Report By:
United T&B
7013 Flagler Road
Nordland, WA 98358

NATIONAL TAB

Comfort. Under control.

For:
National TAB
1329 E. Kemper Road
Suite 4210
Cincinnati, OH 45246

Report: TAB REPORT

Function: Test, Adjust, & Balance

Date: 11/15/2022

PROJECT

11-07 CHIPOTLE # 43-4174 12TH & WASHINGTON, UT (OGDEN)

1269 Washington Blvd.

OGDEN, UT 84404

Client

Chipotle Mexican Grill

1401 Wynkoop Street, Suite 500

Denver, CO 80202

National TAB

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.

NATIONAL TAB

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	2937	2500	2937	500	0	16.7%	0.0%						
RTU-2	DINING	3400	3352	2400	2341	1000	1011	29.4%	30.2%						
MUA-1	KITCHEN HOOD									1950	2020				
EF-1	KITCHEN HOOD											3200	3334		
EF-2	RESTROOM													150	157
TOTALS		6400	6289	4900	5278	1500	1011			1950	2020	3200	3334	150	157

NET BUILDING AIRFLOW CALCULATION

TOTALS	DESIGN	ACTUAL
TOTAL OA	3450	3031
TOTAL EXHAUST	3350	3491
NET AIRFLOW	100	-460

DOOR TESTED	BUILDING PRESSURE MEASUREMENTS (IN. H20)
FRONT	-0.0322
SIDE	-0.0342
REAR	-0.0464
AVERAGE	**-0.0376**

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:

BUILDING PRESSURE TEST IS LIKELY INACCURATE DUE TO COVERINGS PUT UP BY PAINTERS AND IS EXACERBATED BY ISSUE WITH RTU-01 OA DAMPER.COVERINGS ALSO PREVENTED SMOKE TEST ON KITCHEN HOOD.

Project Checklist

SYSTEM/UNIT: Project Checklist

Tested By: Clayton Nelson
Date: 11/10/2022

Inspection Data - Project Checklist

	Verification	Response	Notes	By	Date/Time
1	All diffusers and grilles are installed and match design?	Yes		CN	11/10/22 13:56
2	Deflector plates are removed from 1x1 diffusers on the serve line (double check that this is specified on the diffuser schedule first)	Yes		CN	11/10/22 13:56
3	All hood filters installed and accounted for?	Yes		CN	11/10/22 13:56
4	Hoods are wired and have power?	Yes		CN	11/10/22 13:56
5	Hood is free of alarms?	Yes		CN	11/10/22 13:56
6	Thermostats have power?	Yes		CN	11/10/22 13:56
7	Have trades/general contractor been notified about any issues and are they created on FaciliBuild?	Yes		CN	11/10/22 13:57

General - Project Checklist

	Verification	Response	Notes	By	Date/Time
1	Is space free of drafting?	Yes		CN	11/10/22 13:57
2	Is space comfortable in all areas?	Yes		CN	11/10/22 13:57
3	Is the space free of ventilation noise?	Yes		CN	11/10/22 13:57
4	If deviations from design were necessary to resolve 103 what were they? Otherwise put "NA"	Yes		CN	11/10/22 13:57

Project Issue Report

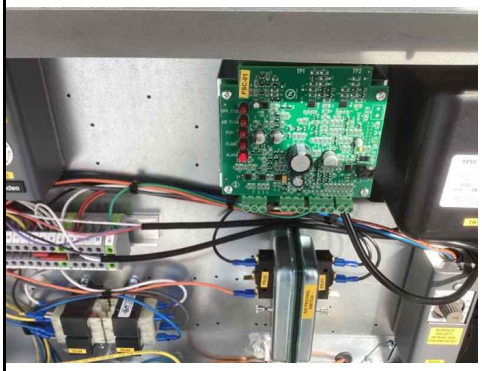
Issue ID:	0001	Status:	Open	Issue Priority:	
Equipment:	MAU-01				Created Date: 10-Nov-22

Issue Description:

Heater tested and is functional? - No - MuA-01 shows alarm after attempts to heat.

Issue Type: Installation
Role Assignment: Mechanical Contractor
Comments / Signature:

Issue Photos:



Name: Heater tested and is functional? - No - MuA-01 sho.jpg
Captured: 11/10/2022 11:29 AM

Issue ID:	0002	Status:	Open	Issue Priority:	
Equipment:	RTU-01				Created Date: 10-Nov-22

Issue Description:

OA Damper Position - Closed - OA damper does not respond to controller settings. Recommend checking wiring, and place damper to 20% open (3.6v).

Issue Type: Installation
Role Assignment: Mechanical Contractor
Comments / Signature:

Project Issue Report

Issue ID:	0003	Status:	Open	Issue Priority:	
Equipment:	Air Balance Summary				Created Date: 10-Nov-22

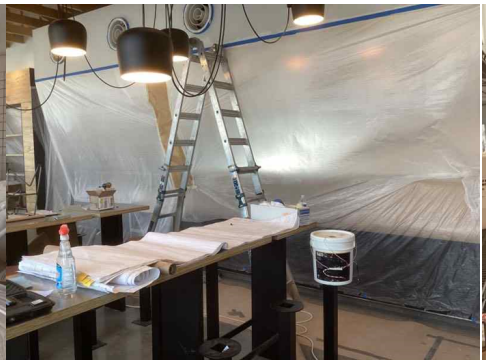
Issue Description:

Building pressure test is likely inaccurate due to coverings put up by painters and is exacerbated by issue with RTU-01 OA damper. Coverings also prevented smoke test on kitchen hood.

