Report By:

National TAB
1329 E Kemper Rd, Ste 4210
Cincinnati, OH 45246

Report: **Test and Balance**
Date: **4/18/2022**

PROJECT

FREDDY'S - WICHITA, KS (AMIDON AVE)

2021 N AMIDON AVE ST. 100
WICHITA , KS

Client

Freddy's Frozen Custard & Steakburgers (CORPORATE)
260 N Rock Rd
Suite 200
Wichita, KS 67206

National TAB

Project: FREDDY'S - WICHITA, KS (AMIDON AVE)

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REMARKS

Assigned Organization: National TAB

Status: Not Submitted

Asset:

PRIORITY (HIGH/LOW/INFO ONLY)	
HIGH	When putting unit into heat, blowers shut down. Informed M.C. of issue. Unit was Balanced in test mode.
HIGH	DOAS Office HMI screen has communication fault. Also a CAT5 cable is missing for the space sensor. Captive Are ordered a replacement HMI.
HIGH	Humidity sensor wiring for RTU-1 is incorrect. Consult the manufacturer for proper wiring guidelines.
HIGH	RTU-1 when calling for heat causes the blower to turn off. Eric has already called M.C. to resolve the issue. The unit was balanced in test mode.
LOW	All KEF on Roof are missing grease cups.
LOW	KEF2 for HD2 Fryers Hinge Kit not installed properly.
LOW	Dish Hood Duct is missing Backdraft Damper.
LOW	OBD's missing for restroom diffusers on RTU-1. Airflow is high to both restrooms as a result. Recommend installing so that airflow can be reduced to design.
LOW	Diffuser 4 on the DOAS has a missing wingnut on the damper. The damper will just need to be tightened in fully open position.
INFO ONLY	Diffuser 1-8 on the DOAS was not installed. Balanced total flow to design and balanced remaining diffusers for hood performance and comfort.

Notes/Comments:

Project Summary

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 Roof Top Units (RTU), All Exhaust Fans (EF), All Kitchen Hoods, and all associated air devices.

RTU's/DOAS
Each of the RTU's 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 RTU 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.

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 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	DINING	4800	4764	3800	3725	1000	1039	20.8%	21.8%						
DOAS1	KITCHEN	2650	2746	0	0	2650	2746	100.0%	100.0%						
KEF-1	HD1 RANGE											1600	1652		
KEF-2	HD2 FRYERS											775	807		
KEF-3	HD3 DISH											525	526		
EF-1	WOMENS RR													75	78
EF-2	MENS RR													150	105
TOTALS		7450	7510	3800	3725	3650	3785			0	0	2900	2985	225	183

NET BUILDING AIRFLOW CALCULATION

TOTALS	DESIGN	ACTUAL
TOTAL OA	3650	3785
TOTAL EXHAUST	3125	3168
NET AIRFLOW	525	617

DOOR TESTED	BUILDING PRESSURE MEASUREMENTS (IN. H20)
FRONT	
SIDE	
REAR	
AVERAGE	**#DIV/0!**

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:

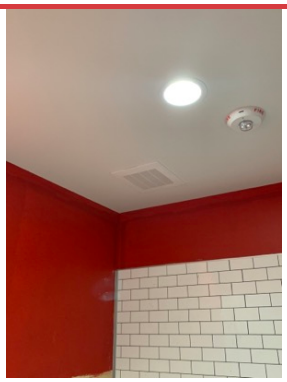
FRONT WINDOWS NOT INSTALLED AND DOORS ARE NOT FULLY SEALED. WINDOWS MOSTLY SEALED BY PLYWOOD. ESTIMATED POSITIVE BUILDING PRESSURE WITH LIGHTER TEST AND NET AIRFLOW

