

# Air Balance Summary

**PROJECT:** Chipotle 43-4906  
**LOCATION:** Taylorsville, UT  
**PROJECT #:** 24295

**DATE:** 6/28/2024  
**CONTACT:** William Clayton

## SYSTEM/UNIT: Air Balance Summary

Tested By: Omar Carreno  
 Date: 6/21/2024

Unit Design Data	
Design O/A + MUA CFM	2800
Design Exhaust CFM	2900
Design CFM Difference	200
Designed Pos or Neg	Positive

Test Data	
Actual O/A + MUA CFM	2799
Actual Exhaust CFM	2835
Actual CFM Difference	36
Building Set	Positive

Building	
Front Door DP (in wg)	0.0374
Back Door DP (in wg)	0.0328
Side Door 1 DP (in wg)	0.0393
Side Door 2 DP (in wg)	Not Applicable
Wind Conditions	Mild Winds

## Air Balance Summary Equipment Summary

System/Unit	SA Des (CFM)	RA Des (CFM)	OA Des (CFM)	EA Des (CFM)	SA Act (CFM)	RA Act (CFM)	OA Act (CFM)	EA Act (CFM)
EF-01	0	0	0	2550	0	0	0	2515
EF-02	0	0	0	350	0	0	0	320
MAU-01	1300	0	1300	0	1337	0	1337	0
RTU-01	3400	2900	500	0	3270	2791	479	0
RTU-02	4000	3000	1000	0	4067	3084	983	0
<b>Totals:</b>	-	-	<b>2800</b>	<b>2900</b>	-	-	<b>2799</b>	<b>2835</b>

# Report Summary/Remarks

**PROJECT:** Chipotle 43-4906  
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## Scope of Work

### Preface

The summary below provides a quick understanding of how well your HVAC systems balanced in respect to the design criteria. The summary concludes with a quick understanding of your building environment and possible suggestions for each of your systems after testing has been performed. 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. Our focus is 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. Also, enclosed are pictures of building assets and items listed below that will provide your team with more insight.

### Facility Identification and TAB Requirements

The mechanical equipment to be tested, adjusted, and balanced includes: All Rooftop Units (RTUs), All Exhaust Fans (EF), All Make Up Air Units (MUA), All Kitchen Hoods, and all associated air devices.

## System Posturing & Remarks

### Air Apparatuses

Each of the RTUs were measured at their terminal devices utilizing a flow hood. The sum of these readings is equal to the total flow for that particular unit. The total flow of each HP was then adjusted to +/-10% of the specified design. Each terminal diffuser was balanced to within +/-10% of the engineer's design volume utilizing the provided hand damper located at the takeoff of the main & branch trunk line(s). Any equipment that fell outside of this 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 +/-10% of the engineers design flow. 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 +/-10% of design criteria. Any EF's or MUA's that fell outside of this tolerance is noted throughout the report.

### General Exhaust Fans

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 +/-10% of design. Each terminal device was balanced to within +/-10% of the design volume using the installed volume dampers. Any equipment that fell outside of this tolerance is noted throughout the report.

### Final Building Test

After completing the test and balance, the final building pressure was recorded on the Building Summary form. This pressure falls within the recommended tolerances by the International Mechanical Code of +0.02" W.C. to -0.02" W.C. The building is designed for a net positive pressure and this measurement coincides with that requirement.

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# Project Checklist

**PROJECT:** Chipotle 43-4906  
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## SYSTEM/UNIT: Project Checklist

### Inspection Data - Project Checklist

Verification		Response	Notes	By	Date/Time
1	All diffusers and grilles are installed and match design?	Yes		WC	6/28/24 6:06
2	Deflector plates are removed from 1x1 diffusers on the serve line (double check that this is specified on the diffuser schedule first)	NA		WC	6/28/24 6:06
3	All hood filters installed and accounted for?	Yes		WC	6/28/24 6:06
4	Hoods are wired and have power?	Yes		WC	6/28/24 6:06
5	Hood is free of alarms?	Yes		WC	6/28/24 6:06
6	Thermostats have power?	Yes		WC	6/28/24 6:06
7	Have trades/general contractor been notified about any issues and are they created on FaciliBuild?	NA		WC	6/28/24 6:06

### General - Project Checklist

Verification		Response	Notes	By	Date/Time
1	Is space free of drafting?	Yes		WC	6/28/24 6:06
2	Is space comfortable in all areas?	Yes		WC	6/28/24 6:06
3	Is the space free of ventilation noise?	Yes		WC	6/28/24 6:06
4	If deviations from design were necessary to resolve above issues, what were they? Otherwise put "NA"	NA		WC	6/28/24 6:06

# Air Apparatus

PROJECT: Chipotle 43-4906  
 LOCATION: Taylorsville, UT  
 PROJECT #: 24295

DATE: 6/28/2024  
 CONTACT: William Clayton

SYSTEM/UNIT: RTU-01

Tested By: Omar Carreno  
 Date: 6/21/2024



Design Airflow (CFM)		Final Airflow (CFM)	
Design Total	3400	Actual Total CFM	3270
Design Grille Total	3400	Actual Grille Total CFM	3270
Design Return	2900	Actual Return Air CFM	2791
Design Min O/A	500	Actual Min O/A CFM	479
<b>Unit Design Data</b>		<b>Unit Data</b>	
Submittal Make	York	Make (tag)	York
Submittal Model #	ZJ102	Model # (tag)	ZJ102N18R2B5EAA2A3
Submittal Airflow	Not Provided	Serial # (tag)	N2M3000673
Sched./Sub. Volts	208	Location	Roof
Sched./Sub. Phase	3	Unit Discharge	Downblast
Sched./Sub. HP	Not Listed	Cooling Coil Location	Unit / Drawthru
Submittal BHP	Not Provided	Coil Area (sq ft)	13.3
Filter MERV Rating (Sched/Sub)	Not Listed	Clg Coil Vel (FPM)	246
<b>Design Static Pressures (in wg)</b>		<b>Fan Design Data</b>	
Design Ext SP	.80	Submittal Motor RPM	Not Provided
Submittal Total SP	Not Provided	Submittal Fan RPM	-
Submittal Clg Coil Δ SP	-	<b>Fan Data</b>	
<b>Filter Data</b>		<b>Electrical Data</b>	
Condition	Clean	Measurement Method	VFD Display
Filter Type	Pleated	Motor Volts 1	212
MERV Rating	-		
Filter Size Set 1 (in)	20x24x2		
# Filters Set 1	4		
Filter Size Set 2 (in)	-		
# Filters Set 2	-		
<b>Motor Nameplate Data</b>			
Motor Make	Baldor		
Motor Frame	56HZ		
Motor HP	3.00		
Motor RPM	1750		
Motor Volts	460		
Motor Phase	3		