Issue Type: Installation
Role Assignment: Mechanical Contractor
Comments / Signature:

Issue Photos:

Name: Building pressure test is likely inaccurate due to.jpg
Captured: 11/10/2022 1:52 PM



Name: Building pressure test is likely inaccurate due to.jpg
Captured: 11/10/2022 1:52 PM

Name: Building pressure test is likely inaccurate due to.jpg
Captured: 11/10/2022 1:52 PM

Air Apparatus

SYSTEM/UNIT: RTU-01

Tested By: Clayton Nelson
Date: 11/11/2022

Design Airflow (CFM)	
Design Total	3000
Design Grille Total	3000
Design Return	2500
Design Min O/A	500

Unit Design Data	
Submittal Make	Trane
Submittal Model #	YHC092
Submittal Airflow	Not Provided
Sched./Sub. Volts	208
Sched./Sub. Phase	3
Sched./Sub. HP	Not Listed
Submittal BHP	Not Provided
Filter MERV Rating (Sched/Sub)	Not Listed

Design Static Pressures (in wg)	
Design Ext SP	0.8
Submittal Total SP	Not Provided
Submittal Clg Coil Δ SP	-

Filter Data	
Condition	Partially Loaded
Filter Type	Disposable
MERV Rating	-
Filter Size Set 1 (in)	16x20x2
# Filters Set 1	4
Filter Size Set 2 (in)	-
# Filters Set 2	-

Motor Nameplate Data	
Motor Make	Marathon
Motor Frame	56HZ
Motor HP	-
Motor RPM	1725
Motor Volts	230
Motor Phase	3

Final Airflow (CFM)	
Actual Total CFM	2937
Actual Grille Total CFM	2937
Actual Return Air CFM	2937
Actual Min O/A CFM	0
Fan CFM Test Method	Supply Outlet Total
OA Method/Instrument	Face Velocity/RVA
OA Ak (sq ft)	3.417
OA Damper Position	Closed
RA Damper Position	100% Open

Unit Data	
Make (tag)	Carrier
Model # (tag)	48TCDM08A2A5A0A0A0
Serial # (tag)	3222P35512
Location	Roof
Unit Discharge	Downblast
Cooling Coil Location	Unit / Drawthru
Coil Area (sq ft)	8.9
Clg Coil Vel (FPM)	330
Fan Service	Supply
Fan Type	Centrifugal (FC)
Fan Discharge	Downblast
Fan Arrangement	DWDI

Fan Design Data	
Submittal Motor RPM	Not Provided
Submittal Fan RPM	-

Fan Data	
Actual Fan RPM/Speed	864
Actual Motor RPM	1743

Electrical Data	
Measurement Method	V/A Meter
Motor Volts 1	209
Motor Volts 2	211

Air Apparatus

SYSTEM/UNIT: RTU-01

Tested By: Clayton Nelson
Date: 11/11/2022

Motor Nameplate Data	
Motor Amps	8.8
Motor S.F.	1.15
Motor % PF	-
Motor % Eff.	-
Other Motor Data	-

Drive Data	
Drive Type	Belt Drive
Sheave Type	Variable
Fan Sheave Make	Fenner Drives
Fan Shv Mod# or Size (in)	AFD84
Fan Sheave Bore (in)	1
Motor Sheave Make	Power Drive
Mtr Shv Mod# or Size (in)	1VL50
Motor Sheave Bore (in)	7/8
VP Range	3 Turns Open
Center Distance (in)	17.3
No of Belts	1
Belt Make	Browning
Belt Size	AX25
Other Data	-

Electrical Data	
Motor Volts 3	212
Motor Amps 1	4.8
Motor Amps 2	5.6
Motor Amps 3	5.2
Operating HZ	60.00
Approx. BHP	
Corr. Nameplate Amps	9.7
Starter Data	Internal to VFD
VFD Reference	Not Applicable

Air Apparatus

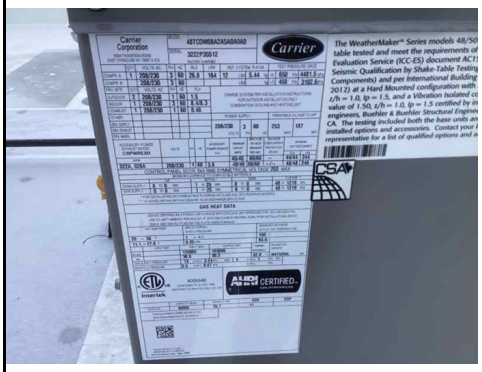
SYSTEM/UNIT: RTU-01

Tested By: Clayton Nelson
Date: 11/11/2022

Motor Make Photo:

Name: Motor Make.jpg
Captured: 11/10/2022 12:17 PM
Caption:

Make (tag) Photo:



Name: Make (tag).jpg
Captured: 11/10/2022 8:37 AM
Caption:

Air Apparatus

SYSTEM/UNIT: RTU-01

Tested By: Clayton Nelson
Date: 11/11/2022

Inspection Data - RTU-01

	Verification	Response	Notes	By	Date/Time
1	IS ECONOMIZER BLANK PLATE INSTALLED BELOW THE OUTDOOR AIR FILTERS? (IF NO, REMOVE THE PIECE FROM UNDERNEATH THE COIL FILTER BANK AND INSTALL) Trane only (N/A = not applicable)	Yes		CN	11/10/22 12:26
2	Economizers are assembled and functional?	No		CN	11/10/22 12:47
3	DCV Max damper opening position is set to minimum?	No		CN	11/10/22 12:47
4	Free cooling enthalpy set point set for lowest setting (Typically "D")	No		CN	11/10/22 12:47
5	Is the motor operating below the motor FLA rating?	Yes		CN	11/10/22 12:26
6	Belts are Tight?	Yes		CN	11/10/22 12:26
7	If direct drive unit is the speed controller working.	Yes		CN	11/10/22 12:26
8	Gas piping is installed and valves are in on position?	Yes		CN	11/10/22 12:26
9	Unit free of noticeable noise and vibration?	Yes		CN	11/10/22 12:26

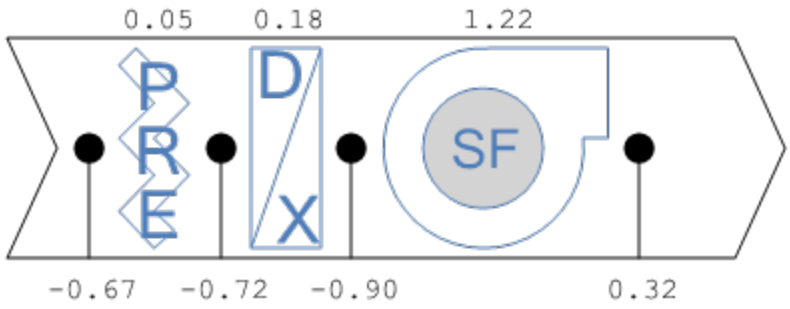
Log:

RTU-01	11/10/2022	Clayton Nelson	OA Damper Position - Closed - OA damper does not respond to controller settings. Recommend checking wiring, and place damper to 20% open (3.6v).