STORE FRONT

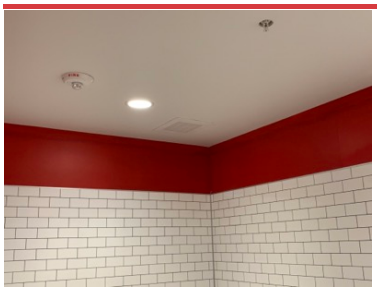
HD1

HD2

HD3



EF1 WOMENS RR



EF2 MENS RR

ROOFTOP

DOAS1

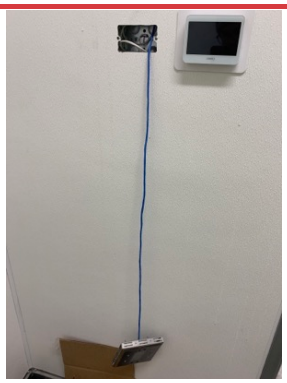
RTU1

KEF1

KEF2

KEF3

RTU1 THERMOSTAT



DOAS OFFICE HMI

Communication fault on HMI in the office. Also, missing a CAT 5 cable for the space sensor. Captive ordered replacement HMI.

UNINSTALLED HINGE KIT AND GREASE TRAP KEF2

UNINSTALLED GREASE TRAP KEF1

NO BACKDRAFT DAMPER INSTALLED KEF3

TECH - STEP 1: INITIAL WALKTHROUGH

Assigned Organization: National TAB

Status: Not Submitted

Asset:

INITIAL SITE WALKTHROUGH	
Review Plan Review Checklist, has it been signed off and meets our standards to start balancing? If not contact processor to ensure job is ready.	YES
All diffusers and grilles are installed and match design?	NO DIFFUSER 1-8 MISSING FROM DUCTWORK. MC NOTIFIED.
All hood filters installed and accounted for?	YES
Hoods are wired and have power?	YES
Hood is free of alarms?	YES
Thermostats have power?	YES RTU1; DOAS NOT OPERATIONAL AT THIS TIME. REPLACEMENT IS ORDERED
Have trades/general contractor been notified about any issues and are they created on FaciliBuild?	YES

Notes/Comments:

TECH - STEP 3: TEST, ADJUST AND BALANCE

Assigned Organization: National TAB

Status: Not Submitted

Asset:

TEST, ADJUST, AND BALANCE ALL EQUIPMENT:	
DURING TESTING MAKE NOTE OF THE FOLLOWING:	
Is space free of drafting?	YES
Is space comfortable in all areas?	YES
Is the space free of ventilation noise?	YES
If there is a DOAS and the speed was adjusted from where it was initially found, was the clogged filter switch recalibrated (instructions available)? If not applicable put "NA"	NA
If deviations from design were necessary to resolve 1-3 what were they? Otherwise put "NA".	NA

Notes/Comments:

TECH - STEP 4: FINAL TESTS

Assigned Organization: National TAB

Status: Not Submitted

Asset:

FINAL TESTS	
HOOD CAPTURE TEST	
List equipment turned on for testing	GRIDDLE, FRYER
List smoke candle type used	45 SECOND SMOKE EMITTER
Smoke test capture - Perimeter of hood	100%
Smoke test capture - Top of cooking surface	100%
WITNESS	
Date test was completed	3/18/2022
TAB tech name / Firm	JACOB DAVIDSON / NATIONAL TAB
Site super name / Firm	ERIC GARVER / CDO GROUP
Owner representative name / Firm (if Applicable)	NA
Video taken of the smoke test?	YES
Building pressure at front & back doors (All Systems On)	UNABLE TO GET BUILDING PRESSURE BECAUSE BUILDING NOT SEALED. POSITIVE PRESSURE WAS CONFIRMED VIA LIGHTER TEST AND POSITIVE AIRFLOW
ADDITIONAL	
Do actual net building airflow, design net building airflow, and pressure coincide? If not why? (All three should either be positive or negative)	YES
Is the kitchen negative to the dining (use balance schedule sheet for calculation)?	YES
Thermostats are programmed?	RTU1 IS PROGRAMMED. DOAS IS NOT PROGRAMMABLE AT THIS TIME
Prodigy parameter 131 is set to the same as the minimum damper position for all RTU's?	YES

Notes/Comments:

System/Unit: AHU/RTU

Asset: DOAS1 AREA: KITCHEN

Unit Data		
	Design	**Actual**
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	CASRTU3-I.300-18-20T-DOAS	CASRTU3-I.400-15-15T-DOAS
Serial Num	-	4955887
Type	DOAS	DOAS
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	BIRD SCREEN
OA Filter Size 1	-	45.75X36
Num Final Filter 1	-	4 METAL MESH
Final Filter Size 1	-	23X14
Num Final Filter 2	-	8
Final Filter Size 2	-	20X25X2

