

Report By:

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



**Report: TAB REPORT**  
**Function: Test, Adjust, & Balance**  
**Date: 08/13/2024**

**PROJECT**  
**08-12-24 FREDDY'S - SIOUX CITY, IA**

5842 Sunnybrook Drive

SIOUX CITY, IA 51106

Client

TR HOSPITALITY GROUP

# National TAB

Project: 08-12-24 FREDDY'S - SIOUX CITY, IA

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## Project Summary

The summary below provides a quick understanding of our scope of work and general testing procedures. Enclosed in the report is further detail about your building performance including recommendations, asset data, and pictures. Our focus is to work with the trades to remedy any issues or deficiencies during the actual field balancing and not after the balancing has occurred to achieve a positive environment and outcome. The level of success is determined by the availability of the trades, possible parts needed, or time constraints.

### 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.

### 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.

## Issue List

- RTU1/RTU2 final filters needed
- RTU1/RTU2 no balancing dampers are installed.
- RTU1/RTU2 thermostats aren't programmable



**08-12-24 FREDDY'S - SIOUX CITY, IA**

**Project Issue Information**

**Issue Name :** RTU1/RTU2 final filters needed  
**Description :** Final filters are needed for both RTU units. Currently the construction filters are installed. Each unit takes 4 - 16X20X2 filters  
**Created By :** National TAB                      **Assigned To :** National TAB - Jacob Davidson  
**Status :** Open  
**Priority :** Low                                      **Asset Tag :**  
**Originated Date :** 08/13/2024 - Jacob Davidson - National TAB

Project Issue File Details



08/13/2024



08/13/2024



**08-12-24 FREDDY'S - SIOUX CITY, IA**

**Project Issue Information**

**Issue Name :** RTU1/RTU2 no balancing dampers are installed.  
**Description :** No balancing dampers are installed on RTU1 and RTU2. Without dampers, tech can only balance the systems to total design.  
**Created By :** National TAB                      **Assigned To :** National TAB - Jacob Davidson  
**Status :** Open  
**Priority :** High                                      **Asset Tag :**  
**Originated Date :** 08/12/2024 - Jacob Davidson - National TAB

Project Issue File Details



08/12/2024



08/12/2024

Project Issue Response Details

- **08/13/2024 National TAB - Jacob Davidson**
  - There was one damper in the hallway but no dampers for the restrooms on RTU1.



**08-12-24 FREDDY'S - SIOUX CITY, IA**

**Project Issue Information**

**Issue Name :** RTU1/RTU2 thermostats aren't programmable  
**Description :** Thermostats for dining RTUs are not programmable so tech is unable to set them for occupancy. Tech was only able to set time on them.  
**Created By :** National TAB                      **Assigned To :** National TAB - Jacob Davidson  
**Status :** Open  
**Priority :** Low                                      **Asset Tag :**  
**Originated Date :** 08/13/2024 - Jacob Davidson - National TAB

Project Issue File Details



08/13/2024

### 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	DINING I & RR	3000	3061	2500	2537	500	524	16.7%	17.1%						
RTU-2	DINING II & COUNTER	3000	3039	2500	2502	500	537	16.7%	17.7%						
DOAS-1	KITCHEN	2450	2405	0	0	2450	2405	100.0%	100.0%						
KEF-1	GRIDDLE											1600	1588		
KEF-2	FRYER											1046	1110		
EF-1	RR													225	246
EF-2	RR													225	247
<b>TOTALS</b>		8450	8505	5000	5039	3450	3466			0	0	2646	2698	450	493

#### NET BUILDING AIRFLOW CALCULATION

TOTALS	DESIGN	ACTUAL
TOTAL OA	3450	3466
TOTAL EXHAUST	3096	3191
<b>NET AIRFLOW</b>	<b>354</b>	<b>275</b>

DOOR TESTED	BUILDING PRESSURE MEASUREMENTS (IN. H2O)
FRONT	0.0048
SIDE	0.0066
REAR	0.0143
<b>AVERAGE</b>	<b>0.0086</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

- TECH - SITE PICTURES
- TECH - STEP 1: INITIAL SITE WALKTHROUGH
- TECH - STEP 2: UNIT DATA AND EVAL
- TECH - STEP 3: TEST, ADJUST AND BALANCE
- TECH - STEP 4: FINAL TESTS