SYSTEM/UNIT: RTU-01/Static Profile

Tested By: Clayton Nelson
Date: 11/11/2022

Static Pressure Profile



Air Apparatus

RTU-01 Supply Outlet Summary

System/Unit	Area Served	Type	Size / Area (in)	Design CFM	Prelim CFM	Final CFM	% Final	Instrument	Ak	Open (sq ft)	Final FPM
S-01	Office	CD	8	150	158	149	99	Capture Hood	1.000	1.000	149
S-02	Kitchen	CD	10	275	263	268	97	Capture Hood	1.000	1.000	268
S-03	Kitchen	CD	10	275	266	270	98	Capture Hood	1.000	1.000	270
S-04	Kitchen	CD	8	225	245	216	96	Capture Hood	1.000	1.000	216
S-05	Service Line	CD	8	225	161	209	93	Capture Hood	1.000	1.000	209
S-06	Service Line	CD	8	225	178	227	101	Capture Hood	1.000	1.000	227
S-07	Service Line	CD	8	225	164	220	98	Capture Hood	1.000	1.000	220
S-08	Service Line	CD	12	300	234	291	97	Capture Hood	1.000	1.000	291
S-09	Service Line	CD	12	300	324	295	98	Capture Hood	1.000	1.000	295
S-10	ACPSP	PSP	168x6	800	667	792	99	Velgrid	5.753	7.375	138
	Totals:	-	-	**3000**	**2660**	**2937**	**98**	-	-	-	-

Air Apparatus

SYSTEM/UNIT: RTU-02

Tested By: Clayton Nelson
Date: 11/11/2022

Design Airflow (CFM)	
Design Total	3400
Design Grille Total	3400
Design Return	2400
Design Min O/A	1000

Unit Design Data	
Submittal Make	Trane
Submittal Model #	YHC102
Submittal Airflow	Not Provided
Sched./Sub. Volts	208
Sched./Sub. Phase	3
Sched./Sub. HP	Not Listed
Submittal BHP	Not Provided
Filter MERV Rating (Sched/Sub)	Not Listed

Design Static Pressures (in wg)	
Design Ext SP	0.8
Submittal Total SP	Not Provided
Submittal Clg Coil Δ SP	-

Filter Data	
Condition	Partially Loaded
Filter Type	Pleated
MERV Rating	-
Filter Size Set 1 (in)	20x20x2
# Filters Set 1	4
Filter Size Set 2 (in)	-
# Filters Set 2	-

Motor Nameplate Data	
Motor Make	Marathon
Motor Frame	56HZ
Motor HP	-
Motor RPM	1670
Motor Volts	208
Motor Phase	3

Final Airflow (CFM)	
Actual Total CFM	3352
Actual Grille Total CFM	3352
Actual Return Air CFM	2341
Actual Min O/A CFM	1011
Fan CFM Test Method	Supply Outlet Total
OA Method/Instrument	Face Velocity/RVA
OA Ak (sq ft)	3.417
OA Damper Position	39%/49%
RA Damper Position	61%

Unit Data	
Make (tag)	Carrier
Model # (tag)	48HCED08B2M5A5W3J0
Serial # (tag)	2622P77864
Location	Roof
Unit Discharge	Downblast
Cooling Coil Location	Unit / Drawthru
Coil Area (sq ft)	11.1
Clg Coil Vel (FPM)	302
Fan Service	Supply
Fan Type	Centrifugal (FC)
Fan Discharge	Downblast
Fan Arrangement	DWDI

Fan Design Data	
Submittal Motor RPM	Not Provided
Submittal Fan RPM	-

Fan Data	
Actual Fan RPM/Speed	763
Actual Motor RPM	1663

Electrical Data	
Measurement Method	VFD Display
Motor Volts 1	206
Motor Volts 2	-

Air Apparatus

SYSTEM/UNIT: RTU-02

Tested By: Clayton Nelson
Date: 11/11/2022

Motor Nameplate Data	
Motor Amps	6.7
Motor S.F.	1.15
Motor % PF	-
Motor % Eff.	-
Other Motor Data	-

Drive Data	
Drive Type	Belt Drive
Sheave Type	Variable
Fan Sheave Make	Fenner
Fan Shv Mod# or Size (in)	AFD74
Fan Sheave Bore (in)	1
Motor Sheave Make	Browning
Mtr Shv Mod# or Size (in)	1VM44
Motor Sheave Bore (in)	5/8
VP Range	Full Open
Center Distance (in)	16.0
No of Belts	1
Belt Make	Browning
Belt Size	A48
Other Data	Idler Tension Pulley

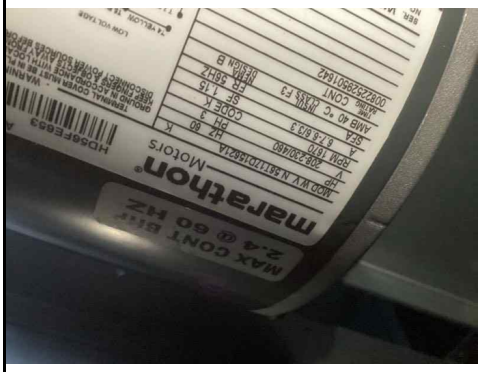
Electrical Data	
Motor Volts 3	-
Motor Amps 1	4.5
Motor Amps 2	-
Motor Amps 3	-
Operating HZ	60.00
Approx. BHP	
Corr. Nameplate Amps	6.8
Starter Data	Internal to VFD
VFD Reference	Not Applicable

