total				4850		4495	4258	4245	87.53%

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Project: 10-09-23 FREDDY'S - COVINGTON, GA

System/Unit: FAN - Exhaust

Asset: EF1 AREA:

Unit Data		
	Design	**Actual**
MFG	COOK	PENN BARRY
Model Num	GC-146	ZJ1
Serial Num	-	D23FZ85958
Type	CEILING	IN CEILING
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	FASCO
Frame	-	NL
Horsepower	30.3W	NL
Motor Rpm	-	1550
Phase	1	1
Voltage (rated)	120	115
Amperage (rated)	-	1.4
Service Factor	-	NL

Test Data		
	Design	**Actual**
CFM	75	84
Fan RPM	-	NA
Fan Rotation	-	CCW
Motor RPM	-	NA
System SetPt	-	MINIMIZED
RL Voltage	-	NA
RL Amperage	-	NA
Total ESP	0.25"	NA
Fan Inlet SP	-	NA
Fan Discharge SP	-	ATM

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Notes:
Speed controller is minimized. Airflow is high.

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Project: 10-09-23 FREDDY'S - COVINGTON, GA

System/Unit: FAN - Exhaust

Asset: EF2 AREA:

Unit Data		
	Design	**Actual**
MFG	COOK	PENN BARRY
Model Num	GC-146	Z8H
Serial Num	-	A23AR95616
Type	CEILING	IN CEILING
Configuration	VERTICAL	Vertical

Motor Data		
	Design	**Actual**
Motor MFG	-	NL
Frame	-	NL
Horsepower	63.3W	NL
Motor Rpm	-	1550
Phase	1	1
Voltage (rated)	120	115
Amperage (rated)	-	NL
Service Factor	-	NL

Test Data		
	Design	**Actual**
CFM	150	146
Fan RPM	-	NA
Fan Rotation	-	CCW
Motor RPM	-	NA
System SetPt	-	MINIMIZED
RL Voltage	-	NA
RL Amperage	-	NA
Total ESP	0.25"	NA
Fan Inlet SP	-	NA
Fan Discharge SP	-	ATM

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Project: 10-09-23 FREDDY'S - COVINGTON, GA

System/Unit: FAN - Exhaust

Asset: KEF1 AREA:GRIDDLE

Unit Data		
	Design	**Actual**
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	CASRE18DD	DU85HFA
Serial Num	-	5258134
Type	UTILITY	UPBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	TELCO GREEN
Frame	-	48 EC
Horsepower	1.500	1/3
Motor Rpm	-	1800
Phase	3	1
Voltage (rated)	208	208
Amperage (rated)	-	5.2
Service Factor	-	NL

Test Data		
	Design	**Actual**
CFM	1700	1720
Fan RPM	-	1260
Fan Rotation	-	CCW
Motor RPM	-	1260
System SetPt	-	70%
RL Voltage	-	213.7
RL Amperage	-	2.1
Total ESP	1.400"	0.8445”
Fan Inlet SP	-	-0.8445”
Fan Discharge SP	-	ATM

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Project: 10-09-23 FREDDY'S - COVINGTON, GA

System/Unit: FAN - Exhaust

Asset: KEF2 AREA:FRYER

Unit Data		
	Design	**Actual**
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	DU50HFA	DU50HFA
Serial Num	-	5285134
Type	UPBLAST/CEILING	UPBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	TELCO GREEN
Frame	-	48C
Horsepower	0.500	0.5
Motor Rpm	-	1800
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	6.3
Service Factor	-	NL

Test Data		
	Design	**Actual**
CFM	775	734
Fan RPM	-	1098
Fan Rotation	-	CCW
Motor RPM	-	1098
System SetPt	-	61%
RL Voltage	-	123
RL Amperage	-	2.8
Total ESP	1.250	0.6232”
Fan Inlet SP	-	-0.6232”
Fan Discharge SP	-	ATM

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Project: 10-09-23 FREDDY'S - COVINGTON, GA

System/Unit: FAN - Exhaust

Asset: KEF3 AREA:DISHWASHER

Unit Data		
	Design	**Actual**
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	DU33HFA	DU33HFA
Serial Num	-	5285134
Type	UPBLAST/CEILING	UPBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	TELCO GREEN
Frame	-	48EC
Horsepower	0.333	1/3
Motor Rpm	-	1800
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	4.3
Service Factor	-	NL

Test Data		
	Design	**Actual**
CFM	525	511
Fan RPM	-	688
Fan Rotation	-	CCW
Motor RPM	-	688
System SetPt	-	40%
RL Voltage	-	123.4
RL Amperage	-	0.5
Total ESP	0.800"	0.1144"
Fan Inlet SP	-	-0.1144
Fan Discharge SP	-	ATM

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Project: 10-09-23 FREDDY'S - COVINGTON, GA

System/Unit: Kitchen Hood Type I

Asset: HD1 AREA:GRIDDLE

Unit Data		
	Design	**Actual**
MFG	CaptiveAire	CaptiveAire
Model Num	5424ND-2	5424ND-2
Job / Serial Num	-	5258134
Type	TYPE 1 CANOPY	TYPE 1 CANOPY
Hood length	102"	102"
Hood Width	54"	54"

Test Data Exhaust		
	Design	**Actual**
Filter Type	CAPTRATE SOLO FILTER	CAPTRATE SOLO FILTER
Filter Size 1	16X16	16x16
Filter Qty 1	6	6
Filter AK factor size 1	1.62	1.62
Filter Total AK Area	9.72	9.72
Filter1 FPM	-	160
Filter2 FPM	-	159
Filter3 FPM	-	208
Filter4 FPM	-	187
Filter5 FPM	-	172
Filter6 FPM	-	173
Filter Ave FPM(corr)	-	177
CFM	1700	1720

Cooking Equipment		
	Design	**Actual**
Item 1	-	GRIDDLE
Item 2	-	GRIDDLE

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Project: 10-09-23 FREDDY'S - COVINGTON, GA

System/Unit: Kitchen Hood Type I

Asset: HD2 AREA:FRYER

Unit Data		
	Design	**Actual**
MFG	CaptiveAire	CaptiveAire
Model Num	5424ND-2	5424ND-2
Job / Serial Num	-	5258134
Type	TYPE 1 CANOPY	TYPE 1 CANOPY
Hood length	60"	60"
Hood Width	54"	54"

Test Data Exhaust		
	Design	**Actual**
Filter Type	CAPTRATE SOLO FILTER	CAPTRATE SOLO FILTER
Filter Size 1	16X16	16X16
Filter Qty 1	3	3
Filter AK factor size 1	1.62	1.62
Filter Total AK Area	4.86	4.86
Filter1 FPM	-	153
Filter2 FPM	-	150
Filter3 FPM	-	151
Filter Ave FPM(corr)	-	151
CFM	775	734

Cooking Equipment		
	Design	**Actual**
Item 1	-	FRYER
Item 2	-	FRYER

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Project: 10-09-23 FREDDY'S - COVINGTON, GA

System/Unit: Kitchen Hood Type II

Asset: HD(Type2)3 AREA:DISHES

Unit Data		
	Design	**Actual**
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	4224 VHB-G	4224 VHB-G
Serial Num	-	5258134
Type	TYPE II CANOPY	TYPE II CANOPY
Hood length	42"	42"
Hood Width	42"	42"

Test Data		
	Design	**Actual**
Exhaust CFM	525	511

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