08/13/2024

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**RTU-2**

**Comment:**



08/13/2024

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**DOAS-1**

**Comment:**



08/13/2024

---

**KEF-1**

**Comment:**



08/13/2024

---

**KEF-2**

**Comment:**



08/13/2024

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EF-1

Comment:

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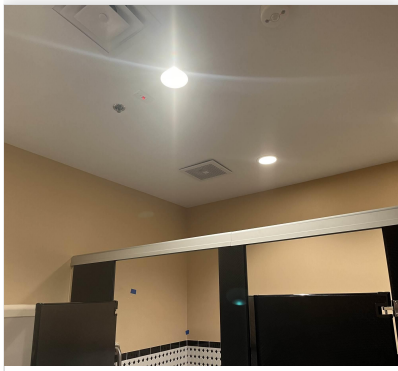
08/13/2024

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EF-2

Comment:

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08/13/2024

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**HOOD-1**

**Comment:**



08/13/2024

---

**HOOD-2**

**Comment:**



**08/13/2024**



08-12-24 FREDDY'S - SIOUX CITY, IA

CheckList Information

**Name :** TECH - STEP 1: INITIAL SITE WALKTHROUGH **Status :** Not Completed  
**Assigned Organization :** National TAB **Asset :**  
**Requesting Organization :** National TAB  
**Created Date :** 08/09/2024 - Brian Turnbough - National TAB

CheckList Item Details

INITIAL SITE WALKTHROUGH

All diffusers and grilles are installed and match design? Yes

Comment:

All hood filters installed and accounted for? Yes

Comment:

Hoods are wired and have power? Yes

Comment:

Hood is free of alarms? Yes

Comment:

Thermostats have power? Yes

Comment:

Have trades/general contractor been notified about any issues and are they created on FaciliBuild?

Comment:

N/A



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CheckList Information

**Name :** TECH - STEP 2: UNIT DATA AND EVAL      **Status :** Not Completed

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

**Requesting Organization :** National TAB

**Created Date :** 08/09/2024 - Brian Turnbough - National TAB

CheckList Item Details

UNIT DATA AND EVALUATION WHILE GATHERING UNIT DATA CHECK THE FOLLOWING:

RTU's/AHU's

Economizers are assembled and functional?	Yes
---	-----

Comment:

DCV Max damper opening position is set to minimum?	Yes
--	-----

Comment:

Free cooling enthalpy set point set for lowest setting (Typically "D")	Yes
--	-----

Comment:

Motors are all operating below the FLA rating?	Yes
--	-----

Comment:

Are belts tight?	N/A
------------------	-----

Comment:

If direct drive unit is the speed controller working.	Yes
---	-----

Comment:

Is gas piping installed and valves turned on?	Yes
---	-----

Comment:

Unit free of noticeable noise and vibration

Yes

Comment:

EF's

Rotation is correct?

Yes

Comment:

Belts are tight?

N/A

Comment:

Grease cup installed on hood fan?

Yes

Comment:

Hinge kit installed installed on hood fan?

Yes

Comment:

Lean fan back. Is grease duct installation adequate and is duct ran all the way to the base of the fan?

Yes

Comment:

Flex conduit is long enough so that fan can be completely tilted back?

Yes

Comment:

There is no major leakage around base of fan?

Yes

Comment:

Is the motor operating below the motor FLA rating?

Yes

Comment:

For restroom fan(s) is the back draft damper installed and can it fully open?

N/A

Comment:

**Unit free of noticeable noise and vibration?**

Yes

**Comment:**

---

**HOODS**

**Kitchen equipment installed in proper places?**

Yes

**Comment:**

**Can kitchen equipment be turned on for final smoke test?**

Yes

**Comment:**

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**DOCUMENTATION**

**Have trades/general contractor been notified about any issues and are they created on FaciliBuild?**

Yes

**Comment:**



08-12-24 FREDDY'S - SIOUX CITY, IA

CheckList Information

**Name :** TECH - STEP 3: TEST, ADJUST AND BALANCE      **Status :** Not Completed

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

**Requesting Organization :** National TAB

**Created Date :** 08/09/2024 - Brian Turnbough - National TAB

CheckList Item Details

TEST, ADJUST, AND BALANCE ALL EQUIPMENT:

DURING TESTING MAKE NOTE OF THE FOLLOWING:

Is space free of drafting?	Yes
----------------------------	-----

Comment:

Is space comfortable in all areas?	Yes
------------------------------------	-----

Comment:

Is the space free of ventilation noise?	Yes
---	-----

Comment:

If deviations from design were necessary to resolve 1-3 what were they? Otherwise put "NA".