Air Apparatus

SYSTEM/UNIT: RTU-02

Tested By: Clayton Nelson
Date: 11/11/2022

Motor Make Photo:



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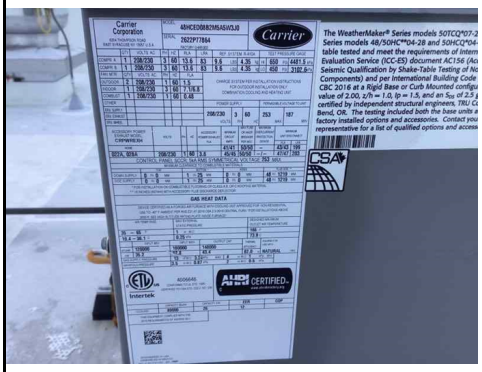
Caption:

Make (tag) Photo:



Name: Make (tag).jpg
Captured: 11/10/2022 8:31 AM
Caption:

Air Apparatus

SYSTEM/UNIT: RTU-02

Tested By: Clayton Nelson
Date: 11/11/2022

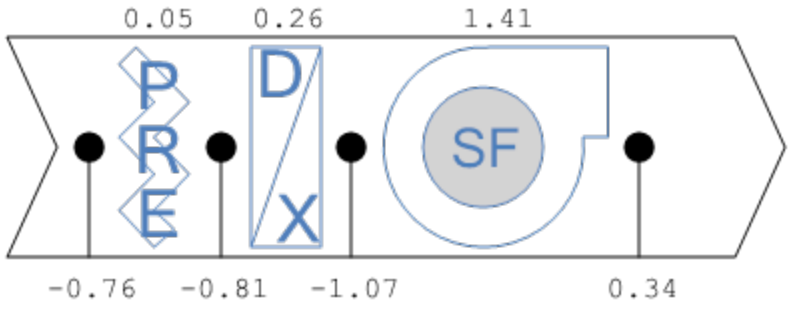
Inspection Data - RTU-02

	Verification	Response	Notes	By	Date/Time
1	IS ECONOMIZER BLANK PLATE INSTALLED BELOW THE OUTDOOR AIR FILTERS? (IF NO, REMOVE THE PIECE FROM UNDERNEATH THE COIL FILTER BANK AND INSTALL) Trane only (N/A = not applicable)	Yes		CN	11/10/22 12:09
2	Economizers are assembled and functional?	Yes		CN	11/10/22 12:09
3	DCV Max damper opening position is set to minimum?	Yes		CN	11/10/22 12:09
4	Free cooling enthalpy set point set for lowest setting (Typically "D")	Yes		CN	11/10/22 12:09
5	Is the motor operating below the motor FLA rating?	Yes		CN	11/10/22 8:37
6	Belts are Tight?	Yes		CN	11/10/22 8:37
7	If direct drive unit is the speed controller working.	NA		CN	11/10/22 8:37
8	Gas piping is installed and valves are in on position?	Yes		CN	11/10/22 8:37
9	Unit free of noticeable noise and vibration?	Yes		CN	11/10/22 8:37

SYSTEM/UNIT: RTU-02/Static Profile

Tested By: Clayton Nelson
Date: 11/11/2022

Static Pressure Profile



Air Apparatus

RTU-02 Supply Outlet Summary

System/Unit	Area Served	Type	Size / Area (in)	Design CFM	Prelim CFM	Final CFM	% Final	Instrument	Ak	Open (sq ft)	Final FPM
S-01	SEATING	SW	14	400	388	388	97	Capture Hood	1.000	1.000	388
S-02	SEATING	SW	14	500	512	512	102	Capture Hood	1.000	1.000	512
S-03	SEATING	SW	14	500	490	490	98	Capture Hood	1.000	1.000	490
S-04	SEATING	SW	14	600	566	566	94	Capture Hood	1.000	1.000	566
S-05	SEATING	SW	14	700	709	709	101	Capture Hood	1.000	1.000	709
S-06	SEATING	SW	18/6	400	367	389	97	Capture Hood	0.545	1.000	714
S-07	SEATING	SW	18/6	300	412	298	99	Capture Hood	0.545	1.000	547
	Totals:	**-**	**-**	**3400**	**3444**	**3352**	**99**	**-**	**-**	**-**	**-**

Fan

SYSTEM/UNIT: EF-01

Tested By: Clayton Nelson
Date: 11/11/2022

Design Airflow (CFM)	
Design Airflow	3200
Design Grille Airflow	Not Applicable

Unit Design Data	
Submittal Make	CAPTIVEAIRE
Submittal Model #	DU240HFA
Submittal Airflow	Not Provided
Sched./Sub. Volts	208
Sched./Sub. Phase	3
Sched./Sub. HP	3
Submittal BHP	Not Provided

Design Static Pressures (in wg)	
Design External SP	1.20
Submittal Total SP	Not Provided

Motor Nameplate Data	
Motor Make (tag)	TECO
Motor Frame (tag)	213T
Motor HP (tag)	3
Motor RPM (tag)	1175
Motor Volts (tag)	230
Motor Phase (tag)	3
Motor Amps (tag)	9.2
Motor S.F. (tag)	1.15
Mtr % PF (tag)	-
Mtr % Eff. (tag)	88.5
Other Motor Data	-

Drive Data	
Drive Type	Direct Drive
Sheave Type	-
Fan Sheave Make	-
Fan Shv Mod# or Size (in)	-
Fan Sheave Bore (in.)	-
Motor Sheave Make	-

Final Airflow (CFM)	
Actual Airflow	3334
Actual Grille Airflow	Not Applicable
Fan CFM Test Method	See Kitchen Hood Sheet
Test Method Ak (sq ft)	-

Unit Data	
Make (tag)	Captive Aire
Model # (tag)	DU240HFA
Serial # (tag)	5154109
Unit Location	Roof
Unit Discharge	Upblast
Fan Service	Exhaust
Fan Type	Centrifugal (BI)
Fan Discharge	Upblast
Fan Arrangement	SWSI

