

Report By:

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



**Report: TAB**

**Function: Test, Adjust, & Balance**

**Date: 04/03/2024**

# PROJECT

## 04-01-24 CAVA - BREA, CA

103 W IMPERIAL HWY

BREA, CA 92821

### Client

CAVA

702 H ST NW

2nd floor

Washington, DC 20001

## 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	3000	2976	2560	2525	440	451	14.7%	15.2%						
RTU-2	DINING	3000	3162	2560	2696	440	466	14.7%	14.7%						
MUA-1	COOKLINE									1976	1986				
KEF-1	KITCHEN HD											2381	2358		
EF-1	RESTROOM													120	127
EF-2	RESTROOM													120	121
<b>TOTALS</b>		6000	6138	5120	5221	880	917			1976	1986	2381	2358	240	248

#### NET BUILDING AIRFLOW CALCULATION

TOTALS	DESIGN	ACTUAL
TOTAL OA	2856	2903
TOTAL EXHAUST	2621	2606
<b>NET AIRFLOW</b>	<b>235</b>	<b>297</b>

DOOR TESTED	BUILDING PRESSURE MEASUREMENTS (IN. H2O)
FRONT	0.0017
SIDE	
REAR	0.0012
<b>AVERAGE</b>	<b>0.0015</b>

#### FINAL CHECKS

- ACTUAL NET AIRFLOW COINCIDES WITH DESIGN: ✓

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- MEASURED PRESSURES COINCIDES WITH ACTUAL NET AIRFLOW: ✓

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

NOTES:

## CheckList List

- FIV - EF'S
- FIV - HVAC DUCTWORK
- FIV - RTU'S
- FIV – HOODS
- FIV – MUA
- FPT - BUILDING PRESSURE AND HOOD CONTAINMENT
- FPT - KEF'S
- FPT - RTU's
- FPT – MUA
- TECH - SITE PICTURES



## 04-01-24 CAVA - BREA, CA

### CheckList Information

**Name :** FIV - EF'S **Status :** Completed

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

**Requesting Organization :** National TAB

**Created Date :** 03/26/2024 - Brianna Biggs - National TAB

**Completed Date :** 04/03/2024 - Zack Eismin - National TAB

### CheckList Item Details

Unit Tag matches the design and submittal MFG and Model Pass

**Comment:**

Each exhaust fan is proper tagged for proper identification with tags sized and placed on the fan for visual ease Pass

**Comment:**

Fans are installed in the correct location and orientation Pass

**Comment:**

All packing, material and debris has been removed from the blower/wheel housing and the motor compartment Pass

**Comment:**

Fan wheels turn easily by hand (turn power off prior to testing) Pass

**Comment:**

Fans grease duct curb top plate is properly transitioned to the fan inlet and flush on top of the curb, sealed to the fan base to prevent leakage Pass

**Comment:**

Exhaust fans have external disconnects and are connected to allow full hinging of each exhaust fan Pass

**Comment:**

Fan is properly hinged and supported when hinged fully back for grease duct access (for Halton fans, ensure the base mounted disconnect is not hitting the fan base/curb when fully hinged back) Pass

**Comment:**

Grease cups are properly installed and connected to the fan base grease drain to prevent spilling outside of the grease cup Pass

**Comment:**

Exhaust fans are located 5ft from parapet wall and 10ft from any fresh air intake. Pass

**Comment:**



## 04-01-24 CAVA - BREA, CA

### CheckList Information

**Name :** FIV - HVAC DUCTWORK **Status :** Completed  
**Assigned Organization :** National TAB **Asset :**  
**Requesting Organization :** National TAB  
**Created Date :** 03/26/2024 - Brianna Biggs - National TAB  
**Completed Date :** 04/03/2024 - Zack Eismin - National TAB

### CheckList Item Details

#### KVS - GREASE DUCT (HOOD SYSTEM)

Grease duct is sized and routed per plan Pass

**Comment:**

Grease duct is properly supported Pass

**Comment:**

Grease duct has code required negative pitch from fan inlet back to the hood riser connection Pass

**Comment:**

Grease duct has required clean-out doors installed, labeled, and accessible for removal/cleaning. Doors are located as required by code Pass