Comment:

N/A



**08-12-24 FREDDY'S - SIOUX CITY, IA**

**CheckList Information**

**Name :** TECH - STEP 4: FINAL TESTS                      **Status :** Not Completed  
**Assigned Organization :** National TAB                      **Asset :**  
**Requesting Organization :** National TAB  
**Created Date :** 08/09/2024 - Brian Turnbough - 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 SECOND S102 SMOKE EMITTER

**Smoke test capture - Perimeter of hood**

**Comment:**

100%

**Smoke test capture - Top of cooking surface**

**Comment:**

100%

**WITNESS**

**Date test was completed**

08/13/2024

**Comment:**

**TAB tech name / Firm**

**Comment:**

JACOB DAVIDSON / NATIONAL TAB INTELLIGENCE

**Site super name / Firm**

**Comment:**

LINDSAY BAILEY / HAMPTON CONSTRUCTION

**Owner representative name / Firm (if Applicable)**

**Comment:**

N/A

**Building pressure at front & back doors (All Systems On)**

**Comment:**

0.0048" FRONT 0.0143" BACK

**ADDITIONAL**

**Do actual net building airflow, design net building airflow, and pressure coincide? If not why? (All three should either be positive or negative)**

**Comment:**

YES

**Thermostats are programmed?**

No

**Comment:**

THERMOSTATS ARE NOT PROGRAMMABLE ON RTU1 AND RTU2

# National TAB

Project: 08-12-24 FREDDY'S - SIOUX CITY, IA

System/Unit: AHU/RTU



Asset: DOAS1

AREA:KITCHEN

Unit Data		
	Design	Actual
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Serial Num	-	6139649
Model Num	CASRTU3-I.400-18-15T	CASRTU3-I.400-18-15T
Type	DOAS	DOAS
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1 BIRD SCREEN
OA Filter Size 1	-	25.5X45.75
Num Final Filter 1	-	4 METAL MESH
Final Filter Size 1	-	16X25X2
Num Final Filter 2	-	8
Final Filter Size 2	-	20X25X2

Test Data		
	Design	Actual
SF CFM	2450	2405
SF RPM	-	1126
RA CFM	0	0
OA CFM	2450	2405
RL Voltage	-	151V VFD
RL Amperage	-	5.3A VFD
SF Rotation	-	CCW
SF System SetPt	-	58.0HZ
RA Damper Position	-	0%
Min OA Damper Position	-	100%
Min OA Damper Type	-	ECONOMIZER

Motor Data		
	Design	Actual
Motor MFG	-	TECO WESTINGHOUSE
Frame	-	184T
Horsepower	2.00	2
Motor Rpm	-	1165
Phase	3	3
Rated Voltage	208	230/460
Rated Amperage	-	7.51/3.76

