Report By:

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

Report: TAB REPORT

Function: Test, Adjust, & Balance

Date: 05/20/2024

PROJECT

05-13-24 FREDDY'S - Independence, MO

19007 E 39th St S

Independence, MO 64055

Client

Freddy's Frozen Custard & Steakburgers (CORPORATE)

260 N Rock Rd

Suite 200

Wichita, KS 67206

National TAB

Project: 05-13-24 FREDDY'S - Independence, MO

Table Of Contents

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

- DOAS diffuser 6 low on flow, flex duct sagging
- DOAS diffuser 8 low on flow, flex sagging
- DOAS diffuser 9 high on flow. Unable to get to damper
- DOAS office VAV diffuser not powered
- EF1/EF2 for restrooms are overamping
- RTU1 diffuser 6 low flow, unable to push more air to diffuser
- RTU1 diffusers for restroom and hallway missing OBD
- RTU1 HMI in space not operating

05-13-24 FREDDY'S - Independence, MO

Project Issue Information

Issue Name : DOAS diffuser 6 low on flow, flex duct sagging

Description : DOAS diffuser 6 is low on flow and flex duct is sagging preventing airflow from getting to the diffuser. Recommend lifting and stretching duct to get more air to diffuser.

Created By : National TAB

Assigned To : National TAB - Jacob Davidson

Status : Open

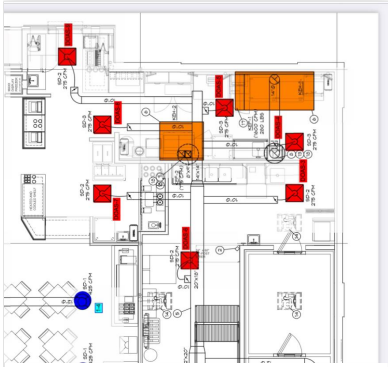
Priority : Medium

Asset Tag :

Originated Date : 05/13/2024 - Jacob Davidson - National TAB

Project Issue Response Details

- **05/13/2024 National TAB - Jacob Davidson**
  - Added pics



IMG_7836
05/13/2024

IMG_7825
05/13/2024

05-13-24 FREDDY'S - Independence, MO

Project Issue Information

Issue Name : DOAS diffuser 8 low on flow, flex sagging

Description : Diffuser 8 on DOAS is low on flow and the flex duct above ceiling is sagging which could be restricting the airflow. Recomment lifting and stretching the duct above ceiling to get optimal flow.

Created By : National TAB

Assigned To : National TAB - Jacob Davidson

Status : Open

Priority : Medium

Asset Tag :

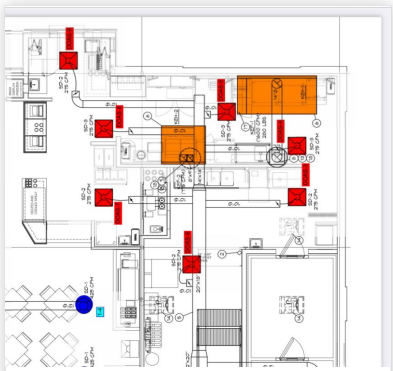
Originated Date : 05/13/2024 - Jacob Davidson - National TAB

Project Issue Response Details

- **05/13/2024 National TAB - Jacob Davidson**
  - Added pics

IMG_7831
05/13/2024

IMG_7828
05/13/2024



IMG_7836
05/13/2024

05-13-24 FREDDY'S - Independence, MO

Project Issue Information

Issue Name : DOAS diffuser 9 high on flow. Unable to get to damper

Description : DIffuser 9 is high on flow and tech is unable to get to the damper due to ceiling obstruction.

Created By : National TAB

Assigned To : National TAB - Jacob Davidson

Status : Open

Priority : Medium

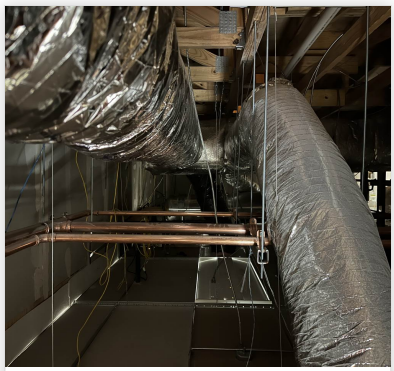
Asset Tag :