# Air Apparatus

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**DATE:** 6/28/2024  
**CONTACT:** William Clayton

**SYSTEM/UNIT:** RTU-01

Tested By: Omar Carreno  
 Date: 6/21/2024

Motor Nameplate Data	
Motor Amps	4.1
Motor S.F.	1.15
Motor % PF	78
Motor % Eff.	87.5
Other Motor Data	-

Electrical Data	
Motor Volts 2	-
Motor Volts 3	-
Motor Amps 1	6.2
Motor Amps 2	-
Motor Amps 3	-
Operating HZ	-
Approx. BHP	2.1
Corr. Nameplate Amps	8.9
Starter Data	-
VFD Reference	Not Applicable

Drive Data	
Drive Type	Belt Drive
Sheave Type	Fixed
Fan Sheave Make	Not Listed
Fan Shv Mod# or Size (in)	8
Fan Sheave Bore (in)	1
Motor Sheave Make	Not Accessible
Mtr Shv Mod# or Size (in)	5
Motor Sheave Bore (in)	5/8
VP Range	-
Center Distance (in)	19.0
No of Belts	1
Belt Make	Dayton
Belt Size	4L210
Other Data	-

## 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		OC 6/20/24 23:30
2	Economizers are assembled and functional?	Yes		OC 6/20/24 23:31
3	DCV Max damper opening position is set to minimum?	NA		OC 6/20/24 23:31
4	Free cooling enthalpy set point set for lowest setting (Typically "D")	NA		OC 6/20/24 23:31
5	Is the motor operating below the motor FLA rating?	Yes		OC 6/20/24 23:31
6	Belts are Tight?	Yes		OC 6/20/24 23:31
7	If direct drive unit is the speed controller working.	NA		OC 6/20/24 23:31
8	Gas piping is installed and valves are in on position?	Yes		OC 6/20/24 23:31
9	Unit free of noticeable noise and vibration?	Yes		OC 6/20/24 23:31

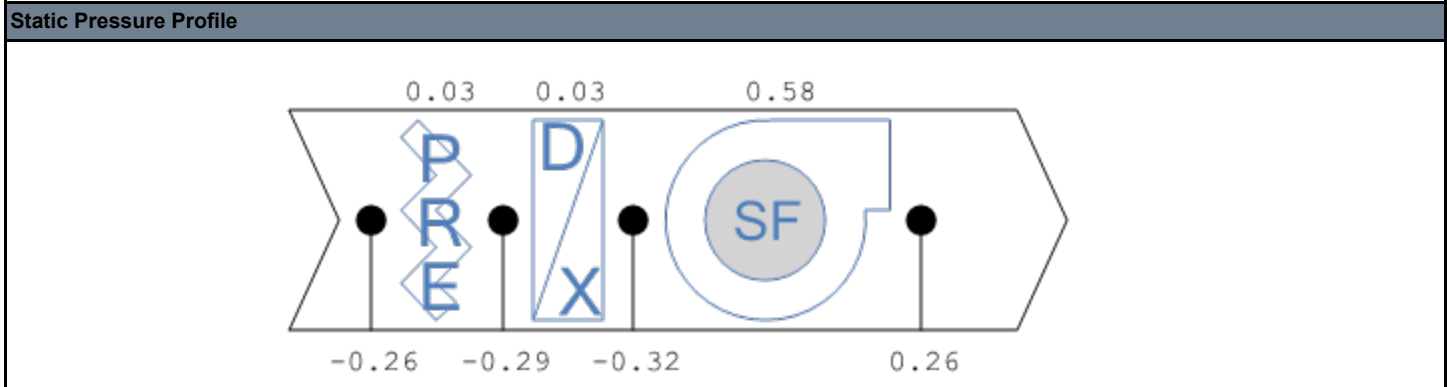
# Air Apparatus

PROJECT: Chipotle 43-4906  
 LOCATION: Taylorsville, UT  
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DATE: 6/28/2024  
 CONTACT: William Clayton

SYSTEM/UNIT: RTU-01/Static Profile

Tested By: Omar Carreno  
 Date: 6/21/2024



## 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	12	325	298	298	92	Capture Hood	1.000	1.000	298
S-02	Kitchen	CD	12	325	347	337	104	Capture Hood	1.000	1.000	337
S-03	Kitchen	CD	8	150	129	139	93	Capture Hood	1.000	1.000	139
S-04	Drivethru	CD	12	400	376	376	94	Capture Hood	1.000	1.000	376
S-05	Drivethru	CD	12	400	366	366	92	Capture Hood	1.000	1.000	366
S-06	Service Line	CD	8	250	258	258	103	Capture Hood	1.000	1.000	258
S-07	Service Line	CD	8	250	238	238	95	Capture Hood	1.000	1.000	238
S-08	Service Line	CD	8	250	241	241	96	Capture Hood	1.000	1.000	241
S-09	Service Line	CD	8	250	230	230	92	Capture Hood	1.000	1.000	230
S-10	ACPSP	PSP	177x6	800	787	787	98	Velgrid	5.547	7.375	142
<b>Totals:</b>		-	-	<b>3400</b>	<b>3270</b>	<b>3270</b>	<b>96</b>	-	-	-	-