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

Completed By: Jacob Davidson on 08/13/2024

**National TAB**  
 Project:08-12-24 FREDDY'S - SIOUX CITY, IA  
**AHU/RTU**



**Diffuser Supply (GRD)**

**DOAS1/KITCHEN**

<b>Asset</b>									
<b>Asset Name</b>	<b>Location</b>	<b>Type</b>	<b>Size</b>	<b>DESIGN CFM</b>	<b>AK</b>	<b>CFM(1)</b>	<b>CFM(2)</b>	<b>FINAL CFM</b>	<b>% to design</b>
DOAS1-SGRD1	COUNTER	C	8"	200	1	235	199	201	100.5
DOAS1-SGRD2	COUNTER	C	8"	200	1	249	207	208	104.0
DOAS1-SGRD3	DRIVE THRU	C	8"	225	1	276	229	232	103.1
DOAS1-SGRD4	KITCHEN	C	8"	225	1	285	238	237	105.3
DOAS1-SGRD5	KITCHEN	D	6"	100	1	146	122	104	104.0
DOAS1-SGRD6	KITCHEN	C	8"	225	1	287	237	243	108.0
DOAS1-SGRD7	KITCHEN	C	8"	225	1	285	238	245	108.9
DOAS1-SGRD8	KITCHEN	C	8"	225	1	308	262	237	105.3
DOAS1-SGRD9	KITCHEN	C	8"	225	1	274	230	240	106.7
DOAS1-SGRD10	BACK DOOR	C	8"	225	1	261	218	234	104.0
DOAS1-SGRD11	OUTSIDE ROOM	E	10X6	225	0.56	260	214	224	99.6
<b>Total</b>				<b>2300</b>		<b>2866</b>	<b>2394</b>	<b>2405</b>	<b>104.57%</b>

Completed By: Jacob Davidson on 08/13/2024

# National TAB

Project: 08-12-24 FREDDY'S - SIOUX CITY, IA

## System/Unit: AHU/RTU



Asset: RTU1

AREA:DINING/RR

Unit Data		
	Design	Actual
MFG	LENNOX	CARRIER
Serial Num	-	2223P62012
Model Num	KGB092S4B	48FCDN08A2M5A6U0C0
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1 METAL MESH
OA Filter Size 1	-	19.5X35
Num Final Filter 1	-	4
Final Filter Size 1	-	16X20X2

Motor Data		
	Design	Actual
Motor MFG	-	NA
Frame	-	NA
Horsepower	-	NA
Motor Rpm	-	NA
Phase	3	3
Rated Voltage	208	208/230
Rated Amperage	-	6.4

Test Data		
	Design	Actual
SF CFM	3000	3061
SF RPM	-	1522
RA CFM	2500	2537
OA CFM	500	524
RL Voltage	-	211/211/212
RL Amperage	-	3.2/3.1/3.2
SF Rotation	-	CCW
SF System SetPt	-	7.20 POSITION B 30%
RA Damper Position	-	76%
Min OA Damper Position	-	24%
Min OA Damper Type	-	ECONOMIZER

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.47"
Fan Suction SP	-	-0.85"
Fan Discharge SP	-	0.48"
Total ESP	0.8"	0.95"
Fan Total SP	-	1.33"

General	
	Actual
Fan Rotation Correct	YES
Unit Filters Clean	NEED FINAL FILTERS
Condensate Drain Installed	YES

Completed By: Jacob Davidson on 08/13/2024

Notes:

DIFFUSERS NOT PRESENT IN RESTROOMS OR DINING ROOM. TECH WAS UNABLE TO BALANCE INDIVIDUAL DIFFUSERS.

Written By: Jacob Davidson on 08/13/2024

# National TAB

Project:08-12-24 FREDDY'S - SIOUX CITY, IA

## AHU/RTU



**Diffuser Supply (GRD)**

**RTU1/DINING/RR**

Asset									
Asset Name	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
RTU1-SGRD1	WOMENS RR	B1	8"	125	1	269	227	227	181.6
RTU1-SGRD2	MENS RR	B1	8"	125	1	226	184	184	147.2
RTU1-SGRD3	RR HALL	B	6"	100	1	140	104	104	104.0
RTU1-SGRD4	DINING	A	12"	425	1	621	470	470	110.6
RTU1-SGRD5	DINING	A	12"	425	1	317	260	260	61.2
RTU1-SGRD6	DINING	A	12"	400	1	515	398	398	99.5
RTU1-SGRD7	DINING	A	12"	425	1	441	361	361	84.9
RTU1-SGRD8	DINING	A	12"	400	1	576	415	415	103.8
RTU1-SGRD9	DINING	A	12"	425	1	590	451	451	106.1
RTU1-SGRD10	DOOR	B1	8"	150	1	234	191	191	127.3
Total				3000		3929	3061	3061	102.03%

