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**I N T E L L I G E N C E**

For:  
National TAB  
1126 Swift Street  
North Kansas City, MO 64116

**Report: TAB REPORT**  
**Function: Test, Adjust, & Balance**  
**Date: 12/13/2023**

# **PROJECT**

**11-27-23 CHIPOTLE #38-3998 NORTH  
KINGSTOWN, RI (NORTH KINGSTOWN)**

118 Gate Rd

NORTH KINGSTOWN, RI 02852

## Client

Chipotle Mexican Grill  
610 Newport Center Drive, Suite 1100  
Newport Beach, CA 92660

## 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.

### 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.

### MUA (Make Up Air Unit) w/ PSP

Total flow for the MAU (Make-up Air Unit) unit was measured by readings taken at the discharge of the hood's perforated supply plenum. Readings taken with a velocity matrix were averaged and multiplied by a manufacturer's corrected area. Adjustments to the fan speed were made in order to bring the unit to within design tolerance. Any MUA'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.

### 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	KITCHEN	3400	3306	2900	2796	500	510	14.7%	15.4%						
RTU-2	DINING	3400	3306	2400	2286	1000	1020	29.4%	30.9%						
MUA-1	KITCHEN HOOD									1950	1960				
EF-1	KITCHEN HOOD											3200	3102		
EF-2	RESTROOM													150	155
<b>TOTALS</b>		6800	6612	5300	5082	1500	1530			1950	1960	3200	3102	150	155

#### NET BUILDING AIRFLOW CALCULATION

TOTALS	DESIGN	ACTUAL
TOTAL OA	3450	3490
TOTAL EXHAUST	3350	3257
<b>NET AIRFLOW</b>	100	233

DOOR TESTED	BUILDING PRESSURE MEASUREMENTS (IN. H <sub>2</sub> O)
FRONT	0.19
SIDE	-
REAR	0.161
<b>AVERAGE</b>	<b>0.1755</b>

#### FINAL CHECKS

ACTUAL NET AIRFLOW COINCIDES WITH DESIGN: ✓

MEASURED PRESSURES COINCIDES WITH ACTUAL NET AIRFLOW: ✓

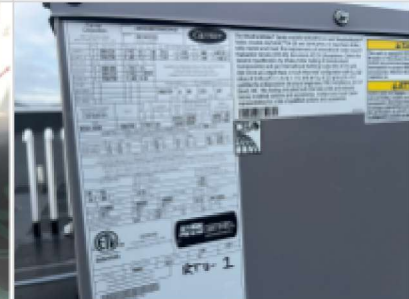
PRESSURE FALLS WITHIN IMC TOLERANCE OF +/-0.02" W.C.

NOTES:

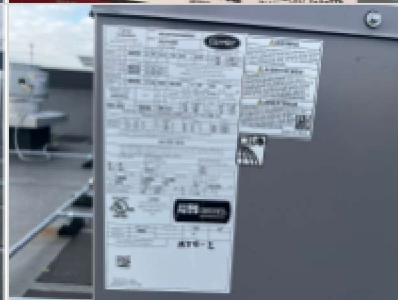
Store Front



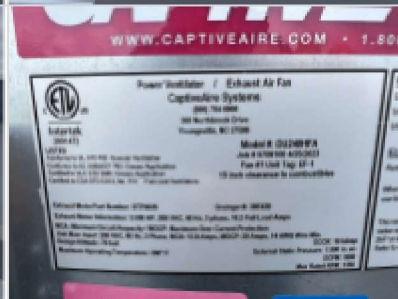
RTU-1



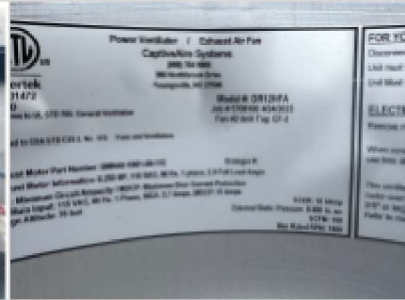
RTU-2



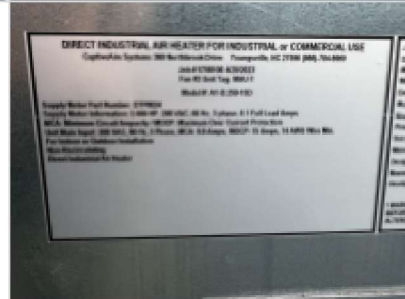
EF-1



EF-2



MAU-1



# Fan Test Sheet

<b>Project:</b>	Chipotle North Kingston RI	<b>System:</b>	RTU-1
<b>Location:</b>	Roof	<b>Serves:</b>	Kitchen
<b>Instrument:</b>	Shortridge ADM-860c	<b>Date:</b>	12/06/23