# Air Apparatus

**PROJECT:** Chipotle 43-4906  
**LOCATION:** Taylorsville, UT  
**PROJECT #:** 24295

**DATE:** 6/28/2024  
**CONTACT:** William Clayton

**SYSTEM/UNIT:** RTU-02

Tested By: Omar Carreno  
 Date: 6/21/2024



Design Airflow (CFM)		Final Airflow (CFM)	
Design Total	4000	Actual Total CFM	4067
Design Grille Total	4000	Actual Grille Total CFM	4067
Design Return	3000	Actual Return Air CFM	3084
Design Min O/A	1000	Actual Min O/A CFM	983
		Fan CFM Test Method	Supply Outlet Total
		OA Method/Instrument	Face Velocity/RVA
		OA Ak (sq ft)	3.500
		OA Damper % (High Spd)	27%
		OA Damper % (Low Spd)	32%
		RA Damper % (High Spd)	73%
Unit Design Data		Unit Data	
Submittal Make	York	Make (tag)	York
Submittal Model #	ZJ120	Model # (tag)	ZJ102N18R2B5EAA2A3
Submittal Airflow	Not Provided	Serial # (tag)	N2A4102022
Sched./Sub. Volts	208	Location	Roof
Sched./Sub. Phase	3	Unit Discharge	Downblast
Sched./Sub. HP	Not Listed	Cooling Coil Location	Unit / Drawthru
Submittal BHP	Not Provided	Coil Area (sq ft)	13.3
Filter MERV Rating (Sched/Sub)	Not Listed	Clg Coil Vel (FPM)	306
		Fan Service	Supply
		Fan Type	Centrifugal (AF)
		Fan Discharge	Downblast
		Fan Arrangement	SWSI
Design Static Pressures (in wg)		Fan Design Data	
Design Ext SP	.80	Submittal Motor RPM	Not Provided
Submittal Total SP	Not Provided	Submittal Fan RPM	-
Submittal Clg Coil Δ SP	-		
Filter Data		Fan Data	
Condition	Clean	Actual Fan RPM/Speed	Not Accessible
Filter Type	Pleated	Actual Motor RPM	Not Accessible
MERV Rating	-		
Filter Size Set 1 (in)	20x24x2	Electrical Data	
# Filters Set 1	4	Measurement Method	VFD Display
Filter Size Set 2 (in)	-	Motor Volts 1	213
# Filters Set 2	-		
Motor Nameplate Data			
Motor Make	Baldor		
Motor Frame	56HZ		
Motor HP	3.00		
Motor RPM	1750		
Motor Volts	230		
Motor Phase	3		

# Air Apparatus

PROJECT: Chipotle 43-4906  
 LOCATION: Taylorsville, UT  
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DATE: 6/28/2024  
 CONTACT: William Clayton

## SYSTEM/UNIT: RTU-02

Tested By: Omar Carreno  
 Date: 6/21/2024

Motor Nameplate Data	
Motor Amps	8.3
Motor S.F.	1.15
Motor % PF	78
Motor % Eff.	87.5
Other Motor Data	-

Drive Data	
Drive Type	Belt Drive
Sheave Type	Fixed
Fan Sheave Make	Not Listed
Fan Shv Mod# or Size (in)	8
Fan Sheave Bore (in)	1
Motor Sheave Make	Not Accessible
Mtr Shv Mod# or Size (in)	5
Motor Sheave Bore (in)	5/8
VP Range	-
Center Distance (in)	19.0
No of Belts	1
Belt Make	Dayton
Belt Size	4L210
Other Data	-

Electrical Data	
Motor Volts 2	-
Motor Volts 3	-
Motor Amps 1	5.9
Motor Amps 2	-
Motor Amps 3	-
Operating HZ	-
Approx. BHP	2.0
Corr. Nameplate Amps	9.0
Starter Data	-
VFD Reference	Not Applicable

## 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)	NA		OC	6/19/24 20:41
2 Economizers are assembled and functional?	Yes		OC	6/20/24 23:32
3 DCV Max damper opening position is set to minimum?	NA		OC	6/20/24 23:32
4 Free cooling enthalpy set point set for lowest setting (Typically "D")	NA		OC	6/20/24 23:32
5 Is the motor operating below the motor FLA rating?	Yes		OC	6/19/24 20:41
6 Belts are Tight?	Yes		OC	6/19/24 20:41
7 If direct drive unit is the speed controller working.	NA		OC	6/19/24 20:41
8 Gas piping is installed and valves are in on position?	Yes		OC	6/19/24 20:41
9 Unit free of noticeable noise and vibration?	Yes		OC	6/19/24 20:41

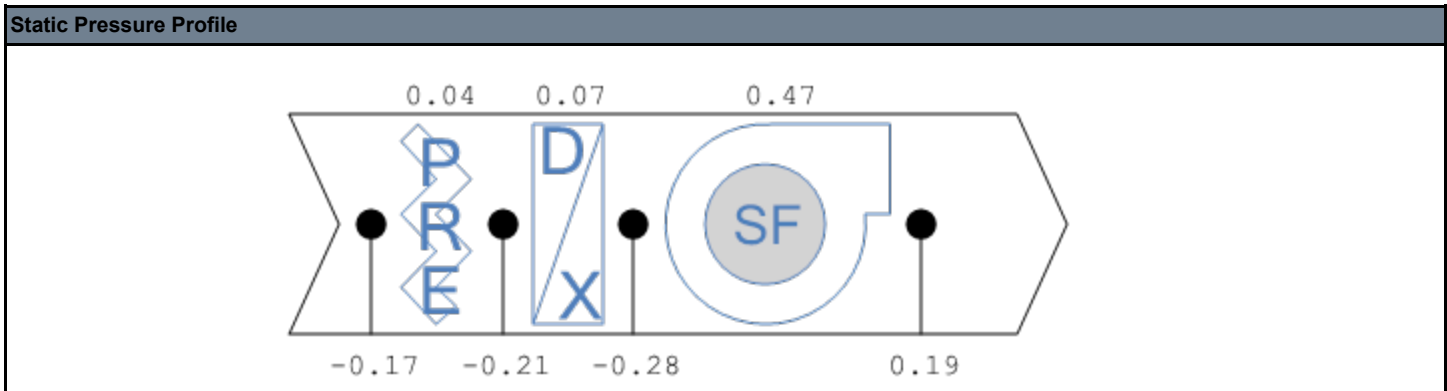
# Air Apparatus

PROJECT: Chipotle 43-4906  
 LOCATION: Taylorsville, UT  
 PROJECT #: 24295

DATE: 6/28/2024  
 CONTACT: William Clayton

SYSTEM/UNIT: RTU-02/Static Profile

Tested By: Omar Carreno  
 Date: 6/21/2024



## 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	Dining	SW	14	500	431	498	100	Capture Hood	1.000	1.000	498
S-02	Dining	SW	14	500	472	509	102	Capture Hood	1.000	1.000	509
S-03	Dining	SW	14	600	537	613	102	Capture Hood	1.000	1.000	613
S-04	Dining	SW	14	700	679	691	99	Capture Hood	1.000	1.000	691
S-05	Dining	SW	14	800	728	811	101	Capture Hood	1.000	1.000	811
S-06	Dining	SW	18/6	500	593	526	105	Capture Hood	1.000	1.000	526
S-07	Dining	SW	18/6	400	672	419	105	Capture Hood	1.000	1.000	419
<b>Totals:</b>		-	-	<b>4000</b>	<b>4112</b>	<b>4067</b>	<b>102</b>	-	-	-	-