**Comment:**

Grease duct clean-out doors are secured using tool less fasteners and seal fully when hand tightened Pass

**Comment:**

Grease duct is centered in the curb and transitions as required to ensure the fan inlet is fully covered by the grease duct opening. Duct top plate flanges to the edges of the curb and is secured and flat so that the fan sits flush and square. Pass

**Comment:**

Grease duct is wrapped if welded duct, or is double wall round duct? Pass

**Comment:**

**KVS - MUA DUCT (HOOD SYSTEM)**

MUA duct is routed and sized as per plan Pass

**Comment:**

MUA duct is properly supported Pass

**Comment:**

MUA duct seams are sealed air tight using proper sealant and application for SMACNA pressure rating of duct systems Yes

**Comment:**

MUA duct is externally insulated and taped to prevent vapor barrier from being breached Pass

**Comment:**

MUA duct drop box and transitions are done to encourage laminar flow and avoid restrictions Pass

**Comment:**

Branch take-off's have accessible dampers exposed for the TAB team to adjust each line as necessary Pass

**Comment:**

Flex duct (if used) is supported and straight with no more than one (1) hard 90 degree elbow and less than 5ft in total length Pass

**Comment:**

Connection to the hood MUA plenum is secured and foil taped to prevent air leakage Pass

**Comment:**

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**RESTROOM DUCT**

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Restroom duct is routed and sized per plan Pass

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**Comment:**

Restroom duct is properly supported Pass

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**Comment:**

Duct seams are sealed Yes

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**Comment:**

Dampers are accessible to TAB team for balancing Pass

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**Comment:**

Flex duct (if used) is supported and straight with no more than one (1) hard 90 degree elbow and less than 5ft in total length Pass

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**Comment:**

Duct is secured to exhaust register Pass

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**Comment:**

Gravity damper is installed, opens and closes freely, and is sealed to prevent air leakage Pass

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**Comment:**

Duct to curb transition is centered and sized to ensure it covers the entire fan inlet. Curb top plate is flush and secured to the ends of the curb. N/A

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**Comment:**

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**HVAC DUCT**

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Kitchen and Dining room duct is routed and sized as per plan Pass

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**Comment:**

Ducts are properly supported Pass

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**Comment:**

Ductwork is externally insulated

Yes

**Comment:**

Duct seams are sealed air tight using proper sealant and application for SMACNA pressure rating of duct systems

Pass

**Comment:**

Ducts are securely insulated as per specifications and foil taped to prevent air barrier from being breached

Pass

**Comment:**

Takeoffs are installed to serve required terminal diffusers and are equipped with accessible dampers for TAB team access and can be opened or closed fully with no impingements

Pass

**Comment:**

Flex duct (if used) is supported and straight with no more than one (1) hard 90 degree elbow and less than 5ft in total length

Pass

**Comment:**

Takeoff to diffuser is installed securely to prevent slippage and air leakage

Pass

**Comment:**

All diffuser neck or opening sizes are installed as planned

Fail

**Comment:**

ROUND DIFFUSERS ARE MISSING FOR RTU-2

Supply and Return duct transitions to top of RTU curb, sized to full width and length of opening and is flashed fully to the sides of the curb.

Pass

**Comment:**



## 04-01-24 CAVA - BREA, CA

### CheckList Information

**Name :** FIV - RTU'S **Status :** Completed  
**Assigned Organization :** National TAB **Asset :**  
**Requesting Organization :** National TAB  
**Created Date :** 03/26/2024 - Brianna Biggs - National TAB  
**Completed Date :** 04/03/2024 - Zack Eismin - National TAB

### CheckList Item Details

#### RTU IDENTIFICATION, ORIENTATION & LOCATION

Each RTU is tagged for proper identification with tags sized and placed on the fan for visual ease Pass

**Comment:**

Identify and ensure the RTU label information and size is correct Pass

**Comment:**

Ensure proper location of unit Pass

**Comment:**

Ensure orientation of curb & RTU is per plan Pass

**Comment:**

Ensure Packing in the blower compartment has been removed Pass

**Comment:**

#### RTU - INSTALLATION DETAILS

With disconnect switch "off" spin the indoor and outdoor fan wheel's by hand and ensure they spin freely