Originated Date : 05/13/2024 - Jacob Davidson - National TAB

Project Issue Response Details

- **05/13/2024 National TAB - Jacob Davidson**
  - Added pics

IMG_7830
05/13/2024



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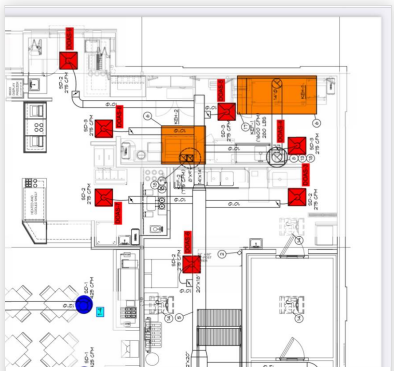
05/13/2024



IMG_7836
05/13/2024

05-13-24 FREDDY'S - Independence, MO

Project Issue Information

Issue Name : DOAS office VAV diffuser not powered

Description : Office VAV diffuser is not powered and tech is unable to get the diffuser open to balance.

Created By : National TAB

Assigned To : National TAB - Jacob Davidson

Status : Open

Priority : Medium

Asset Tag :

Originated Date : 05/13/2024 - Jacob Davidson - National TAB

Project Issue Response Details

- **05/13/2024 National TAB - Jacob Davidson**
  - Added pics

IMG_7824
05/13/2024

IMG_7822
05/13/2024

05-13-24 FREDDY'S - Independence, MO

Project Issue Information

Issue Name : EF1/EF2 for restrooms are overamping

Description : Units are overamping at 0.52 of 0.40 FLA for EF2 and 0.40 of 0.22A on EF1. There is no way to reduce amperage on the units as they don't have speed control. Recommend checking the wiring.

Created By : National TAB

Assigned To : National TAB - Jacob Davidson

Status : Open

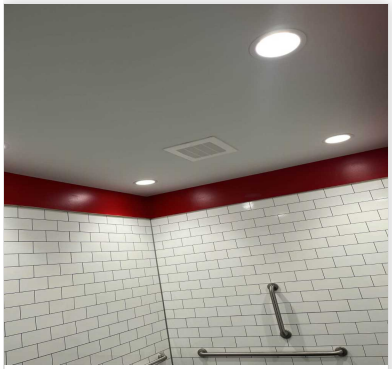
Priority : Urgent

Asset Tag :

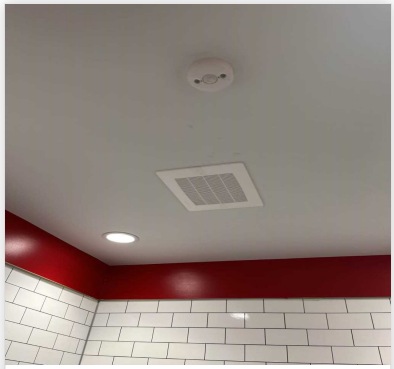
Originated Date : 05/13/2024 - Jacob Davidson - National TAB

Project Issue Response Details

- **05/13/2024 National TAB - Jacob Davidson**
  - Added pics of units



IMG_7838
05/13/2024



IMG_7837
05/13/2024

05-13-24 FREDDY'S - Independence, MO

Project Issue Information

Issue Name : RTU1 diffuser 6 low flow, unable to push more air to diffuser

Description : DIffuser 6 is low as it comes off the takeoff and immediately takes a 90 degree turn. Tech is unable to push more air to diffuser. It is in an open area where it is not anticipated to cause comfort issues.

Created By : National TAB

Assigned To : National TAB - Jacob Davidson

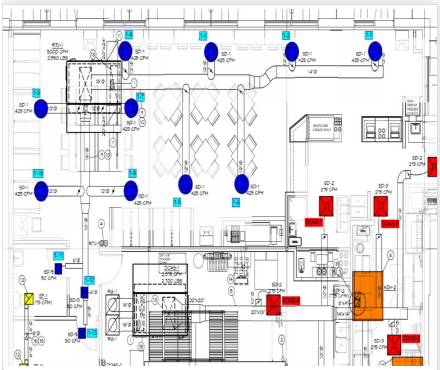
Status : Open

Priority : InfoOnly

Asset Tag :

Originated Date : 05/16/2024 - Jacob Davidson - National TAB

Project Issue File Details



RTU1LAyout
05/16/2024

Project Issue Response Details

- **05/16/2024 National TAB - Jacob Davidson**
  - Added pic of diffusers

IMG_7879
05/16/2024

05-13-24 FREDDY'S - Independence, MO

Project Issue Information

Issue Name : RTU1 diffusers for restroom and hallway missing OBD

Description : RTU1 diffusers for the restroom and hallway were supposed to have OB dampers installed to adjust airflow. Tech is unable to find any dampers for diffusers.