# Fan

**PROJECT:** Chipotle 43-4906  
**LOCATION:** Taylorsville, UT  
**PROJECT #:** 24295

**DATE:** 6/28/2024  
**CONTACT:** William Clayton

**SYSTEM/UNIT: EF-01**

Tested By: Omar Carreno  
 Date: 6/20/2024

Design Airflow (CFM)	
Design Airflow	2550
Design Grille Airflow	Not Applicable

Unit Design Data	
Submittal Make	Captiveaire
Submittal Model #	DU180HFA
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	1.20
Submittal Total SP	Not Provided

Motor Nameplate Data	
Motor Make (tag)	WEG
Motor Frame (tag)	182
Motor HP (tag)	2
Motor RPM (tag)	1170
Motor Volts (tag)	230
Motor Phase (tag)	3
Motor Amps (tag)	6.44
Motor S.F. (tag)	1.25
Mtr % PF (tag)	0.66
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	-
Mtr Shv Mod# or Size (in)	-
Motor Sheave Bore (in.)	-
VP Range	-
Center Distance (in.)	-
No of Belts	-
Belt Make	-
Belt Size	-
Other Data	-

Final Airflow (CFM)	
Actual Airflow	2515
Actual Grille Airflow	2515
Fan CFM Test Method	See Kitchen Hood Sheet
Test Method Ak (sq ft)	Not Applicable

Unit Data	
Make (tag)	Captive Aire
Model # (tag)	DU180HFA
Serial # (tag)	6237381
Unit Location	Roof
Unit Discharge	Upblast
Fan Service	Exhaust
Fan Type	Centrifugal (AF)
Fan Discharge	Upblast
Fan Arrangement	SWSI

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

Fan Data	
Actual Fan RPM/Speed	55.1 HZ
Actual Motor RPM	-
Speed Cont. Position	Not Applicable

Electrical Data	
Measurement Method	VFD Display
Motor Volts 1	212
Motor Volts 2	213
Motor Volts 3	213
Motor Amps 1	4.6
Motor Amps 2	-
Motor Amps 3	-
Operating HZ	55.1 HZ
Starter Data	Internal to VFD
Approx. BHP	1.32
Corr. Nameplate Amps	7.0

# Fan

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**LOCATION:** Taylorsville, UT  
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**DATE:** 6/28/2024  
**CONTACT:** William Clayton

**SYSTEM/UNIT: EF-01**

Tested By: Omar Carreno  
Date: 6/20/2024

## Inspection Data - EF-01

Verification		Response	Notes	By	Date/Time
1	Fan Rotation is Correct?	Yes		OC	6/20/24 11:03
2	Belts are Tight?	NA		OC	6/20/24 11:04
3	Internal motorized damper is fully opening?	Yes		OC	6/20/24 11:06
4	Motor is operating below the FLA rating?	Yes		OC	6/20/24 11:06
5	Unit free of noticeable noise and vibration?	Yes		OC	6/20/24 11:06
6	There is no major leakage around base of fan?	Yes		OC	6/20/24 11:06

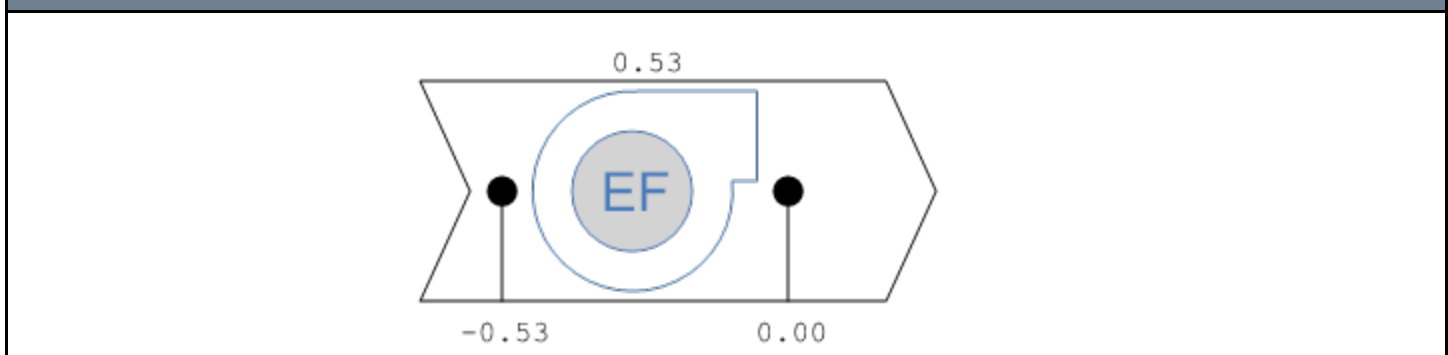
## HVAC Units / Fans - EF-01

Verification		Response	Notes	By	Date/Time
1	Grease cup is installed on hood fan?	Yes		OC	6/20/24 11:06
2	Hinge kit installed on hood fan.	Yes		OC	6/20/24 11:06
3	Lean fan back. Is grease duct installation adequate and is duct ran all the way to the base of the fan?	Yes		OC	6/20/24 11:06
4	Flex conduit is long enough so that fan can be completely tilted back?	Yes		OC	6/20/24 11:06