Pass

**Comment:**

Ensure Roof Curb is fully flashed by roofing material and secured and curb is level

Pass

**Comment:**

Inspect the interior of the supply heat exchange compartment and return air compartment - validate that the duct is flashed and sealed to the top of the curb to prevent leakage or short cycling

Pass

**Comment:**

Hail guards installed on outdoor condenser coils

Pass

**Comment:**

#### RTU - ACCESSORIES

Power connected & disconnect installed

Pass

**Comment:**

Gas line connected per specification (size, painting, supports, shut-off valves, traps)

N/A

**Comment:**

OA hood & filters installed

Pass

**Comment:**

Economizer wired to control board

Pass

**Comment:**

Evaporator coil filters are properly installed with specified MERV rating

Pass

**Comment:**

Economizer damper is installed properly

Pass

**Comment:**

Economizer OA temperature / enthalpy sensors installed and wired

Pass

**Comment:**

Thermostat and humidity (if applicable) control wires wired to RTU terminals

N/A

**Comment:**

Condensate drain installed per specification

Pass

**Comment:**

Condensate line drains away from unit to a approved roof drain

Pass

**Comment:**

Belts are tight?

N/A

**Comment:**

Pulleys aligned?

N/A

**Comment:**

MERV rated filters are installed and are clean?

Pass

**Comment:**



## 04-01-24 CAVA - BREA, CA

### CheckList Information

**Name :** FIV – HOODS **Status :** Completed  
**Assigned Organization :** National TAB **Asset :**  
**Requesting Organization :** National TAB  
**Created Date :** 03/26/2024 - Brianna Biggs - National TAB  
**Completed Date :** 04/03/2024 - Zack Eismin - National TAB

### CheckList Item Details

#### HOOD INSTALLATION DETAILS

Kitchen hoods tags match design and submitted information Pass

**Comment:**

Kitchen hoods are hung Level using 1/2" threaded rod Pass

**Comment:**

Kitchen hoods are supported using beam clamps and/or Unistrut per required structural and local AHJ requirements Pass

**Comment:**

Kitchen hoods are hung level front to back and side to side Pass

**Comment:**

Kitchen hoods are hung at 80" AFF Pass

**Comment:**

Kitchen Hoods are flush against the wall along the bottom and each of it's side walls. Pass

**Comment:**

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Caulk is applied (less than 1/8" thick) from the hood against all wall surfaces or between connecting side to side hoods to prevent grease accumulation inside any crevice.	Pass
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**Comment:**

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There are no penetrations into the hood canopy other than fire system nozzles	Pass
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**Comment:**

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The hood is in "As New" condition with no visible damage, rust, pitting, or other blemishes	Pass
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**Comment:**

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All protective film has been peeled away from the wall or other areas of impingement to assure it can be easily and fully removed prior to cleaning.	Fail
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**Comment:**

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**HOOD ACCESSORIES**

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End panels are installed	Pass
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**Comment:**

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Hood filters are installed	Pass
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**Comment:**

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Grease cups are installed	Pass
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**Comment:**

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Ceiling Wrappers are installed and the ceiling grid is fixed to the top of the ceiling wrappers	Pass
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**Comment:**

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Hood control panel has been identified and is located as per plan, is accessible, and contains all components and temperature sensors to meet local interlock (normal and abnormal conditions) and heat auto on/off functionality.	Pass
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**Comment:**

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## 04-01-24 CAVA - BREA,CA

### CheckList Information

**Name :** FIV – MUA **Status :** Completed  
**Assigned Organization :** National TAB **Asset :**  
**Requesting Organization :** National TAB  
**Created Date :** 03/26/2024 - Brianna Biggs - National TAB  
**Completed Date :** 04/03/2024 - Zack Eismin - National TAB

### CheckList Item Details

MUA Tag information matches design and submittal criteria Pass

**Comment:**

MUA Fan has a permanent tag for identification located on the unit located and sized for visual ease Pass

**Comment:**

MUA is installed in the proper location and orientation Pass

**Comment:**

MUA intake is a minimum 10ft from any exhaust, roof vent or dirty air source Pass

**Comment:**

Blower compartment and internal heater area is free of packing material, debris, and dirt Pass