Completed By: Jacob Davidson on 08/13/2024

# National TAB

Project: 08-12-24 FREDDY'S - SIOUX CITY, IA

## System/Unit: AHU/RTU



Asset: RTU2

AREA: DINING/FRONT COUNTER

Unit Data		
	Design	Actual
MFG	LENNOX	CARRIER
Serial Num	-	2223P62011
Model Num	KGB092S4B	48FCDN08A2M5A6U0C0
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1 METAL MESH
OA Filter Size 1	-	19.5X35
Num Final Filter 1	-	4
Final Filter Size 1	-	16X20X2

Motor Data		
	Design	Actual
Motor MFG	-	NA
Frame	-	NA
Horsepower	-	NA
Motor Rpm	-	NA
Phase	3	3
Rated Voltage	208	208/230
Rated Amperage	-	6.4

Test Data		
	Design	Actual
SF CFM	3000	3039
SF RPM	-	1576
RA CFM	2500	2502
OA CFM	500	537
RL Voltage	-	211/211/211
RL Amperage	-	3.4/3.5/3.5
SF Rotation	-	CCW
SF System SetPt	-	7.50VDC POSITION C 15%
RA Damper Position	-	76%
Min OA Damper Position	-	24%
Min OA Damper Type	-	ECONOMIZER

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.48"
Fan Suction SP	-	-0.86"
Fan Discharge SP	-	0.52"
Total ESP	0.8"	1.00"
Fan Total SP	-	1.38"

General	
	Actual
Fan Rotation Correct	YES
Unit Filters Clean	NEED FINAL FILTERS
Condensate Drain Installed	YES

Completed By: Jacob Davidson on 08/13/2024

Notes:  
DAMPERS WERE NOT INSTALLED IN DINING ROOM. TECH WAS UNABLE TO BALANCE INDIVIDUAL DIFFUSERS.

Written By: Jacob Davidson on 08/13/2024

# National TAB

Project:08-12-24 FREDDY'S - SIOUX CITY, IA

## AHU/RTU



**Diffuser Supply (GRD)**

**RTU2/DINING/FRONT COUNTER**

Asset									
Asset Name	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
RTU2-SGRD1	DINING	A	12"	500	1	668	582	582	116.4
RTU2-SGRD2	DINING	A	12"	500	1	541	472	472	94.4
RTU2-SGRD3	SODAS	A	12"	500	1	517	451	451	90.2
RTU2-SGRD4	ENTRANCE	A	12"	500	1	542	473	473	94.6
RTU2-SGRD5	ENTRANCE	A	12"	500	1	561	489	489	97.8
RTU2-SGRD6	ENTRANCE	A	12"	500	1	656	572	572	114.4
Total				3000		3485	3039	3039	101.3%

Completed By: Jacob Davidson on 08/13/2024

# National TAB

Project: 08-12-24 FREDDY'S - SIOUX CITY, IA

System/Unit: FAN - Exhaust



Asset: EF1

AREA:MENS RR

Unit Data		
	Design	Actual
MFG	COOK	PENNBERRY
Model Num	GC-184	Z8S
Serial Num	-	B24R01741
Type	CEILING	CEILING
Configuration	VERTICAL	VERTICAL

Test Data		
	Design	Actual
CFM	225	246
Fan RPM	-	1050
Fan Rotation	-	CCW
Motor RPM	-	1050
System SetPt	-	NONE
RL Voltage	-	119V
RL Amperage	-	NA

Motor Data		
	Design	Actual
Motor MFG	-	NA
Frame	-	NA
Horsepower	-	NA
Motor Rpm	-	1050
Phase	1	1
Voltage (rated)	120	115
Amperage (rated)	-	NA
Service Factor	-	NA

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# National TAB

Project: 08-12-24 FREDDY'S - SIOUX CITY, IA

System/Unit: FAN - Exhaust



Asset: EF2

AREA:WOMENS RR

Unit Data		
	Design	Actual
MFG	COOK	PENNBERRY
Model Num	GC-184	Z8S
Serial Num	-	B24AR01742
Type	CEILING	CEILING
Configuration	VERTICAL	VERTICAL

Test Data		
	Design	Actual
CFM	225	247
Fan RPM	-	1050
Fan Rotation	-	CCW
Motor RPM	-	1050
System SetPt	-	NONE
RL Voltage	-	119V
RL Amperage	-	NA