**SYSTEM/UNIT: EF-01/Static Profile**

Tested By: Omar Carreno  
Date: 6/20/2024

## Static Pressure Profile





# Fan

**PROJECT:** Chipotle 43-4906  
**LOCATION:** Taylorsville, UT  
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**DATE:** 6/28/2024  
**CONTACT:** William Clayton

**SYSTEM/UNIT: EF-02**

Tested By: Omar Carreno  
 Date: 6/20/2024

Design Airflow (CFM)	
Design Airflow	350
Design Grille Airflow	350

Unit Design Data	
Submittal Make	Captiveaire
Submittal Model #	DR12HFA
Submittal Airflow	Not Provided
Sched./Sub. Volts	120
Sched./Sub. Phase	1
Sched./Sub. HP	.131
Submittal BHP	Not Provided

Design Static Pressures (in wg)	
Design External SP	.60
Submittal Total SP	Not Provided

Motor Nameplate Data	
Motor Make (tag)	Telco green
Motor Frame (tag)	Not Listed
Motor HP (tag)	1/4
Motor RPM (tag)	1800
Motor Volts (tag)	115
Motor Phase (tag)	1
Motor Amps (tag)	Not Listed
Motor S.F. (tag)	Not Listed
Mtr % PF (tag)	Not Listed
Mtr % Eff. (tag)	Not Listed
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	-
Mtr Shv Mod# or Size (in)	-
Motor Sheave Bore (in.)	-
VP Range	-
Center Distance (in.)	-
No of Belts	-
Belt Make	-
Belt Size	-
Other Data	-

Final Airflow (CFM)	
Actual Airflow	320
Actual Grille Airflow	320
Fan CFM Test Method	Inlet Total
Test Method Ak (sq ft)	Not Applicable

Unit Data	
Make (tag)	Captive Aire
Model # (tag)	DR12HFA
Serial # (tag)	6237381
Unit Location	Roof
Unit Discharge	Upblast
Fan Service	Exhaust
Fan Type	Centrifugal (AF)
Fan Discharge	Upblast
Fan Arrangement	SWSI

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

Fan Data	
Actual Fan RPM/Speed	1531
Actual Motor RPM	Not Accessible
Speed Cont. Position	81%

Electrical Data	
Measurement Method	Not Accessible
Motor Volts 1	Internal to ECM
Motor Volts 2	-
Motor Volts 3	-
Motor Amps 1	Internal to ECM
Motor Amps 2	-
Motor Amps 3	-
Operating HZ	-
Starter Data	Not Applicable
Approx. BHP	-
Corr. Nameplate Amps	-

# Fan

PROJECT: Chipotle 43-4906  
 LOCATION: Taylorsville, UT  
 PROJECT #: 24295

DATE: 6/28/2024  
 CONTACT: William Clayton

SYSTEM/UNIT: EF-02

Tested By: Omar Carreno  
 Date: 6/20/2024

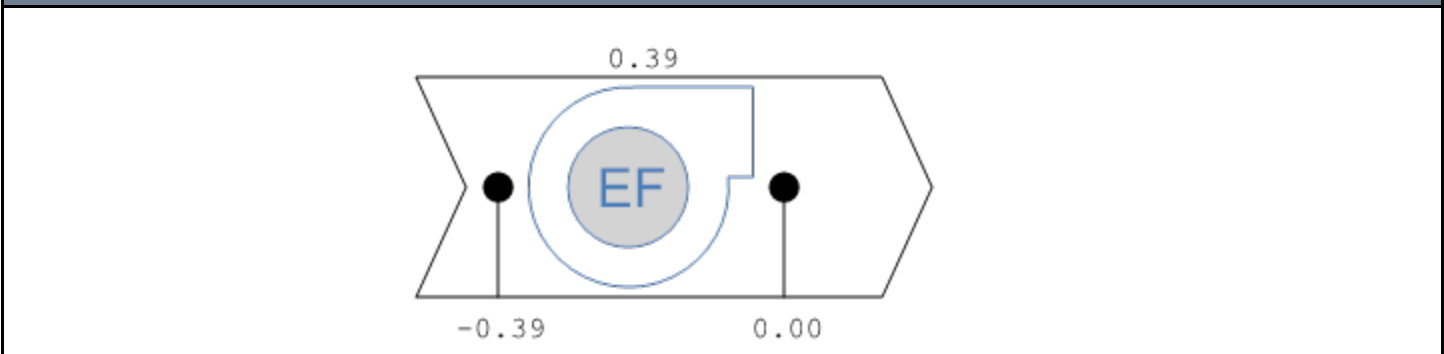
## Inspection Data - EF-02

Verification	Response	Notes	By	Date/Time
1	Fan Rotation is Correct?	Yes	OC	6/20/24 12:57
2	Belts are Tight?	NA	OC	6/20/24 12:57
3	Internal motorized damper is fully opening?	Yes	OC	6/20/24 12:57
4	Motor is operating below the FLA rating?	Yes	OC	6/20/24 12:57
5	Unit free of noticeable noise and vibration?	Yes	OC	6/20/24 12:57
6	There is no major leakage around base of fan?	Yes	OC	6/20/24 12:57
7	Back draft damper installed and can it fully open?	Yes	OC	6/20/24 12:57

SYSTEM/UNIT: EF-02/Static Profile

Tested By: Omar Carreno  
 Date: 6/20/2024

## 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	33	69	92	Capture Hood	1.000	1.000	69
E-02	Restroom	CD	6/6	75	30	68	91	Capture Hood	1.000	1.000	68
E-03		CD	8/8	200	261	183	92	Capture Hood	1.000	1.000	183
<b>Totals:</b>		-	-	-	<b>324</b>	<b>320</b>	<b>91</b>	-	-	-	-

# Fan

**PROJECT:** Chipotle 43-4906  
**LOCATION:** Taylorsville, UT  
**PROJECT #:** 24295

**DATE:** 6/28/2024  
**CONTACT:** William Clayton

**SYSTEM/UNIT: MAU-01**

Tested By: Omar Carreno  
 Date: 6/21/2024

Design Airflow (CFM)	
Design Airflow	1300
Design Grille Airflow	Not Provided

Unit Design Data	
Submittal Make	Captiveaire
Submittal Model #	A1-D.250-15D
Submittal Airflow	Not Provided
Sched./Sub. Volts	208
Sched./Sub. Phase	3
Sched./Sub. HP	1
Submittal BHP	Not Provided