Created By : National TAB

Assigned To : National TAB - Brianna Biggs

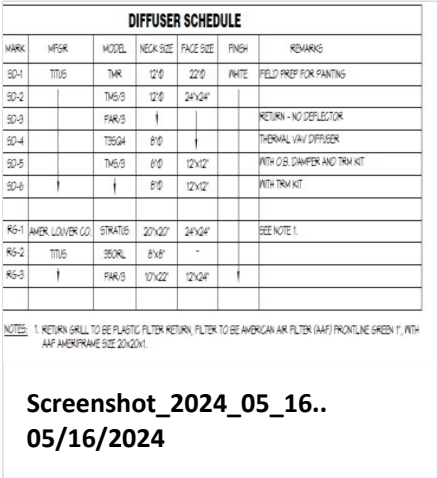
Status : Open

Priority : High

Asset Tag :

Originated Date : 05/16/2024 - Jacob Davidson - National TAB

Project Issue File Details



DIFFUSER SCHEDULE

MARK	MFGR.	MODEL	NECK SIZE	FACE SIZE	FINISH	REMARKS
SD-1	TITUS	TMR	12"Ø	22"Ø	WHITE	FIELD PREP FOR PAINTING
SD-2	"	TMS/3	12"Ø	24"X24"	"	
SD-3	"	FAR/3	"	"	"	RETURN - NO DEFLECTOR
SD-4	"	T35Q4	8"Ø	"	"	THERMAL VAV DIFFUSER
SD-5	"	TMS/3	8"Ø	12"X12"	"	WITH OB. DAMPER AND TRM KIT
SD-6	"	"	8"Ø	12"X12"	"	WITH TRM KIT
RG-1	AMER. LOUVER CO.	STRATUS	20"X20"	24"X24"		SEE NOTE 1.
RG-2	TITUS	350RL	8"X8"	-		
RG-3	"	FAR/3	10"X22"	12"X24"	"	

NOTES: 1. RETURN GRILL TO BE PLASTIC FILTER RETURN, FILTER TO BE AMERICAN AIR FILTER (AAF) FRONTLINE GREEN 1", WITH AAF AMERIFRAME SIZE 20X20X1.

Screenshot_2024_05_16.. 05/16/2024

Project Issue Response Details

- **05/16/2024 National TAB - Jacob Davidson**
  - Added pics

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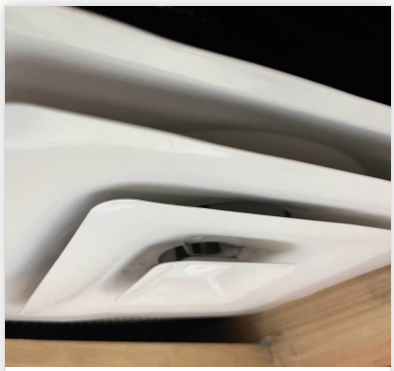
IMG_7878
05/16/2024



IMG_7876
05/16/2024

05-13-24 FREDDY'S - Independence, MO

Project Issue Information

Issue Name : RTU1 HMI in space not operating

Description : HMI in the space is not operating for operation of RTU1 so settings can only be changed from the roof currently. Spoke to CAS tech and they believe the issue is the CAT5 cable.

Created By : National TAB

Assigned To : National TAB - Jacob Davidson

Status : Open

Priority : High

Asset Tag :

Originated Date : 05/16/2024 - Jacob Davidson - National TAB

Project Issue Response Details

- **05/16/2024 National TAB - Jacob Davidson**
  - Added pic

IMG_7875
05/16/2024

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	DINING	5000	4828	4100	3883	900	945	18.0%	19.6%						
DOAS-1	KITCHEN	2375	2313	0	0	2375	2313	100.0%	100.0%						
KEF-1	GRIDDLE											1600	1588		
KEF-2	FRYER											775	850		
EF-1	RR													75	85
EF-2	RR													75	75
TOTALS		7375	7141	4100	3883	3275	3258			0	0	2375	2438	150	160

NET BUILDING AIRFLOW CALCULATION

TOTALS	DESIGN	ACTUAL
TOTAL OA	3275	3258
TOTAL EXHAUST	2525	2598
NET AIRFLOW	750	660

DOOR TESTED	BUILDING PRESSURE MEASUREMENTS (IN. H20)
FRONT	0.0045
SIDE	0.0054
REAR	0.0061
AVERAGE	**0.0053**

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:

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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

05-13-24 FREDDY'S - Independence, MO

CheckList Information

Name :	TECH - SITE PICTURES	**Status :**	Not Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	05/13/2024 - Brian Turnbough - National TAB		

CheckList Item Details

STORE FRONT

Comment:

IMG_7891
05/16/2024

RTU-1

Comment:

IMG_7894
05/16/2024

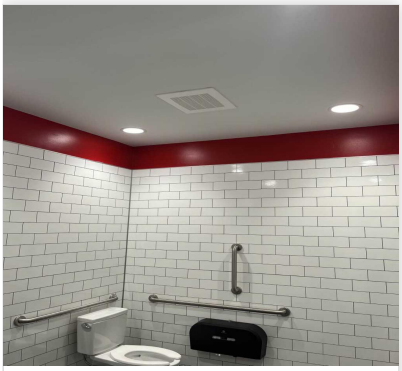
DOAS-1

Comment:

IMG_7895
05/16/2024

EF-1

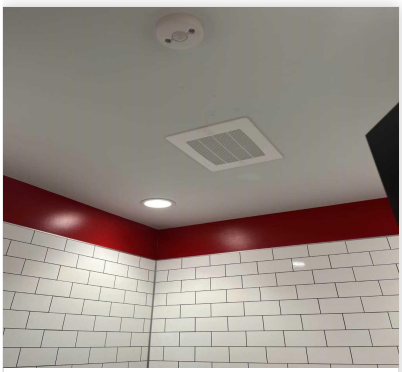
Comment:



IMG_7896
05/16/2024

EF-2

Comment:



IMG_7897
05/16/2024

KEF-1

Comment:

IMG_7892
05/16/2024

KEF-2

Comment:

IMG_7893
05/16/2024

HOOD-1

Comment:

IMG_7889
05/16/2024

HOOD-2

Comment:

IMG_7890
05/16/2024

05-13-24 FREDDY'S - Independence, MO

CheckList Information

Name :	TECH - STEP 1 : INITIAL SITE WALKTHROUGH	**Status :**	Not Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	05/13/2024 - 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?	No
Comment: RTU1 IS NOT OPERATIONAL	
Have trades/general contractor been notified about any issues and are they created on FaciliBuild?	
Comment:	

05-13-24 FREDDY'S - Independence, MO

CheckList Information

Name :	TECH - STEP 2: UNIT DATA AND EVAL	**Status :**	Not Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	05/13/2024 - 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?	
Comment:	
DCV Max damper opening position is set to minimum?	
Comment:	
Free cooling enthalpy set point set for lowest setting (Typically "D")	N/A
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?	
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?	Yes

Comment:

Unit free of noticeable noise and vibration?	Yes

Comment:

MUA

Rotation is correct?	N/A

Comment:

Gas piping is installed and valves are in on position?	N/A

Comment:

Heater tested and is functional?	N/A

Comment:

Internal motorized damper is fully opening?	N/A

Comment:

Motor is operating below the FLA rating?	N/A

Comment:

Unit free of noticeable noise and vibration?	N/A

Comment:

HOODS

Kitchen equipment installed in proper places?	Yes

Comment:

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

Comment:

DOCUMENTATION

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

Comment:

05-13-24 FREDDY'S - Independence, MO

CheckList Information

Name :	TECH - STEP 3: TEST, ADJUST AND BALANCE	**Status :**	Not Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	05/13/2024 - 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

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05-13-24 FREDDY'S - Independence, MO

CheckList Information

Name :	TECH - STEP 4: FINAL TESTS	**Status :**	Not Completed
Assigned Organization :	National TAB	**Asset :**	
Requesting Organization :	National TAB		
Created Date :	05/13/2024 - 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:

95% ON FRYER HOOD 100% ON GRIDDLE HOOD

Smoke test capture - Top of cooking surface

Comment:

100% ON BOTH HOODS

WITNESS

Date test was completed 05/16/2024

Comment:

TAB tech name / Firm

Comment:

JACOB DAVIDSON / NATIONAL TAB INTELLIGENCE

Site super name / Firm

Comment:

MARK MORROW / ACCEL CONSTRUCTION

Owner representative name / Firm (if Applicable)

Comment:

N/A

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

Comment:

0.0045" FRONT 0.0054" SIDE 0.0061" 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?	Yes

Comment:

UNABLE TO PROGRAM DINING ROOM HMI

National TAB

Project: 05-13-24 FREDDY'S - Independence, MO

System/Unit: AHU/RTU

Asset: DOAS-1 AREA:KITCHEN

Unit Data		
	Design	**Actual**
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Serial Num	-	5873095
Model Num	CASRTU3-I.200-24-12.5T-DOAS	CASRRTU3-I.300-15-15T
Type	DOAS	DOAS
Configuration	VERTICAL DISCHARGE	VERTICAL DISCHARGE
Num OA Filters 1	-	1 BIRD SCREEN
OA Filter Size 1	-	25.5X46
Num Final Filter 1	-	4 METAL MESH
Final Filter Size 1	-	16X25X2
Num Final Filter 2	-	8
Final Filter Size 2	-	20X25X2

Motor Data		
	Design	**Actual**
Motor MFG	-	TECO WESTINGHOUSE
Frame	-	145T
Horsepower	1.50	1.5
Motor Rpm	-	1740
Phase	3	3
Rated Voltage	208	230/460
Rated Amperage	-	4.03/2.02

Test Data		
	Design	**Actual**
SF CFM	2375	2313
SF RPM	-	1537
RA CFM	0	0
OA CFM	2375	2313
RL Voltage	-	207V VFD
RL Amperage	-	3.7A VFD
SF Rotation	-	CCW
RA Damper Position	-	0%
Min OA Damper Position	-	100% OPEN
Min OA Damper Type	-	ECONOMIZER

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

Completed By: Jacob Davidson on 05/16/2024

Notes:
MOTOR SPEED SETPOINT: 53.0HZ

Written By: Jacob Davidson on 05/16/2024

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National TAB

Project:05-13-24 FREDDY'S - Independence, MO

AHU/RTU

Diffuser Supply (GRD)

DOAS-1/KITCHEN

Asset									
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
DOAS-1-SGRD1	KITCHEN	SD-4	8"	154	1	30	37	37	24.0
DOAS-1-SGRD2	KITCHEN	SD-2	12"	296	1	328	330	330	111.5
DOAS-1-SGRD3	KITCHEN	SD-2	10"	275	1	285	290	290	105.5
DOAS-1-SGRD4	KITCHEN	SD-3	10"	275	1	265	264	264	96.0
DOAS-1-SGRD5	KITCHEN	SD-3	10"	275	1	292	288	288	104.7
DOAS-1-SGRD6	KITCHEN	SD-2	10"	275	1	224	240	240	87.3
DOAS-1-SGRD7	KITCHEN	SD-2	10"	275	1	291	296	296	107.6
DOAS-1-SGRD8	KITCHEN	SD-3	10"	275	1	250	236	236	85.8
DOAS-1-SGRD9	KITCHEN	SD-2	10"	275	1	332	332	332	120.7
Total				2375		2297	2313	2313	97.39%

Asset	Notes	Date	Written By
DOAS-1-SGRD2	LEFT HIGH DUE TO DIFFUSER 1 BEING CLOSED	05/16/2024	Jacob Davidson
DOAS-1-SGRD6	LOW FLOW, FLEX SAGGING. TECH UNABLE TO PUSH MORE AIR TO DIFFUSER.	05/16/2024	Jacob Davidson
DOAS-1-SGRD8	LOW FLOW, FLEX SAGGING. TECH UNABLE TO PUSH MORE AIR TO DIFFUSER.	05/16/2024	Jacob Davidson
DOAS-1-SGRD9	HIGH FLOW. DAMPER INACCESSIBLE. TECH UNABLE TO REDUCE FLOW.	05/16/2024	Jacob Davidson

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National TAB

Project: 05-13-24 FREDDY'S - Independence, MO

System/Unit: AHU/RTU

Asset: RTU-1 AREA:KITCHEN

Unit Data		
	Design	**Actual**
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Serial Num	-	5453155
Model Num	CASRTU3-I.200-24-12.5T-DOAS	CASRTU3-I.200-24-12.5T-DOAS
Type	RTU	RTU DOAS
Configuration	VERTICAL DISCHARGE	VERTICAL
Num OA Filters 1	-	1 BIRD SCREEN
OA Filter Size 1	-	25.5X46
Num Final Filter 1	-	4 METAL MESH
Final Filter Size 1	-	16X25X2
Num Final Filter 2	-	8
Final Filter Size 2	-	20X25X2

Motor Data		
	Design	**Actual**
Motor MFG	-	MARATHON
Frame	-	215T
Horsepower	5.00	5
Motor Rpm	-	1181
Phase	3	3
Rated Voltage	208	230/460
Rated Amperage	-	13.8/8.9