**Comment:**

Blower wheel turns freely by hand (turn power off prior to testing) Pass

**Comment:**

All MUA compartment and control doors are fully accessible, minimum 36" clearance for service allowing the doors to fully open without restriction Pass

**Comment:**

MUA Electrical disconnect is external to the unit and properly wired Pass

**Comment:**

Outdoor air awning is installed and fitted with proper OA mesh filters Pass

**Comment:**

Condensate drain is installed (for cooling MUA's) with proper traps, clean-outs, and drain away from the unit to an acceptable roof drain Pass

**Comment:**

Refrigeration line sets are installed and connected properly with adequate supports per specifications Pass

**Comment:**

Condenser is installed away from any grease producing exhaust fans and located as per roof plan Pass

**Comment:**

Condenser's electrical disconnect is external to the unit and properly wired (if applicable) Pass

**Comment:**

Condenser hail guards are installed (if applicable) Pass

**Comment:**

All Condenser compartment and control doors are fully accessible, minimum 36" clearance for service allowing the doors to fully open without restriction (if applicable) Pass

**Comment:**

Gas line is installed per specification and properly supported N/A

**Comment:**

Gas line is installed per specification and properly supported and contains maintenance shut-off valve, trap, and regulator (if line pressure requires it). MUA is equipped with inlet gas pressure gauge to validate incoming gas pressure is suitable

N/A

**Comment:**



## 04-01-24 CAVA - BREA,CA

### CheckList Information

**Name :** FPT - BUILDING PRESSURE AND HOOD CONTAINMENT **Status :** Completed

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

**Requesting Organization :** National TAB

**Created Date :** 03/26/2024 - Brianna Biggs - National TAB

**Completed Date :** 04/03/2024 - Zack Eismin - National TAB

### CheckList Item Details

#### FINAL TESTS

#### HOOD CAPTURE TEST

List equipment turned on for testing

**Comment:**

NONE

List smoke candle type used

**Comment:**

45 SECONDS

Smoke test capture - Perimeter of hood (%)

**Comment:**

100%

Smoke test capture - Top of cooking surface (%)

**Comment:**

100%

#### WITNESS

Date test was completed

04/03/2024

**Comment:**

TAB tech name / Firm

**Comment:**

ZACK / NATIONAL TAB

Site super name / Firm

**Comment:**

GAGE / LEVICA BUILDERS

Owner representative name / Firm (if Applicable)

**Comment:**

N/A

**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:**

0.0015"



## 04-01-24 CAVA - BREA, CA

### CheckList Information

**Name :** FPT - KEF'S **Status :** Completed

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

**Requesting Organization :** National TAB

**Created Date :** 03/26/2024 - Brianna Biggs - National TAB

**Completed Date :** 04/03/2024 - Zack Eismin - National TAB

### CheckList Item Details

Exhaust fans wheel rotation is correct Pass

**Comment:**

TAB firm has balanced the exhaust fans to proper design levels Pass

**Comment:**

All motor and electrical readings are below the full load rating of each fan Pass

**Comment:**

Exhaust Fans do not have any unusual noise or vibration while operating Pass

**Comment:**

Smoke and Grease from exhaust fans appear to properly elevate above the parapet wall and off the roof. Pass

**Comment:**

Hoods have been started up by the manufacturers rep? Pass

**Comment:**

Hoods free of alarms?

Fail

**Comment:**

CORE FAULT

Exhaust fans modulate to high speed when kitchen equipment is on and at cooking temperatures? If not, adjust modulation/offset down.

Pass

**Comment:**



## 04-01-24 CAVA - BREA, CA

### CheckList Information

**Name :** FPT - RTU's **Status :** Completed  
**Assigned Organization :** National TAB **Asset :**  
**Requesting Organization :** National TAB  
**Created Date :** 03/26/2024 - Brianna Biggs - National TAB  
**Completed Date :** 04/03/2024 - Zack Eismin - National TAB