Motor Data		
	Design	Actual
Motor MFG	-	NA
Frame	-	NA
Horsepower	-	NA
Motor Rpm	-	1050
Phase	1	1
Voltage (rated)	120	120
Amperage (rated)	-	NA
Service Factor	-	NA

Completed By: Jacob Davidson on 08/13/2024

# National TAB

Project: 08-12-24 FREDDY'S - SIOUX CITY, IA

System/Unit: FAN - Exhaust



Asset: KEF1

AREA:HD 1

Unit Data		
	Design	Actual
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	CASRE18DD	CASRE18DD
Serial Num	-	6139649
Type	DOWNBLAST	UTILITY
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	Actual
Motor MFG	-	TECO WESTINGHOUSE
Frame	-	145T
Horsepower	1.000	1.5
Motor Rpm	-	1740
Phase	3	3
Voltage (rated)	208	230/460
Amperage (rated)	-	4.03/2.02
Service Factor	-	1.15

Test Data		
	Design	Actual
CFM	1600	1588
Fan RPM	-	1163
Fan Rotation	-	CCW
Motor RPM	-	1163
System SetPt	-	40.1HZ
RL Voltage	-	126V VFD
RL Amperage	-	3.7A VFD
Total ESP	1.500"	UTO
Fan Inlet SP	-	UTO
Fan Discharge SP	-	UTO

Completed By: Jacob Davidson on 08/13/2024

# National TAB

Project: 08-12-24 FREDDY'S - SIOUX CITY, IA

System/Unit: FAN - Exhaust



Asset: KEF2

AREA:HD 2

Unit Data		
	Design	Actual
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	DU85HFA	DU85HFA
Serial Num	-	6139649
Type	UPBLAST/CEILING	UPBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	Actual
Motor MFG	-	TELCO GREEN
Frame	-	NL
Horsepower	1.000	1
Motor Rpm	-	1800
Phase	1	1
Voltage (rated)	208	208/230
Amperage (rated)	-	6.9
Service Factor	-	1

Test Data		
	Design	Actual
CFM	1046	1110
Fan RPM	-	DD ECM
Fan Rotation	-	CCW
Motor RPM	-	DD ECM
System SetPt	-	61%
RL Voltage	-	212V
RL Amperage	-	2.53A
Total ESP	1.500"	0.76"
Fan Inlet SP	-	-0.76"
Fan Discharge SP	-	ATM

Completed By: Jacob Davidson on 08/13/2024

# National TAB

Project: 08-12-24 FREDDY'S - SIOUX CITY, IA

System/Unit: Kitchen Hood Type I



Asset: HD1

AREA:KEF 1

Unit Data		
	Design	Actual
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	5424 ND-2	5424 ND-2
Job / Serial Num	-	6139649
Type	TYPE I CANOPY	TYPE I CANOPY
Hood length	96"	96"
Hood Width	54"	54"

Test Data Exhaust		
	Design	Actual
Filter Type	CAPTRATE SOLO FILTER	CAPTRATE
Filter Size 1	16X16	16X16
Filter Qty 1	5	5
Filter AK factor size 1	1.62	1.62
Filter Total AK Area	8.1	8.1
Filter1 FPM	-	190
Filter2 FPM	-	206
Filter3 FPM	-	207
Filter4 FPM	-	191
Filter5 FPM	-	187
Filter Ave FPM(corr)	-	196
CFM	1600	1588