Test Data		
	Design	**Actual**
SF CFM	5000	4828
SF RPM	-	1378
RA CFM	4100	3883
OA CFM	900	945
RL Voltage	-	209V VFD
RL Amperage	-	12.9A VFD
SF Rotation	-	CCW
RA Damper Position	-	N/A
Min OA Damper Position	-	4.7VDC
Min OA Damper Type	-	ECONOMIZER

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

Completed By: Jacob Davidson on 05/16/2024

Notes:
MOTOR SPEED SETPOINT: 70.0HZ

Written By: Jacob Davidson on 05/16/2024

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National TAB

Project:05-13-24 FREDDY'S - Independence, MO

AHU/RTU

Diffuser Supply (GRD)

RTU-1/KITCHEN

Asset									
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
RTU-1-SGRD1	DINING	SD-1	12"	485	1	551	480	477	98.4
RTU-1-SGRD2	DINING	SD-1	12"	485	1	449	415	447	92.2
RTU-1-SGRD3	DINING	SD-1	12"	485	1	536	480	473	97.5
RTU-1-SGRD4	DINING	SD-1	12"	485	1	491	481	496	102.3
RTU-1-SGRD5	DINING	SD-1	12"	485	1	444	432	449	92.6
RTU-1-SGRD6	DINING	SD-1	12"	485	1	101	209	170	35.1
RTU-1-SGRD7	DINING	SD-1	12"	485	1	470	458	467	96.3
RTU-1-SGRD8	DINING	SD-1	12"	485	1	551	482	488	100.6
RTU-1-SGRD9	DINING	SD-1	12"	485	1	495	483	483	99.6
RTU-1-SGRD10	DINING	SD-1	12"	485	1	507	515	454	93.6
RTU-1-SGRD11	RR 1	SD-5	6"	50	1	158	158	157	314.0
RTU-1-SGRD12	RR VESTIBULE	SD-5	6"	50	1	163	139	148	296.0
RTU-1-SGRD13	RR 2	SD-5	6"	50	1	121	128	119	238.0
Total				5000		5037	4860	4828	96.56%

Asset	Notes	Date	Written By
RTU-1-SGRD6	DIFFUSER IS COMING OFF THE TAKEOFF AFTER A HARD RIGHT ANGLE AND TECH IS U NABLE TO PUSH MORE AIR TO DIFFUSER.	05/16/2024	Jacob Davidson
RTU-1-SGRD11	NO DAMPER TO REDUCE FLOW	05/16/2024	Jacob Davidson
RTU-1-SGRD12	NO DAMPER TO REDUCE FLOW	05/16/2024	Jacob Davidson
RTU-1-SGRD13	NO DAMPER TO REDUCE FLOW	05/16/2024	Jacob Davidson

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National TAB

Project: 05-13-24 FREDDY'S - Independence, MO

System/Unit: FAN - Exhaust

Asset: EF1 AREA:MENS RR

Unit Data		
	Design	**Actual**
MFG	CAPTIVEAIRE	COOK
Model Num	DU50HFA	GEMINI 140 SERIES SONEBUSTER
Serial Num	-	NL
Type	DD	DD
Configuration	CEILING	CEILING

Motor Data		
	Design	**Actual**
Motor MFG	-	QUEACE
Frame	-	NL
Horsepower	30.3W	15W
Motor Rpm	-	1550
Phase	1	1
Voltage (rated)	120	115
Amperage (rated)	-	0.40/0.22
Service Factor	-	1

Test Data		
	Design	**Actual**
CFM	75	85
Fan RPM	900	DD
Fan Rotation	-	CCW
Motor RPM	-	DD
System SetPt	-	LOW
RL Voltage	-	122V
RL Amperage	-	0.41A

Completed By: Jacob Davidson on 05/13/2024

Notes:
FAN HAS HIGH AMPERAGE DRAW

Written By: Jacob Davidson on 05/16/2024

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National TAB

Project: 05-13-24 FREDDY'S - Independence, MO

System/Unit: FAN - Exhaust

Asset: EF2 AREA:WOMENS RR

Unit Data		
	Design	**Actual**
MFG	CAPTIVEAIRE	COOK
Model Num	DU50HFA	GEMINI 140 SERIES SONEBUSTER
Serial Num	-	NL
Type	DD	DD
Configuration	CEILING	CEILING

Motor Data		
	Design	**Actual**
Motor MFG	-	QUEACE
Frame	-	NL
Horsepower	30.3W	15W
Motor Rpm	-	1550
Phase	1	1
Voltage (rated)	120	115
Amperage (rated)	-	0.4/0.22
Service Factor	-	1

Test Data		
	Design	**Actual**
CFM	75	75
Fan RPM	900	1550
Fan Rotation	-	CCW
Motor RPM	-	1550
System SetPt	-	HIGH
RL Voltage	-	122V
RL Amperage	-	0.52A

Completed By: Jacob Davidson on 05/13/2024

Notes:
FAN HAS HIGH AMPERAGE DRAW.