### CheckList Item Details

#### THERMOSTAT PROGRAMMING AND CALIBRATION

Time is correct on the thermostats Pass

**Comment:**

Occupied Time = 7:30 AM Pass

**Comment:**

Occupied Heat setpoint = 68 Pass

**Comment:**

Occupied Cooling setpoint = 72 Pass

**Comment:**

Dehumidification Setpoint = 55% Pass

**Comment:**

Occupied Fan = On Pass

**Comment:**

Unoccupied Time = 12:00AM

Pass

**Comment:**

Unoccupied Heat setpoint = 60

Pass

**Comment:**

Occupied Cooling setpoint = 80

Pass

**Comment:**

Unoccupied Fan = Auto

Pass

**Comment:**

Actual measured temperature is within +/-1 degree of temperature displayed on thermostat. If not calibrate the sensor

Pass

**Comment:**

Actual measured RH is within +/-3 % of displayed RH at RTU or thermostat. If not calibrate the sensor

Pass

**Comment:**

#### CONTROL WIRING VALIDATION

Economizer Dry Bulb sensor wired

Pass

**Comment:**

Economizer Dry Bulb sensor operational

Pass

**Comment:**

OCP/OCC terminal wired correctly

Pass

**Comment:**

Thermostat Wired correctly (R,C,Y1,Y2,W1,W2)

Pass

**Comment:**

Humidity Sensor Wired correctly

Pass

**Comment:**

---

**CALIBRATION & PROGRAMMING**

---

RTU OA DB StPt, Reading Accuracy (+/- 2 degrees / 10 minute time to calibrate to actual reading)

Pass

**Comment:**

---

RTU MAT StPt, Reading Accuracy (+/- 2 degrees / 10 minute time to calibrate to actual reading)

N/A

**Comment:**

---

RTU MAT Low StPt

**Comment:**

N/A

---

RTU Low T Lockout

**Comment:**

N/A

---

Economizer set to 28 BTU/lb enthalpy setpoint.

**Comment:**

---

**Temperature tests**

---

Outside air temperature / humidity

**Comment:**

68 °F 44%RH

---

Full cooling LAT/H

**Comment:**

35°F 40%RH

---

Full heating LAT/H

**Comment:**

111°F 35%RH

---

**OUTDOOR AIR / RELIEF DAMPER**

---

If power exhaust installed, set point is higher than the OA damper setpoint

N/A

**Comment:**

If power exhaust installed, open the OA damper above the power exhaust setpoint and ensure that the power exhaust turns on

N/A

**Comment:**

If relief damper is installed, ensure that it is installed properly and can open freely.

Pass

**Comment:**

#### OCCUPANCY VALIDATION

Place the thermostat in "unoccupied" - Does the OA damper close fully

Pass

**Comment:**

Stage cooling and Heating in "unoccupied" - Does the unit properly stage and does the OA damper remain closed

Pass

**Comment:**

Place the thermostat in "Occupied" - Does the OA damper open to the TAB preset minimum position in High speed

Pass

**Comment:**

Place the thermostat in "Occupied" - Does the OA damper open to the TAB preset minimum position in Low speed (if applicable)

Pass

**Comment:**



### 04-01-24 CAVA - BREA, CA

#### CheckList Information

**Name :** FPT – MUA **Status :** Completed  
**Assigned Organization :** National TAB **Asset :**  
**Requesting Organization :** National TAB  
**Created Date :** 03/26/2024 - Brianna Biggs - National TAB  
**Completed Date :** 04/03/2024 - Zack Eismin - National TAB

#### CheckList Item Details

TAB firm has balanced the MUA to within proper design limits Pass

**Comment:**

Blower wheel rotation is correct Pass

**Comment:**

MUA does not have any unusual noise or vibration while operating Pass

**Comment:**

Motor and electrical measurements are below the full load rating Pass

**Comment:**

Startup has been completed by the manufacturers rep? Pass

**Comment:**

Heater tested and is functional? Pass

**Comment:**

Cooling is tested and is functional? Yes

Comment:



### 04-01-24 CAVA - BREA,CA

#### CheckList Information

**Name :** TECH - SITE PICTURES **Status :** Completed  
**Assigned Organization :** National TAB **Asset :**  
**Requesting Organization :** National TAB  
**Created Date :** 03/26/2024 - Brianna Biggs - National TAB  
**Completed Date :** 04/03/2024 - Zack Eismin - National TAB

#### CheckList Item Details

STORE FRONT

**Comment:**



20240403\_091321  
04/03/2024

RTU-1

**Comment:**



20240403\_090709  
04/03/2024

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RTU-2

Comment:

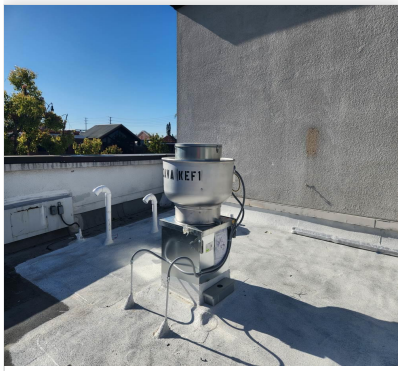


20240403\_090716  
04/03/2024

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KEF-1

Comment:



20240403\_090719  
04/03/2024

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EF-1

Comment:



20240403\_091154  
04/03/2024

---

EF-2

Comment:



**20240403\_091114**  
**04/03/2024**

---

MUA-1

**Comment:**



**20240403\_090729**  
**04/03/2024**

---

HD-1

**Comment:**



**20240403\_091053**  
**04/03/2024**

# National TAB

Project: 04-01-24 CAVA - BREA,CA

System/Unit: AHU/RTU



Asset: RTU1

AREA:KITCHEN

Unit Data		
	Design	Actual
MFG	TRANE	TRANE
Serial Num	-	240413584L
Model Num	WHC092	WHC092H3R0A2FK7E1A1B6
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	38X24
Num Final Filter 1	-	4
Final Filter Size 1	-	20X25X2
Num Final Filter 2	-	
Final Filter Size 2	-	

Test Data		
	Design	Actual
SF CFM	3000	2976
SF RPM	-	912
RA CFM	2560	2525
OA CFM	440	451
RL Voltage	-	208/208/208
RL Amperage	-	2.76/2.76/2.81
SF Rotation	-	CCW
RA Damper Position	-	85%
Min OA Damper Position	-	15%
Min OA Damper Type	-	MOTORIZED
OA Enthalpy Setpt	-	E

Motor Data		
	Design	Actual
Motor MFG	-	NL
Frame	-	NL
Horsepower	2.75	2.75
Motor Rpm	-	NL
Phase	3	3
Rated Voltage	208	208
Rated Amperage	-	7.3

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.36"
Fan Suction SP	-	-0.61"
Fan Discharge SP	-	0.58"
Total ESP	1.0"	0.94"
Fan Total SP	-	1.19"

Drive Data		
	Design	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

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

Completed By: Zack Eismin on 04/03/2024

# National TAB

Project:04-01-24 CAVA - BREA,CA

## AHU/RTU



**Diffuser Supply (GRD)**

**RTU1/KITCHEN**

Asset									
Asset Name	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
SGRD1	BOH	SD2	8"	200	1	264	253	191	95.5
SGRD2	BOH	SD1	8"	500	1	421	384	467	93.4
SGRD3	BOH	SD1	3"	300	1	261	231	293	97.7
SGRD4	OFFICE	SD1	8"	125	1	239	214	133	106.4
SGRD5	OPEN KITCHEN	SD2	10"	245	1	444	220	257	104.9
SGRD6	OPEN KITCHEN	SD2	10"	207	1	489	221	209	101.0
SGRD7	OPEN KITCHEN	SD2	10"	207	1	436	191	198	95.7
SGRD8	OPEN KITCHEN	SD2	10"	207	1	506	226	216	104.3
SGRD9	OPEN KITCHEN	SD2	10"	207	1	480	189	191	92.3
SGRD10	HOOD 1	ACPSP	8"	802	5.04	307	727	821	102.4
Total				3000		3847	2856	2976	99.2%

# National TAB

Project: 04-01-24 CAVA - BREA, CA

System/Unit: AHU/RTU



Asset: RTU2

AREA: DINING

Unit Data		
	Design	Actual
MFG	TRANE	TRANE
Serial Num	-	240911802L
Model Num	WHC092	WHC092H3R0A2FK7E1A1B6
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	38X24
Num Final Filter 1	-	4
Final Filter Size 1	-	20X25X2
Num Final Filter 2	-	
Final Filter Size 2	-	