Fan Design Data	
Submittal Motor RPM	Not Provided
Submittal Fan RPM	-

Fan Data	
Actual Fan RPM/Speed	Single Speed
Actual Motor RPM	Not Accessible
Speed Cont. Position	Not Applicable

Electrical Data	
Measurement Method	VFD Display
Motor Volts 1	126
Motor Volts 2	-
Motor Volts 3	-
Motor Amps 1	6.3
Motor Amps 2	-
Motor Amps 3	-
Operating HZ	44.8
Starter Data	Internal to VFD
Approx. BHP	1.13

Fan

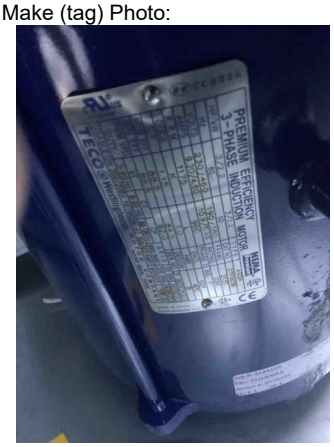
SYSTEM/UNIT: EF-01

Tested By: Clayton Nelson
Date: 11/11/2022

Drive Data	
Mtr Shv Mod# or Size (in)	-
Motor Sheave Bore (in.)	-
VP Range	-
Center Distance (in.)	-
No of Belts	-
Belt Make	-
Belt Size	-
Other Data	-

Electrical Data	
Corr. Nameplate Amps	16.8

Motor Make (tag) Photo:



Name: Motor Make (tag).jpg
Captured: 11/10/2022 8:25 AM
Caption:

Make (tag) Photo:

Name: Make (tag).jpg
Captured: 11/10/2022 8:24 AM
Caption:

Fan

SYSTEM/UNIT: EF-01

Tested By: Clayton Nelson
Date: 11/11/2022

Inspection Data - EF-01

	Verification	Response	Notes	By	Date/Time
1	Fan Rotation is Correct?	Yes		CN	11/10/22 9:55
2	Belts are Tight?	NA		CN	11/10/22 9:55
3	Internal motorized damper is fully opening?	NA		CN	11/10/22 9:55
4	Motor is operating below the FLA rating?	Yes		CN	11/10/22 9:55
5	Unit free of noticeable noise and vibration?	Yes		CN	11/10/22 9:55
6	There is no major leakage around base of fan?	Yes		CN	11/10/22 9:55
7	Is the motor operating below the motor FLA rating?	Yes		CN	11/10/22 9:55

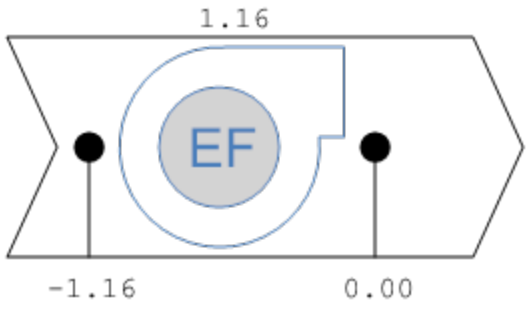
HVAC Units / Fans - EF-01

	Verification	Response	Notes	By	Date/Time
1	Grease cup is installed on hood fan?	No		CN	11/10/22 11:22
2	Hinge kit installed on hood fan.	Yes		CN	11/10/22 11:22
3	Lean fan back. Is grease duct installation adequate and is duct ran all the way to the base of the fan?	Yes		CN	11/10/22 11:22
4	Flex conduit is long enough so that fan can be completely tilted back?	No		CN	11/10/22 11:22

SYSTEM/UNIT: EF-01/Static Profile

Tested By: Clayton Nelson
Date: 11/11/2022

Static Pressure Profile



Fan

SYSTEM/UNIT: EF-01/HD-01

Tested By: Clayton Nelson
Date: 11/11/2022

Design Airflow (CFM)	
Design Exhaust CFM	3200

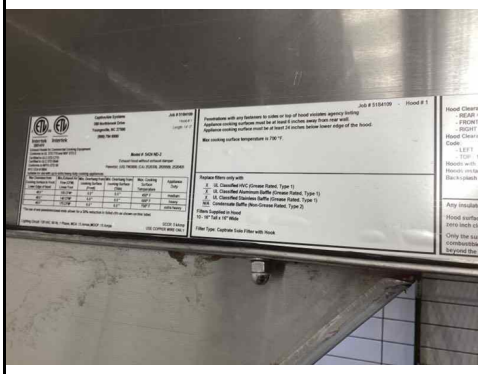
Final Airflow (CFM)	
Actual Exhaust CFM	3334

Test Section	
Smoke Generation Type	Not Applicable
Cooking Equip Heat On	No
Hood Capture %	-
End Panels Installed (Y/N)	Y

Supplemental Data	
Space Offset Temp Riser 1	15
Space Offset Temp Riser 2	15
Riser Temp F (idle) Riser 1	66.
Riser Temp F (idle) Riser 2	70.3
Ambient Room Temp	67.2
100% override functional	N

Kitchen Hood Information	
Service	Grill, Stove, Fryer
Manufacturer	Captive-Aire
Model Number	5424 ND-2
Serial Number	5184109
Test Method	Filters

Manufacturer Photo:



Name: Manufacturer.jpg
Captured: 11/10/2022 8:53 AM
Caption:

Verification - EF-01/HD-01

	Verification	Response	Notes	By	Date/Time
1	Third Party Company	-		CN	11/11/22 10:04
2	Tech Company	-		CN	11/11/22 10:04

Prefunctional - EF-01/HD-01

	Verification	Response	Notes	By	Date/Time
1	Kitchen equipment installed in proper places?	Yes		CN	11/10/22 8:53
2	Can kitchen equipment be turned on for final smoke test?	No		CN	11/10/22 8:53

Remarks

Equipment Under Hood (List All)