Written By: Jacob Davidson on 05/13/2024

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National TAB

Project: 05-13-24 FREDDY'S - Independence, MO

System/Unit: FAN - Exhaust

Asset: KEF-1 AREA:HOODS-1&2

Unit Data		
	Design	**Actual**
MFG	CAPTIVEAIRE	CAPTIVE-AIRE
Model Num	DU50HFA	CASRE18DD
Serial Num	-	5873095
Type	DD	DD
Configuration	UPBLAST	UTILITY

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	-	1273
Fan Rotation	-	CCW
Motor RPM	-	1273
System SetPt	-	43.9HZ
RL Voltage	-	169V VFD
RL Amperage	-	4.0A VFD
Total ESP	1.400"	UTO
Fan Inlet SP	-	UTO
Fan Discharge SP	-	UTO

Completed By: Jacob Davidson on 05/13/2024

Notes:
CANNOT GET PRESSURES ON A UTILITY FAN

Written By: Jacob Davidson on 05/13/2024

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National TAB

Project: 05-13-24 FREDDY'S - Independence, MO

System/Unit: FAN - Exhaust

Asset: KEF-2 AREA:HOOD-3

Unit Data		
	Design	**Actual**
MFG	CAPTIVEAIRE	CAPTIVE-AIRE
Model Num	DU50HFA	DU50HFA
Serial Num	-	5873095
Type	CENTRIFUGAL	CENTRUFUGAL
Configuration	UPBLAST	UPBLAST

Motor Data		
	Design	**Actual**
Motor MFG	-	NA
Frame	-	NA
Horsepower	0.500	0.50
Motor Rpm	-	NA
Phase	1	1
Voltage (rated)	208	115
Amperage (rated)	-	6.3
Service Factor	-	1

Test Data		
	Design	**Actual**
CFM	775	850
Fan RPM	-	DD ECM
Fan Rotation	-	CCW
Motor RPM	-	DD ECM
System SetPt	-	70%
RL Voltage	-	122V
RL Amperage	-	2.76A
Total ESP	1.250"	0.53"
Fan Inlet SP	-	-0.53"
Fan Discharge SP	-	ATM

Completed By: Jacob Davidson on 05/16/2024

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National TAB

Project: 05-13-24 FREDDY'S - Independence, MO

System/Unit: Kitchen Hood Type I

Asset: HD-1 AREA:KEF-1

Unit Data		
	Design	**Actual**
MFG	CAPTIVE-AIRE	CAPTIVE-AIRE
Model Num	5424 ND-2	5424 ND-2
Job / Serial Num	-	5873095
Type	TYPE I CANOPY	TYPE I CANOPY
Hood length	96"	96"
Hood Width	54"	54"

Test Data Exhaust		
	Design	**Actual**
Filter Type	CAPTRATE SOLO	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	-	188
Filter2 FPM	-	203
Filter3 FPM	-	198
Filter4 FPM	-	206
Filter5 FPM	-	189
Filter Ave FPM(corr)	-	196
CFM	1600	1588

Cooking Equipment		
	Design	**Actual**
Item 1	-	GRIDDLE

Completed By: Jacob Davidson on 05/13/2024

Notes:
TAGGED AS H-1A ON M3.12

Written By: Jacob Davidson on 05/13/2024

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National TAB

Project: 05-13-24 FREDDY'S - Independence, MO

System/Unit: Kitchen Hood Type I

Asset: HD-2 AREA:KEF-1

Unit Data		
	Design	**Actual**
MFG	CAPTIVE-AIRE	CAPTIVE-AIRE
Model Num	5424 ND-2	5424 ND-2
Job / Serial Num	-	5873095
Type	TYPE I CANOPY	TYPE I CANOPY
Hood length	60"	60"
Hood Width	54"	54"