Fan Data	
Make:	Carrier
Model:	48HSED09F2M5ASW4JO
Serial No.:	3821P87323

Motor Data			
HP:		RPM:	1670
Phase:	3	SF:	1.15
	Rated		Actual
Volts:	208-230		206vfd
Amps:	7.1/6.8		6.3vfd
Hz:	60		60vfd

Air Flow Data		
	Design	Actual
Total	3,400	3,306
Outside Air	500	510

Drive Data		
	Size	Bore
Motor	4 VP	56HZ
Fan	7.00	1.00
Belts	A48	
Centerline Dist.	16.00	
	Design	Actual
Fan RPM		1148

Static Pressure		
Total Design:	0.80	in.w.c.
Suction:	-0.47	in.w.c.
Discharge:	0.26	in.w.c.
Total Actual:	0.73	in.w.c.

Duct					Design		Actual				Notes
No.	Height	Width	Insul.	Area	FPM	CFM	AFPM	CFM	SP	%	
1	35	20		4.86	103	500	105	510		102%	Outside Air Hood

Notes:

Outside air minimum damper position 25%



# Fan Test Sheet

<b>Project:</b>	Chipotle North Kingston RI	<b>System:</b>	RTU-2
<b>Location:</b>	Roof	<b>Serves:</b>	Dining
<b>Instrument:</b>	Shortridge ADM-860c	<b>Date:</b>	12/06/23

Fan Data	
Make:	Carrier
Model:	48FCEM12A2A5A0A0A0
Serial No.:	5022P44658

Motor Data			
HP:		RPM:	
Phase:	3	SF:	1.15
	Rated		Actual
Volts:	208-230		212-218-212
Amps:	6.40		5.8-5.7-5.8
Hz:	60		60

Air Flow Data		
	Design	Actual
Total	3,400	3,306
Outside Air	1,000	1,020

Drive Data		
	Size	Bore
Motor		
Fan		
Belts	Direct Drive	
Centerline Dist.		
	Design	Actual
Fan RPM		

Static Pressure		
Total Design:	0.80	in.w.c.
Suction:	-0.39	in.w.c.
Discharge:	0.33	in.w.c.
Total Actual:	0.72	in.w.c.

Duct					Design		Actual				Notes
No.	Height	Width	Insul.	Area	FPM	CFM	AFPM	CFM	SP	%	
1	34	24		5.67	176	1,000	180	1,020		102%	Outside Air Hood

Notes:

Outside air minimum damper position 25%



# Fan Test Sheet

<b>Project:</b>	Chipotle North Kingston RI	<b>System:</b>	MAU-1
<b>Location:</b>	Roof	<b>Serves:</b>	Make up Air
<b>Instrument:</b>	Shortridge ADM-860c	<b>Date:</b>	12/06/23

Fan Data	
Make:	CAPTIVEAIR
Model:	A1-D.250-15D
Serial No.:	DTP0024

Air Flow Data		
	Design	Actual
Total	1,950	1,960

Static Pressure		
Total Design:	0.80	in.w.c.
Suction:	-0.29	in.w.c.
Discharge:	0.48	in.w.c.
Total Actual:	0.77	in.w.c.

Motor Data			
HP:	2.0	RPM:	1740
Phase:	3	SF:	1.15
	Rated	Actual	
Volts:	230/460	188vfd	
Amps:	6.10	5.4vfd	
Hz:	60	70.3vfd	

Drive Data		
	Size	Bore
Motor		
Fan		
Belts	Direct Drive	
Centerline Dist.		
	Design	Actual
Fan RPM		

Notes:



# Fan Test Sheet

<b>Project:</b>	Chipotle North Kingston RI	<b>System:</b>	EF-1
<b>Location:</b>	Roof	<b>Serves:</b>	Hood Exhaust
<b>Instrument:</b>	Shortridge ADM-860c	<b>Date:</b>	12/06/23

Fan Data	
Make:	CAPTIVEAIR
Model:	DU240HFA
Serial No.:	5708100

Air Flow Data		
	Design	Actual
Total	3,200	3,102

Static Pressure		
Total Design:	1.20	in.w.c.
Suction:	-0.48	in.w.c.
Discharge:	Free	in.w.c.
Total Actual:		in.w.c.