Grill, Stove, Fryer

Fan

EF-01/HD-01 Exhaust Filter Summary

System/Unit	Size	Type	Ak	Reading 2	Reading 1	FPM	Instrument	CFM
Filter-01	16x16	Baffle	1.62		218	218	Velgrid	353
Filter-02	16x16	Baffle	1.62		209	209	Velgrid	339
Filter-03	16x16	Baffle	1.62		210	210	Velgrid	340
Filter-04	16x16	Baffle	1.62		207	207	Velgrid	335
Filter-05	16x16	Baffle	1.62		208	208	Velgrid	337
Filter-06	16x16	Baffle	1.62		202	202	Velgrid	327
Filter-07	16x16	Baffle	1.62		200	200	Velgrid	324
Filter-08	16x16	Baffle	1.62		198	198	Velgrid	321
Filter-09	16x16	Baffle	1.62		206	206	Velgrid	334
Filter-10	16x16	Baffle	1.62		200	200	Velgrid	324
Totals:	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**3334**

Fan

SYSTEM/UNIT: EF-02

Tested By: Clayton Nelson
Date: 11/11/2022

Design Airflow (CFM)	
Design Airflow	150
Design Grille Airflow	150

Unit Design Data	
Submittal Make	CAPTIVEAIRE
Submittal Model #	DR12HFA
Submittal Airflow	Not Provided
Sched./Sub. Volts	120
Sched./Sub. Phase	1
Sched./Sub. HP	0.18
Submittal BHP	Not Provided

Design Static Pressures (in wg)	
Design External SP	0.60
Submittal Total SP	Not Provided

Motor Nameplate Data	
Motor Make (tag)	Nema
Motor Frame (tag)	-
Motor HP (tag)	1/4
Motor RPM (tag)	1800
Motor Volts (tag)	115
Motor Phase (tag)	1
Motor Amps (tag)	2.9
Motor S.F. (tag)	-
Mtr % PF (tag)	-
Mtr % Eff. (tag)	-
Other Motor Data	-

Drive Data	
Drive Type	Direct Drive
Sheave Type	-
Fan Sheave Make	-
Fan Shv Mod# or Size (in)	-
Fan Sheave Bore (in.)	-
Motor Sheave Make	-

Final Airflow (CFM)	
Actual Airflow	157
Actual Grille Airflow	157
Fan CFM Test Method	Inlet Total
Test Method Ak (sq ft)	Not Applicable

Unit Data	
Make (tag)	Captive Aire
Model # (tag)	DR12HFA
Serial # (tag)	5184109
Unit Location	Roof
Unit Discharge	Upblast
Fan Service	Exhaust
Fan Type	Centrifugal (BI)
Fan Discharge	Upblast
Fan Arrangement	SWSI

Fan Design Data	
Submittal Motor RPM	Not Provided
Submittal Fan RPM	-

Fan Data	
Actual Fan RPM/Speed	Single Speed
Actual Motor RPM	906
Speed Cont. Position	50%

Electrical Data	
Measurement Method	V/A Meter
Motor Volts 1	120
Motor Volts 2	-
Motor Volts 3	-
Motor Amps 1	0.3
Motor Amps 2	-
Motor Amps 3	—
Operating HZ	60.0
Starter Data	Not Applicable
Approx. BHP	0.03

Fan

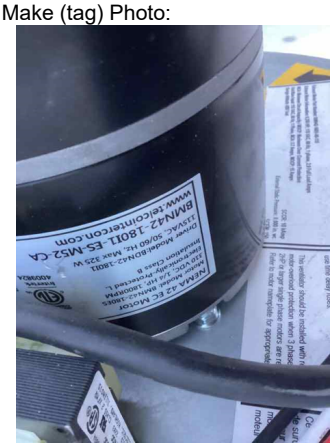
SYSTEM/UNIT: EF-02

Tested By: Clayton Nelson
Date: 11/11/2022

Drive Data	
Mtr Shv Mod# or Size (in)	-
Motor Sheave Bore (in.)	-
VP Range	-
Center Distance (in.)	-
No of Belts	-
Belt Make	-
Belt Size	-
Other Data	-

Electrical Data	
Corr. Nameplate Amps	2.8

Motor Make (tag) Photo:



Name: Motor Make (tag).jpg
Captured: 11/10/2022 8:28 AM
Caption:

Make (tag) Photo:

Name: Make (tag).jpg
Captured: 11/10/2022 8:27 AM
Caption:

Fan

SYSTEM/UNIT: EF-02

Tested By: Clayton Nelson
Date: 11/11/2022

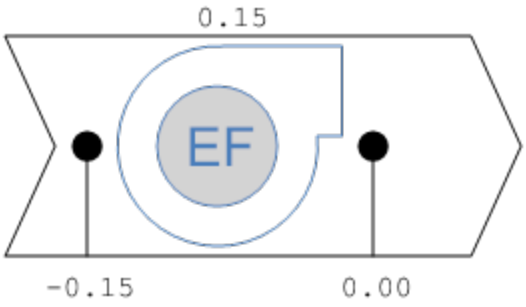
Inspection Data - EF-02

	Verification	Response	Notes	By	Date/Time
1	Fan Rotation is Correct?	Yes		CN	11/11/22 10:08
2	Belts are Tight?	NA		CN	11/11/22 10:08
3	Internal motorized damper is fully opening?	NA		CN	11/11/22 10:08
4	Motor is operating below the FLA rating?	Yes		CN	11/11/22 10:08
5	Unit free of noticeable noise and vibration?	Yes		CN	11/11/22 10:08
6	There is no major leakage around base of fan?	Yes		CN	11/11/22 10:08
7	Is the motor operating below the motor FLA rating?	Yes		CN	11/11/22 10:09
8	Back draft damper installed and can it fully open?	Yes		CN	11/11/22 10:09

SYSTEM/UNIT: EF-02/Static Profile

Tested By: Clayton Nelson
Date: 11/11/2022

Static Pressure Profile



EF-02 Exhaust Inlet Summary

System/Unit	Area Served	Type	Size / Area (in)	Design CFM	Prelim CFM	Final CFM	% Final	Instrument	Ak	Open (sq ft)	Final FPM
E-01	RESTROOM	CD	6/6/	75	119	75	100	Capture Hood	1.000	1.000	75
E-02	RESTROOM	CD	6/6	75	143	82	109	Capture Hood	1.000	1.000	82
	Totals:	-	-	**150**	**262**	**157**	**105**	-	-	-	-