Cooking Equipment	
	Actual
Item 1	GRIDDLE

Completed By: Jacob Davidson on 08/13/2024

# National TAB

Project: 08-12-24 FREDDY'S - SIOUX CITY, IA

System/Unit: Kitchen Hood Type I



Asset: HD2

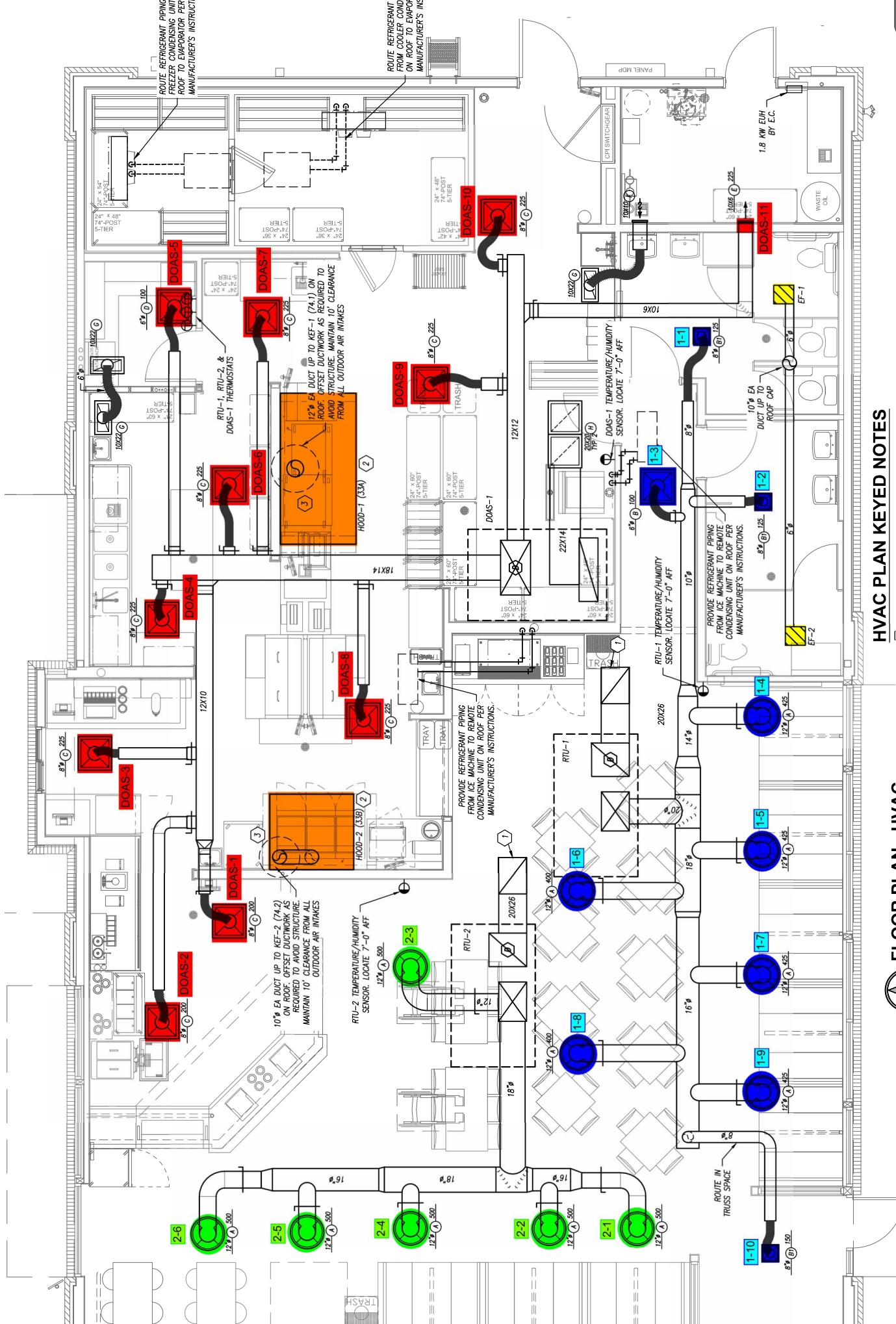
AREA:KEF 2

Unit Data		
	Design	Actual
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	5424 ND-2	5424 ND-2
Job / Serial Num	-	6139649
Type	TYPE I CANOPY	TYPE I CANOPY
Hood length	81"	81"
Hood Width	54"	54"

Test Data Exhaust		
	Design	Actual
Filter Type	CAPTRATE SOLO FILTER	CAPTRATE SOLO
Filter Size 1	16X16	16X16
Filter Qty 1	5	5
Filter AK factor size 1	1.62	1.62
Filter Total AK Area	8.1	8.1
Filter1 FPM	-	135
Filter2 FPM	-	138
Filter3 FPM	-	142
Filter4 FPM	-	135
Filter5 FPM	-	137
Filter Ave FPM(corr)	-	137
CFM	1046	1110

Cooking Equipment	
	Actual
Item 1	FRYERS

Completed By: Jacob Davidson on 08/13/2024



HVAC PLAN KEYED NOTES