Design Static Pressures (in wg)	
Design External SP	.80
Submittal Total SP	Not Provided

Motor Nameplate Data	
Motor Make (tag)	TECO
Motor Frame (tag)	143T
Motor HP (tag)	1
Motor RPM (tag)	1740
Motor Volts (tag)	230
Motor Phase (tag)	3
Motor Amps (tag)	2.9
Motor S.F. (tag)	1.15
Mtr % PF (tag)	Not Listed
Mtr % Eff. (tag)	85.5
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	-
Mtr Shv Mod# or Size (in)	-
Motor Sheave Bore (in.)	-
VP Range	-
Center Distance (in.)	-
No of Belts	-
Belt Make	-
Belt Size	-
Other Data	-

Final Airflow (CFM)	
Actual Airflow	1337
Actual Grille Airflow	1337
Fan CFM Test Method	See Kitchen Hood Sheet
Test Method Ak (sq ft)	-

Unit Data	
Make (tag)	Captive Aire
Model # (tag)	A1-D.250-15D
Serial # (tag)	6237381
Unit Location	Roof
Unit Discharge	Horizontal
Fan Service	Make-Up Air
Fan Type	Centrifugal (AF)
Fan Discharge	Horizontal
Fan Arrangement	SWSI

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

Fan Data	
Actual Fan RPM/Speed	52 HZ
Actual Motor RPM	-
Speed Cont. Position	Not Applicable

Electrical Data	
Measurement Method	VFD Display
Motor Volts 1	213
Motor Volts 2	-
Motor Volts 3	-
Motor Amps 1	2.2
Motor Amps 2	-
Motor Amps 3	-
Operating HZ	-
Starter Data	Not Applicable
Approx. BHP	0.70
Corr. Nameplate Amps	3.1

# Fan

PROJECT: Chipotle 43-4906  
LOCATION: Taylorsville, UT  
PROJECT #: 24295

DATE: 6/28/2024  
CONTACT: William Clayton

SYSTEM/UNIT: MAU-01

Tested By: Omar Carreno  
Date: 6/21/2024

## Inspection Data - MAU-01

Verification		Response	Notes	By	Date/Time
1	Fan Rotation is Correct?	Yes		OC	6/20/24 11:21
2	Belts are Tight?	NA		OC	6/20/24 11:21
3	Internal motorized damper is fully opening?	NA		OC	6/20/24 11:21
4	Motor is operating below the FLA rating?	Yes		OC	6/20/24 11:21
5	Unit free of noticeable noise and vibration?	Yes		OC	6/20/24 11:21
6	There is no major leakage around base of fan?	Yes		OC	6/20/24 11:21
7	Back draft damper installed and can it fully open?	Yes		OC	6/20/24 11:21

## HVAC Units / Fans - MAU-01

Verification		Response	Notes	By	Date/Time
1	Grease cup is installed on hood fan?	NA		OC	6/20/24 11:21
2	Hinge kit installed on hood fan.	NA		OC	6/20/24 11:21
3	Lean fan back. Is grease duct installation adequate and is duct ran all the way to the base of the fan?	NA		OC	6/20/24 11:21
4	Flex conduit is long enough so that fan can be completely tilted back?	NA		OC	6/20/24 11:21

## Heat Exchangers - MAU-01

Verification		Response	Notes	By	Date/Time
1	Gas piping is installed and valves are in on position?	NA		OC	6/20/24 11:21
2	Heater tested and is functional?	NA		OC	6/20/24 11:21
3	Heater Operates?	NA		OC	6/20/24 11:21
4	Flame Status?	NA		OC	6/20/24 11:21
5	Inlet Air Temp SetPt (Design 55)	5g		OC	6/20/24 11:22
6	Discharge Air Temp SetPt (Design 60)	-		OC	6/20/24 11:22
7	Air Flow Switch Sp Actual	.30		OC	6/20/24 11:22

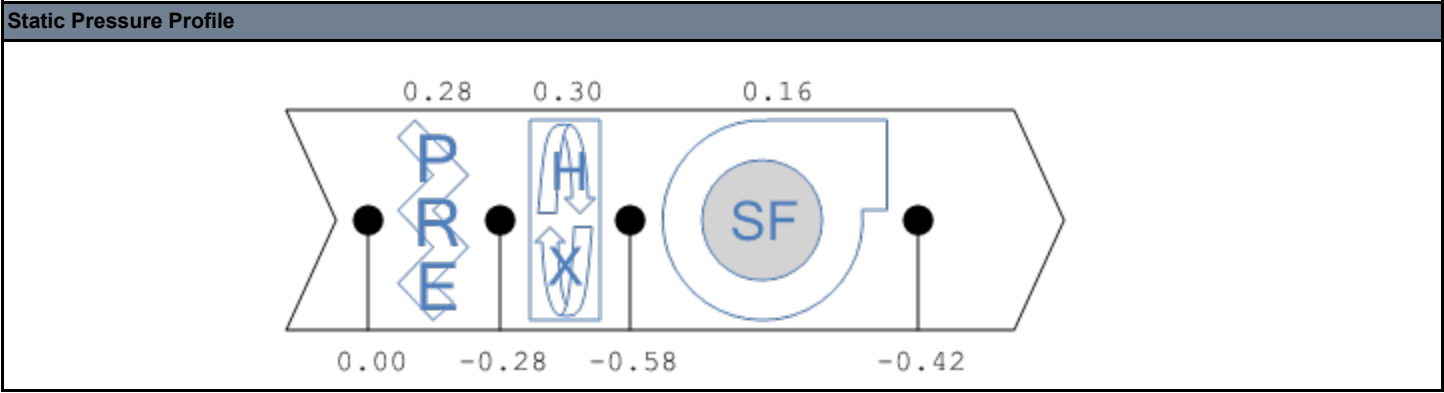
# Fan

**PROJECT:** Chipotle 43-4906  
**LOCATION:** Taylorsville, UT  
**PROJECT #:** 24295

**DATE:** 6/28/2024  
**CONTACT:** William Clayton

**SYSTEM/UNIT: MAU-01/Static Profile**

Tested By: Omar Carreno  
 Date: 6/21/2024



**SYSTEM/UNIT: MAU-01/Kitchen Hood**

Tested By: Omar Carreno  
 Date: 6/21/2024

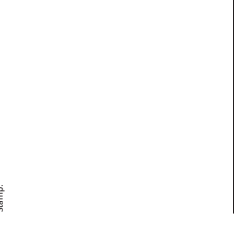
Design Airflow (CFM)	
Des. Make-up Air	1300
Halton Design SP	-