Test Data Exhaust		
	Design	**Actual**
Filter Type	CAPTRATE SOLO	CAPTRATE SOLO
Filter Size 1	16x16	16x16
Filter Qty 1	3	3
Filter AK factor size 1	1.62	1.62
Filter Total AK Area	4.86	4.86
Filter1 FPM	-	166
Filter2 FPM	-	177
Filter3 FPM	-	184
Filter Ave FPM(corr)	-	175
CFM	775	850

Cooking Equipment		
	Design	**Actual**
Item 1	-	FRYERS

Completed By: Jacob Davidson on 05/16/2024

Notes:
TAGGED AS H-1B ON M3.12

Written By: on

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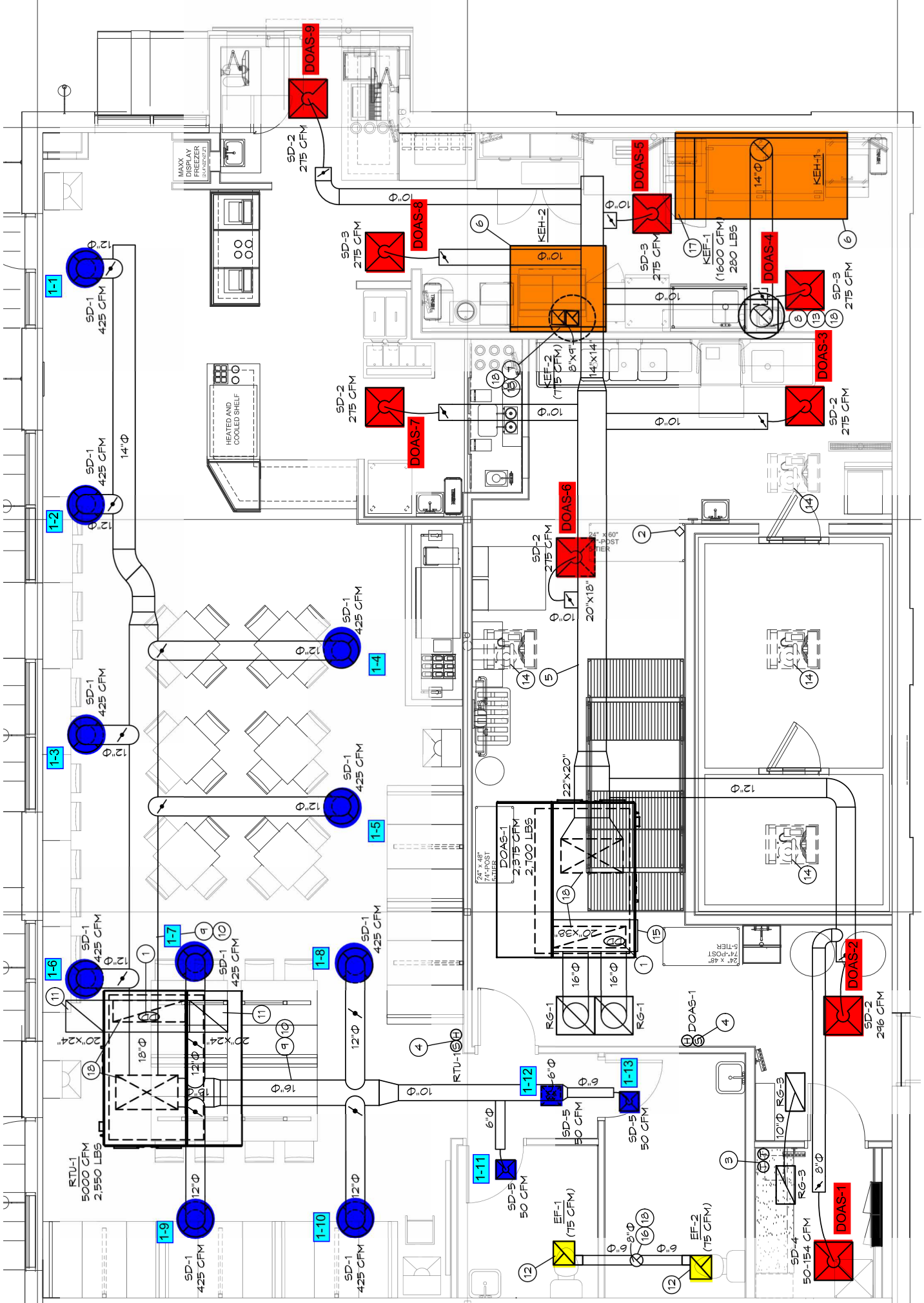

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