Motor Data			
HP:	3.0	RPM:	1175
Phase:	3	SF:	1.15
	Rated	Actual	
Volts:	230/460	150vfd	
Amps:	10.20	9.6vfd	
Hz:	60	44.6vfd	

Drive Data		
	Size	Bore
Motor		
Fan		
Belts	Direct Drive	
Centerline Dist.		
	Design	Actual
Fan RPM		

Notes:



# Fan Test Sheet

<b>Project:</b>	Chipotle North Kingston RI	<b>System:</b>	EF-2
<b>Location:</b>	Roof	<b>Serves:</b>	Toilets
<b>Instrument:</b>	Shortridge ADM-860c	<b>Date:</b>	12/06/23

Fan Data	
Make:	CAPTIVEAIR
Model:	DR12HFA
Serial No.:	BMN42-18011-60-115

Air Flow Data		
	Design	Actual
Total	150	155

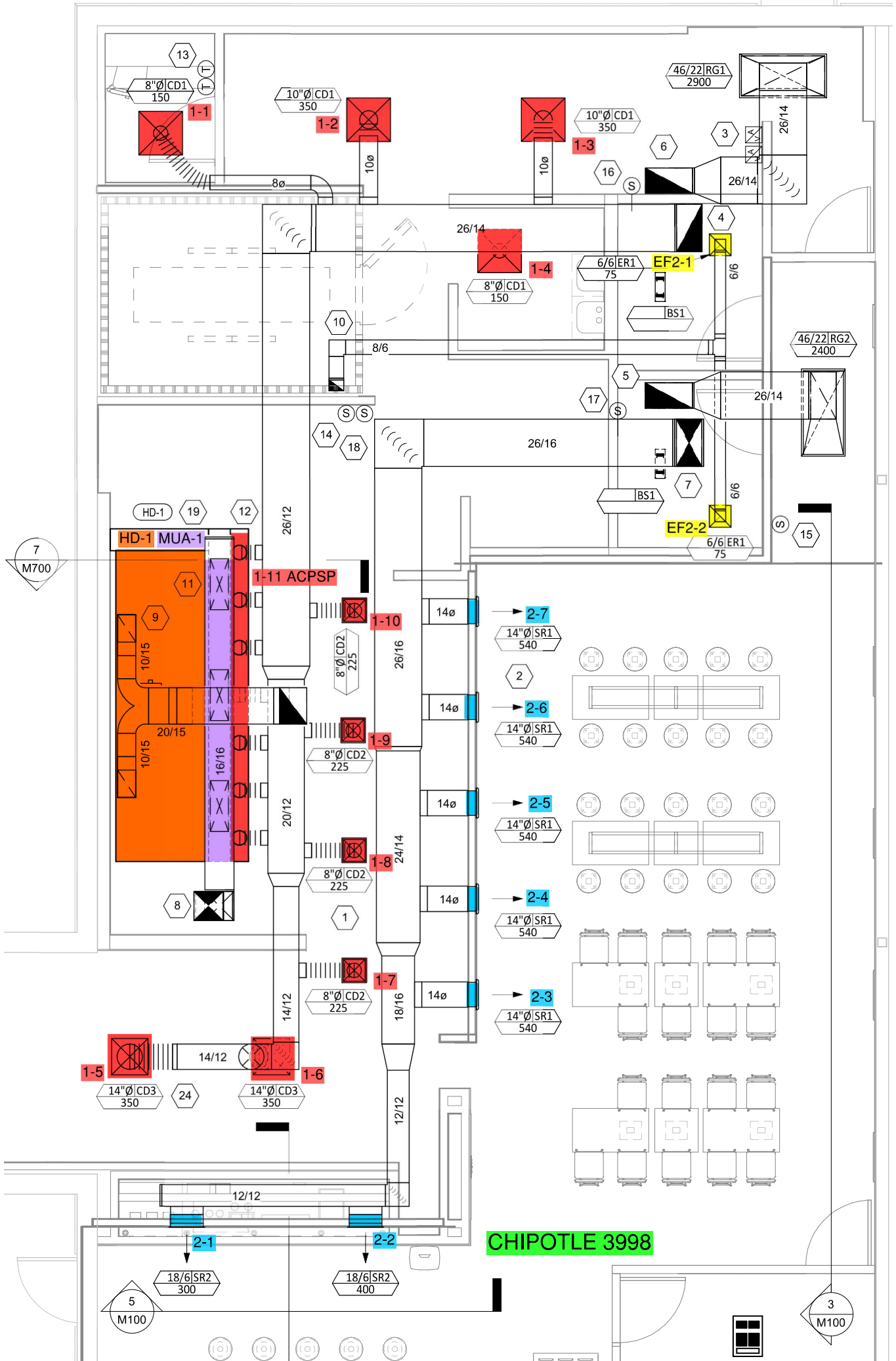
Static Pressure		
Total Design:	0.60	in.w.c.
Suction:	-0.30	in.w.c.
Discharge:	Free	in.w.c.
Total Actual:		in.w.c.

Motor Data			
HP:	0.3	RPM:	1800
Phase:	1	SF:	1.15
	Rated	Actual	
Volts:	115	118	
Amps:	2.90	1.40	
Hz:	60	60	

Drive Data		
	Size	Bore
Motor		
Fan		
Belts	Direct Drive	
Centerline Dist.		
	Design	Actual
Fan RPM		Speed 45

Notes:





**CHIPOTLE 3998**