Filter Data	
MUA Filter (Type 1)	1.63
Qty MUA Filter (Type 1)	3
MUA Filter (Type 2)	-
Qty MUA Filter (Type 2)	-

Kitchen Hood Information	
Manufacturer	Captive-aire
Test Method	Perforated Supply

Final Airflow (CFM)	
Act. Make-up Air	1337
Halton Actual SP	-

Test Data	
PSP Length (in)	165
PSP Width (in)	6
Correction Factor	0.85
Total MA Ak (sq ft)	5.84
Avg. MA Velocity (FPM)	229



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 5400 SOUTH REDWOOD ROAD
   
 TAYLORSVILLE, UTAH

Issue Record:	09/29/23	PERMIT SET
Revisions:	1 10/27/23	PC1
Drawn:	MPC	Checked:
Project No.:	CMGN50012	MPC
Contents:	HVAC PLAN	

PROJECT NO.: CMGN50012
   
 CONTENTS:
   
 HVAC PLAN

PROJECT NO.: CMGN50012
   
 CONTENTS:
   
 HVAC PLAN

PROJECT NO.: CMGN50012
   
 CONTENTS:
   
 HVAC PLAN

PROJECT NO.: CMGN50012
   
 CONTENTS:
   
 HVAC PLAN

PROJECT NO.: CMGN50012
   
 CONTENTS:
   
 HVAC PLAN

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 CONTENTS:
   
 HVAC PLAN

**HVAC PLAN NOTES**

- SEE ARCHITECTURAL REFLECTED CEILING PLAN FOR CEILING MOUNTED EQUIPMENT LOCATION.
- PAINT DUCTWORK VISIBLE THROUGH DINING ROOM SUPPLY REGISTERS BLACK.
- PENETRATIONS THROUGH SHEAR WALL SHALL BE LIMITED TO 10" DIAMETER (O.D.) PENETRATIONS ALL CONTAINED WITHIN 10" DIAMETER. IF LARGER PENETRATIONS ARE REQUIRED, COORDINATE WITH STRUCTURAL ENGINEER FOR BRACING. SEE STRUCTURAL DRAWINGS FOR SHEAR WALL LOCATION.
- 26/14 DUCT UP FOR TRANSITION TO RTU-1 RETURN CONNECTION IN ROOF CUR DECTOR TO RTU-1 OPERATOR.
- 26/18 DUCT UP FOR TRANSITION TO RTU-2 RETURN CONNECTION IN ROOF CUR DECTOR TO RTU-2 OPERATOR.
- 26/14 DUCT UP FROM BUILDING SUPPLY THROUGH ROOF. TRANSITION TO RTU-1 CONNECTION IN ROOF CURB.
- 26/18 DUCT UP FROM BUILDING SUPPLY TO RTU-2 SUPPLY CONNECTION. TRANSITION TO RTU-2 CONNECTION.
- 14/14 DUCT UP THROUGH ROOF. TRANSITION TO MAU-1 SUPPLY CONNECTION.
- 10/24 DUCTS UP FROM HOOD TO 14/14 DUCT THROUGH ROOF TO EF-1. COMPLETE PROVIDE RADIUS ED BOWS WITH AN INSIDE RADIUS OF 0.5W AT ELBOWS IN G.
- 10/10 DUCT UP THROUGH ROOF TO EF-2.
- 26/6 DUCT DOWN TO MAKEUP AIR PDP DUCT CONNECTION. TRANSITION TO SU OPENING SIZE. TYPICAL PDP S.
- 8" DIA. DUCT DOWN TO AC PDP DUCT CONNECTION. TRANSITION TO SUPPLY PLENUM OPENING SIZE. TYPICAL CAP UNUSED DUCT CONNECTIONS. REFER TO HOOD SCHEDULE FOR SUPPLY AIR FLOWS.
- INSTALL GRIDPOINT THERMOSTATS FURNISHED BY TEMS FOR RTU-1 AND RTU-2 AT THIS LOCATION AT 46' AFF. COORDINATE WITH ELECTRICAL SWITCHING IN THIS AREA. PROVIDE WIRING AS SHOWN IN DETAIL 8/ET-20.
- INSTALL GRIDPOINT ZONE SENSOR MODULE FURNISHED BY TEMS FOR RTU-1 AT THIS LOCATION 60" AFF. DIRECT TO WALL (NO JUNCTION BOX). COORDINATE LOCATION WITH EQUIPMENT. PROVIDE WIRING AS SHOWN IN DETAIL 8/ET-20.
- INSTALL GRIDPOINT ZONE SENSOR MODULE FURNISHED BY TEMS FOR RTU-2 AT THIS LOCATION 66" AFF. DIRECT TO WALL (NO JUNCTION BOX). COORDINATE LOCATION WITH EQUIPMENT. PROVIDE WIRING AS SHOWN IN DETAIL 8/ET-20.
- INSTALL GRIDPOINT SUPPLY PROBE FURNISHED BY TEMS FOR RTU-1 IN THE SUPPLY DUCTWORK UPSTREAM FROM THE FIRST BRANCH CONNECTION. PROVIDE WIRING AS SHOWN IN DETAIL 8/ET-10.
- INSTALL GRIDPOINT SUPPLY PROBE FURNISHED BY TEMS FOR RTU-2 IN THE SUPPLY DUCTWORK UPSTREAM FROM THE FIRST BRANCH CONNECTION. PROVIDE WIRING AS SHOWN IN DETAIL 8/ET-10.
- INSTALL REMOTE TEMPERATURE SENSOR FOR HOOD HD-1 AT THIS LOCATION 66" AFF. COORDINATE LOCATION WITH EQUIPMENT. PROVIDE (2) #18 G. THERMISTOR CABLE FROM TEMPERATURE SENSOR TO HOOD CONTROL PANEL.
- INSTALL KITCHEN HOOD, HD-1, SUPPORT HOOD PER MANUFACTURER'S INSTALLATION INSTRUCTIONS AND AS DETAILED IN THE ARCHITECTURAL AND STRUCTURAL DRAWINGS. INSTALL HOOD ACCORDING TO THE REQUIREMENTS OF ITS LISTING. IN COMPLIANCE WITH NFPA 96, THE HOOD SHALL BE INSTALLED WITH A 1/2" AIR GAP BETWEEN THE HOOD AND THE ROOF. DUCT COLLAR EXTERIOR SENSOR IS AUTOMATICALLY ENERGIZED BY EXHAUST MAKEUP AIR FANS IF COOKING TEMPERATURES ARE DETECTED. EXHAUST DUCT SYSTEM TO BE WELDED OR FACTORY-MANUFACTURED WATER AND AIR TIGHT. INSTALL CLEANOUTS PER CODE AND AS SHOWN IN ALL HOOD PER DETAILS 2.4 AND 9/M700. CHIPOTLE WILL PROVIDE AN INDEPENDENT TESTING AGENCY FOR TESTING THE INTEGRITY OF THE GREASE DUCT SYSTEM.