Test Data		
	Design	Actual
SF CFM	3000	3162
SF RPM	-	845
RA CFM	2560	2696
OA CFM	440	466
RL Voltage	-	208/108/209
RL Amperage	-	1.6/1.7/1.6
SF Rotation	-	CCW
RA Damper Position	-	85%
Min OA Damper Position	-	15%
Min OA Damper Type	-	MOTORIZED
OA Enthalpy Setpt	-	E

Motor Data		
	Design	Actual
Motor MFG	-	NL
Frame	-	NL
Horsepower	2.75	2.75
Motor Rpm	-	NL
Phase	3	3
Rated Voltage	208	208
Rated Amperage	-	7.3

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.33"
Fan Suction SP	-	-0.49"
Fan Discharge SP	-	0.24"
Total ESP	1.0"	0.57"
Fan Total SP	-	0.73"

Drive Data		
	Design	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

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

Completed By: Zack Eismin on 04/03/2024

# National TAB

Project:04-01-24 CAVA - BREA,CA

## AHU/RTU



**Diffuser Supply (GRD)**

**RTU2/DINING**

Asset									
Asset Name	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
SGRD1	DINING	SD4	12"	410	1	703	432	432	105.4
SGRD2	DINING	SD4	12"	420	1	1003	452	452	107.6
SGRD3	DINING	SD4	12"	410	1	843	444	444	108.3
SGRD4	DINING	SD4	12"	410	1	414	421	421	102.7
SGRD5	DINING	SD4	12"	410	1	633	437	437	106.6
SGRD6	DINING	SD2	12"	410	1	555	415	415	101.2
SGRD7	DINING	SD2	12"	400	1	593	426	426	106.5
SGRD8	RESTROOM	SD3	6"	50	1	120	52	52	104.0
SGRD9	RESTROOM	SD3	6"	80	1	118	83	83	103.8
Total				3000		4982	3162	3162	105.4%

# National TAB

Project: 04-01-24 CAVA - BREA,CA

## System/Unit: FAN - Exhaust



Asset: EF1

AREA:RESTROOM

Unit Data		
	Design	Actual
MFG	GREENHECK	LOREN COOK
Model Num	SP-150	GEMINI 140
Serial Num	-	NL
Type	CEILING	CEILING
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	Actual
Motor MFG	-	QUEACE
Frame	-	NL
Horsepower	171W	NL
Motor Rpm	-	1550
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	0.4
Service Factor	-	NL

Test Data		
	Design	Actual
CFM	120	127
Fan RPM	886	1550
Fan Rotation	-	CCW
Motor RPM	-	1550
System SetPt	-	MAX
RL Voltage	-	NA
RL Amperage	-	NA
Total ESP	0.5"	0.34"
Fan Inlet SP	-	ATM
Fan Discharge SP	-	0.34"

Completed By: Zack Eismin on 04/02/2024

# National TAB

Project: 04-01-24 CAVA - BREA, CA

## System/Unit: FAN - Exhaust



Asset: EF2

AREA: RESTROOM

Unit Data		
	Design	Actual
MFG	GREENHECK	LOREN COOK
Model Num	SP-150	GEMINI 140
Serial Num	-	NL
Type	CEILING	CEILING
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	Actual
Motor MFG	-	QUEACE
Frame	-	NL
Horsepower	171W	NL
Motor Rpm	-	1550
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	0.4
Service Factor	-	NL

Test Data		
	Design	Actual
CFM	120	121
Fan RPM	886	1550
Fan Rotation	-	CCW
Motor RPM	-	1550
System SetPt	-	MAX
RL Voltage	-	NA
RL Amperage	-	NA
Total ESP	0.5"	0.37"
Fan Inlet SP	-	ATM
Fan Discharge SP	-	0.37"

Completed By: Zack Eismin on 04/02/2024

# National TAB

Project: 04-01-24 CAVA - BREA, CA

## System/Unit: FAN - Exhaust



Asset: KEF1

AREA: KITCHEN HOOD

Unit Data		
	Design	Actual
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	DU85HFA	DU85HFA
Serial Num	-	6095564
Type	UPBLAST	UPBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	Actual
Motor MFG	-	TELCO GREEN
Frame	-	NL
Horsepower	1	1
Motor Rpm	-	1900
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	11.6
Service Factor	-	NL