Fan

SYSTEM/UNIT: MAU-01

Tested By: Clayton Nelson
Date: 11/11/2022

Design Airflow (CFM)	
Design Airflow	1950
Design Grille Airflow	Not Applicable

Unit Design Data	
Submittal Make	CAPTIVEAIRE
Submittal Model #	A1-D.250-G10
Submittal Airflow	Not Provided
Sched./Sub. Volts	208
Sched./Sub. Phase	3
Sched./Sub. HP	2
Submittal BHP	Not Provided

Design Static Pressures (in wg)	
Design External SP	0.80
Submittal Total SP	Not Provided

Motor Nameplate Data	
Motor Make (tag)	TECO
Motor Frame (tag)	145T
Motor HP (tag)	2
Motor RPM (tag)	1750
Motor Volts (tag)	230
Motor Phase (tag)	3
Motor Amps (tag)	5.4
Motor S.F. (tag)	1.15
Mtr % PF (tag)	-
Mtr % Eff. (tag)	88.5
Other Motor Data	

Drive Data	
Drive Type	Direct Drive
Sheave Type	-
Fan Sheave Make	-
Fan Shv Mod# or Size (in)	-
Fan Sheave Bore (in.)	-
Motor Sheave Make	-

Final Airflow (CFM)	
Actual Airflow	2020
Actual Grille Airflow	Not Applicable
Fan CFM Test Method	See Kitchen Hood Sheet
Test Method Ak (sq ft)	-

Unit Data	
Make (tag)	Captive Aire
Model # (tag)	A1.0.250-15D
Serial # (tag)	5184109
Unit Location	Roof
Unit Discharge	Downblast
Fan Service	Make-Up Air
Fan Type	Centrifugal (FC)
Fan Discharge	Downblast
Fan Arrangement	DWDI

Fan Design Data	
Submittal Motor RPM	Not Provided
Submittal Fan RPM	-

Fan Data	
Actual Fan RPM/Speed	Single Speed
Actual Motor RPM	Not Accessible
Speed Cont. Position	Not Applicable

Electrical Data	
Measurement Method	VFD Display
Motor Volts 1	No Safe Access
Motor Volts 2	-
Motor Volts 3	-
Motor Amps 1	4.2
Motor Amps 2	-
Motor Amps 3	-
Operating HZ	65.7
Starter Data	Internal to VFD
Approx. BHP	

Fan

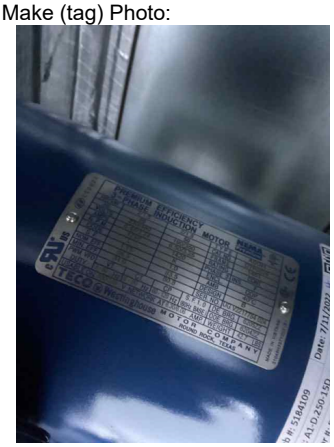
SYSTEM/UNIT: MAU-01

Tested By: Clayton Nelson
Date: 11/11/2022

Drive Data	
Mtr Shv Mod# or Size (in)	-
Motor Sheave Bore (in.)	-
VP Range	-
Center Distance (in.)	-
No of Belts	-
Belt Make	-
Belt Size	-
Other Data	-

Electrical Data
Corr. Nameplate Amps

Motor Make (tag) Photo:



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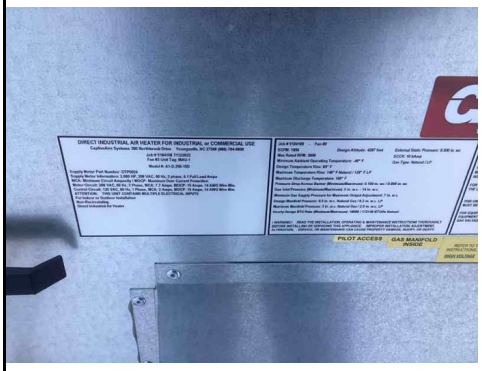
Captured: 11/10/2022 8:23 AM
Caption:

Make (tag) Photo:



Name: Make (tag).jpg
Captured: 11/10/2022 8:22 AM
Caption:

Fan

SYSTEM/UNIT: MAU-01

Tested By: Clayton Nelson
Date: 11/11/2022

Inspection Data - MAU-01

	Verification	Response	Notes	By	Date/Time
1	Fan Rotation is Correct?	Yes		CN	11/10/22 9:34
2	Belts are Tight?	NA		CN	11/10/22 9:35
3	Internal motorized damper is fully opening?	Yes		CN	11/10/22 9:35
4	Motor is operating below the FLA rating?	Yes		CN	11/10/22 9:35
5	Unit free of noticeable noise and vibration?	Yes		CN	11/10/22 9:35
6	There is no major leakage around base of fan?	Yes		CN	11/10/22 9:35
7	Is the motor operating below the motor FLA rating?	Yes		CN	11/10/22 9:35

Heat Exchangers - MAU-01

	Verification	Response	Notes	By	Date/Time
1	Gas piping is installed and valves are in on position?	Yes		CN	11/10/22 9:35
2	Heater tested and is functional?	No		CN	11/10/22 11:28
3	Heater Operates?	No		CN	11/10/22 11:28
4	Flame Status?	No		CN	11/10/22 11:28
5	Inlet Air Temp SetPt (Design 55)	55		CN	11/10/22 11:13
6	Discharge Air Temp SetPt (Design 60)	60		CN	11/10/22 11:13
7	Air Flow Switch Sp Actual	.44		CN	11/10/22 11:19

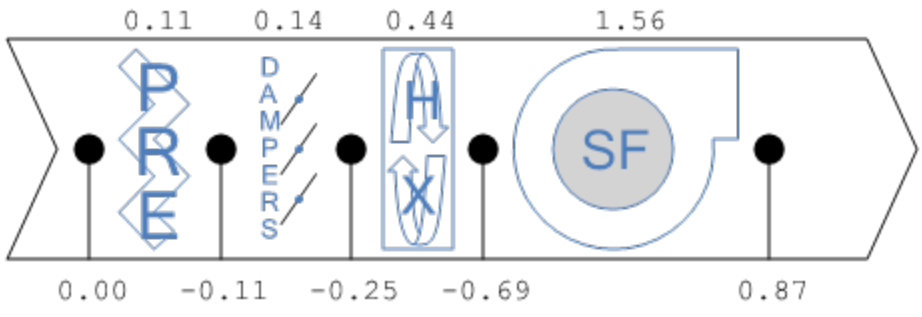
Log:

MAU-01	11/10/2022	Clayton Nelson	Heater tested and is functional? - No - MuA-01 shows alarm after attempts to heat.