**HVAC PLAN NOTES**

- INSTALL REMOTE CONDENSER UNIT FOR WALK-IN COOLER ON ROOF AS DETAILED IN THE ARCHITECTURAL AND STRUCTURAL DRAWINGS. INSTALL REFRIGERANT LINE SET, THERMOSTATIC EXPANSION VALVE, SOLENOID VALVE, TEMPERATURE CONTROL, SIGHT GLASS, FILTER DRIER, PRESSURE CONTROL, LOW AMBIENT CONTROLS, AND WEATHERPROOF HOUSING. TRAP AND SLOPE REFRIGERANT LINES PER MANUFACTURER'S RECOMMENDATIONS. INSTALLATION SHALL COMPLY WITH ASHRAE/ANSI STANDARD 15. INSTALL THE REFRIGERANT LINE SET UNDER THE ROOF DECK TO WITHIN 3' OF THE CONDENSING UNIT. CUT 2-1/2" HOLE IN WALK-IN COOLER ROOF FOR REFRIGERANT LINE SET AND SEAL PER THE COOLER MANUFACTURER'S INSTALLATION INSTRUCTIONS AFTER LINE SET IS INSTALLED.
- INSTALL REMOTE CONDENSER FOR ICE MACHINE ON ROOF AS DETAILED IN THE ARCHITECTURAL AND STRUCTURAL DRAWINGS. INSTALL REFRIGERANT LINE SET, THERMOSTATIC EXPANSION VALVE, SOLENOID VALVE, TEMPERATURE CONTROL, SIGHT GLASS, FILTER DRIER, PRESSURE CONTROL, LOW AMBIENT CONTROLS, AND WEATHERPROOF HOUSING. TRAP AND SLOPE REFRIGERANT LINES PER MANUFACTURER'S RECOMMENDATIONS. SEAL PIPING PENETRATIONS THROUGH ROOF. INSTALLATION SHALL COMPLY WITH ASHRAE/ANSI STANDARD 15. INSTALL THE REFRIGERANT LINE SET UNDER THE ROOF DECK TO WITHIN 3' OF THE REMOTE CONDENSER. IF REFRIGERANT PIPING TO ICE MACHINES IS REQUIRED, USE NEW CONCRETE WITHIN A STAINLESS STEEL SHROUD AS SHOWN IN THE ARCHITECTURAL DRAWINGS.
- INSTALL ROOFTOP EQUIPMENT PER MANUFACTURER'S INSTALLATION INSTRUCTIONS AND AS DETAILED IN THE ARCHITECTURAL AND STRUCTURAL DRAWINGS.
- INSTALL EXHAUST FAN EF-1 PER DETAIL 5/M700 AND AS DETAILED IN THE ARCHITECTURAL AND STRUCTURAL DRAWINGS. INSTALL GREASE-VINGUARD SYSTEM FURNISHED BY CHIPOTLE ON EXHAUST FAN, EF-1.
- PROVIDE SUPPLY DIFFUSER CONNECTION TO SUPPLY SYSTEM PER DETAIL 5/M100. TYPICAL.
- PROVIDE AUDIO VISUAL REMOTE SMOKE DETECTOR ANNUNCIATOR WITH REMOTE KEY OPERATED RESET. WIRE A UNIT BACK TO EACH SMOKE DETECTOR. MOUNT UNIT 60" AFF. TYPICAL.
- INSTALL REMOTE HALO AIR PURIFIER FURNISHED BY TUV IN RTU PER DETAIL 5/M700. SEE ELECTRICAL DRAWINGS FOR POWER CONNECTION INFORMATION. INSTALL LOW WARNING STICKERS ON FACE OF ENCLOSURE PER DETAIL AND ON ANY RTU ACCESS DOORS THROUGH WHICH THE REMOTE HALO WOULD BE VISIBLE IF OPENED.
- MAINTAIN 10" CLEARANCE BETWEEN WATER HEATER FLUE TERMINATION AND OUTSIDE AIR INTAKES. MAINTAIN 30" CLEARANCE BETWEEN WATER HEATER COMBUSTION AIR INTAKE AND EXHAUST FAN EF-1 DISCHARGE. SEE PLUMBING DRAWINGS FOR MORE INFORMATION ON WATER HEATER FLUE AND COMBUSTION AIR TERMINATIONS.
- ADJUST SUPPLY REGISTERS SO THAT SUPPLY AIR HITS WALL ON OPPOSITE SIDE OF ROOM AT APPROXIMATELY 7' AFF WITH NO DRAFTS FELT IN THE DINING ROOM.

**PLAN NOTES**

- Provide a performance test, as well as a capture & containment test, and a visual field test with the inspector. The capture and containment test is a visual field test with the inspector. The performance test involves testing and balancing by a qualified third party. Testing and balancing reports are required at time of final inspection, per IMC 507.6.
- Provide a "light test" for all grease ducts prior to enclosing or concealing, per IMC 506.3.2.5.
- The permit holder shall provide the necessary test equipment and devices required to test the equipment, per IMC 507.6.