Test Data		
	Design	Actual
CFM	2381	2358
Fan RPM	1543	1748
Fan Rotation	-	CCW
Motor RPM	-	1748
System SetPt	-	92%
RL Voltage	-	120
RL Amperage	-	11.4
Total ESP	1.0"	1.22"
Fan Inlet SP	-	-1.22"
Fan Discharge SP	-	ATM

Completed By: Zack Eismin on 04/03/2024

# National TAB

Project: 04-01-24 CAVA - BREA, CA

## System/Unit: FAN - Supply



Asset: MUA1

AREA:COOKLINE

Unit Data		
	Design	Actual
<b>MFG</b>	CAPTIVEAIRE	CAPTIVEAIRE
<b>Model Num</b>	A1-15D-MPU	A1-15D-MPU
<b>Serial Num</b>	-	6095564
<b>Type</b>	MUA	MUA
<b>Configuration</b>	VERTICAL	VERTICAL

Motor Data		
	Design	Actual
<b>Motor MFG</b>	-	TECO
<b>Frame</b>	-	145T
<b>Horsepower</b>	1.5	1.5
<b>Motor Rpm</b>	-	1745
<b>Phase</b>	3	3
<b>Voltage (rated)</b>	208	230/460
<b>Amperage (rated)</b>	-	5.64/2.82
<b>Service Factor</b>	-	1.15

Gas Heat		
	Design	Actual
<b>Heater Operates (y/n)</b>	-	N/A
<b>Flame Status (pass/fail)</b>	-	N/A
<b>Inlet Air Temp SetPt</b>	55	N/A
<b>Discharge Air Temp SetPt</b>	60	N/A
<b>Air Flow Switch SP Actual</b>	-	N/A

Test Data		
	Design	Actual
<b>CFM</b>	1976	1986
<b>SF RPM</b>	1913	1902
<b>Motor RPM</b>	-	1902
<b>SF System SetPt</b>	-	65.4HZ
<b>RL Voltage</b>	-	208/208/209
<b>RL Amperage</b>	-	3.78
<b>Total ESP</b>	-	NA
<b>Fan Discharge SP</b>	-	NA

General		
	Design	Actual
<b>Fan Rotation Correct</b>	-	YES

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# National TAB

Project: 04-01-24 CAVA - BREA,CA



## System/Unit: Kitchen Hood Type I

Asset: HD1

AREA:

Unit Data		
	Design	Actual
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	6030 ND-2-ACPSP-F	6030 ND-2-ACPSP-F
Job / Serial Num	-	6095564
Type	TYPE I CANOPY	TYPE I CANOPY
Hood length	127"	127"
Hood Width	60"	60"
Supply Plenum Type	-	PERFORATED
Supply Plenum Width	14"	14"
Supply Plenum Length	140"	140"

Test Data Exhaust		
	Design	Actual
Filter Type	CAPTRATE SOLO	CAPTRATE SOLO
Filter Size 1	16X20	16X20
Filter Qty 1	7	7
Filter AK factor size 1	2.08	2.08
Filter Total AK Area	14.56	14.56
Filter1 FPM	-	143
Filter2 FPM	-	146
Filter3 FPM	-	163
Filter4 FPM	-	169
Filter5 FPM	-	175
Filter6 FPM	-	176
Filter7 FPM	-	162
Filter Ave FPM(corr)	-	162
CFM	2381	2358

Cooking Equipment		
	Design	Actual
Item 1	-	BROILER
Item 2	-	STOVE RANGE
Item 3	-	FLAT TOP GRILL
Item 4	-	FRYER
Item 5	-	

Test Data Supply		
	Design	Actual
Total AK Area	13.61	13.61
Kv factor (Vel)	0.89	0.89
Num of Readings	-	10
Reading1 FPM	-	189
Reading2 FPM	-	155
Reading3 FPM	-	129
Reading4 FPM	-	170
Reading5 FPM	-	161
Reading6 FPM	-	167
Reading7 FPM	-	185
Reading8 FPM	-	145
Reading9 FPM	-	142
Reading10 FPM	-	205
Reading11 FPM	-	
Reading12 FPM	-	
Reading13 FPM	-	
Reading14 FPM	-	
Ave FPM(corr)	-	164
CFM	1976	1986

Completed By: Zack Eismin on 04/02/2024