SYSTEM/UNIT: MAU-01/Static Profile

Tested By: Clayton Nelson
Date: 11/11/2022

Static Pressure Profile



Fan

SYSTEM/UNIT: MAU-01/HD-01

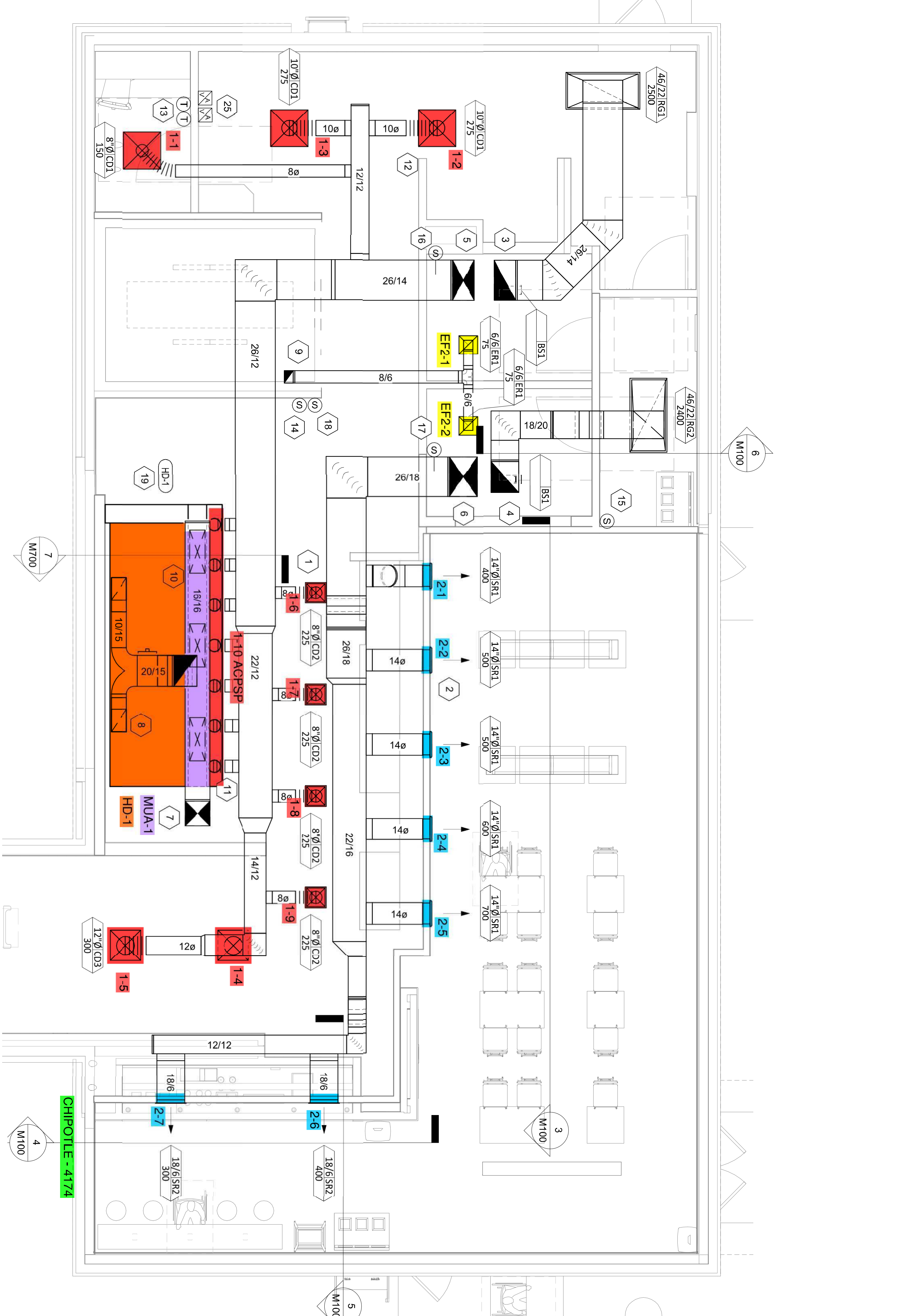
Tested By: Clayton Nelson
Date: 11/11/2022

Design Airflow (CFM)	
Des. Make-up Air	1950

Final Airflow (CFM)	
Act. Make-up Air	2020

Kitchen Hood Information	
Manufacturer	Captive Aire
Test Method	Perforated Supply

Test Data	
PSP Length (in)	177
PSP Width (in)	12
Correction Factor	0.83
Total MA Ak (sq ft)	12.24
Avg. MA Velocity (FPM)	165



CHIPOTLE - 4174
HD-1
MUA-1
1-10 ACPSP
EF2-1
EF2-2
1-1
1-2
1-3
1-4
1-5
1-6
1-7
1-8
1-9
2-1
2-2
2-3
2-4
2-5
2-6
2-7
10"Ø CD1 275
8"Ø CD1 150
8"Ø CD2 225
12"Ø CD3 300
14"Ø SR1 400
14"Ø SR1 500
14"Ø SR1 600
14"Ø SR1 700
18/6 SR2 300
18/6 SR2 400
46/22 RG1 2500
46/22 RG2 2400
6/6 ER1 75
BS1
26/14
26/12
26/18
22/12
22/16
14/12
12/12
18/20
16/16
10/15
20/15
8/6
6/6
18/6
12ø
14ø
10ø
8ø
M700
M100