Motor Data		
	Design	**Actual**
Motor MFG	-	NEMA PREMIUM
Frame	-	145T
Horsepower	2	2
Motor Rpm	-	1740
Phase	3	3
Rated Voltage	208	240/460
Rated Amperage	-	5.48/2.74

Drive Data		
	Design	**Actual**
Motor Sheave Size	-	DD
Motor Bore Size	-	DD
Motor Sheave SetPt	-	DD
Fan Sheave Size	-	DD
Fan Sheave Bore	-	DD
Belt CL Distance	-	DD
Num of Belts	-	DD
Belt Size	-	DD
Belt Alignment	-	DD

Test Data		
	Design	**Actual**
SF CFM	2650	2746
SF RPM	-	61.9HZ
RA CFM	0	0
OA CFM	2650	2746
RL Voltage	-	148 VFD
RL Amperage	-	4.5 VFD
SF Rotation	-	CCW
RA Damper Position	-	0%
Min OA Damper Position	-	100%
Min OA Damper Type	-	ECONOMIZER

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.50"
Fan Suction SP	-	-0.06"
Fan Discharge SP	-	0.42"
Total ESP	0.5"	0.56"
Fan Total SP	-	0.48"

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

Completed By: Jacob Davidson on 03/18/2022

Notes: [1] DIFFUSER D1-8 NOT INSTALLED. UNIT BALANCED TO TOTAL FLOW AND TO ENSURE HOOD CAPTURE.

Diffuser Supply (GRD)

DOAS1 / KITCHEN

Asset	Area Served	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
SGRD1	SERVICE	SD3	10"	320	1	438	396	394	123.1
SGRD2	CUSTARD	SD3	10"	320	1	263	230	414	129.4
SGRD3	COOKLINE	SD3	10"	320	1	452	416	421	131.6
SGRD4	DISHWASHING	SD3	10"	320	1	112	391	391	122.2
SGRD5	COOKLINE	SD3	10"	320	1	440	390	389	121.6
SGRD6	STORAGE	SD3	10"	320	1	406	351	331	103.4
SGRD7	OFFICE	SD7		100	1	289	262	99	99.0
SGRD8	COOKLINE	SD3	10"	320	1	0	0	0	0.0
SGRD9	MECHANICAL	SD3	10"	310	1	331	303	306	98.7

Completed By: Jacob Davidson on 03/18/2022

Asset	Area Served	Notes
SGRD4	DISHWASHING	MISSING WINGNUT ON DAMPER HANDLE. M.C. WILL INSTALL WINGNUT AND SECURE AT 100% OPEN
SGRD8	COOKLINE	DIFFUSER NOT INSTALLED.

System/Unit: AHU/RTU

Asset: RTU1 AREA: DINING

Unit Data		
	Design	**Actual**
MFG	LENNOX	LENNOX
Model Num	LGH150	LGH150H4BM2Y
Serial Num	-	5621K08540
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	2 METAL MESH
OA Filter Size 1	-	14.25X23.75
Num Final Filter 1	-	4
Final Filter Size 1	-	20X25X2
Num Final Filter 2	-	
Final Filter Size 2	-	

Motor Data		
	Design	**Actual**
Motor MFG	-	NEMA PREMIUM
Frame	-	184TZ
Horsepower	5	5
Motor Rpm	-	1765
Phase	3	3
Rated Voltage	208	208-230
Rated Amperage	-	13.8-13

Drive Data		
	Design	**Actual**
Motor Sheave Size	-	4.75”
Motor Bore Size	-	1 1/8”
Motor Sheave SetPt	-	UTO
Fan Sheave Size	-	7.5”
Fan Sheave Bore	-	1”
Belt CL Distance	-	21.5”
Num of Belts	-	1
Belt Size	-	BX59
Belt Alignment	-	VERIFIED GOOD

Test Data		
	Design	**Actual**
SF CFM	4800	4764
SF RPM	-	NOT SAFE ICE
RA CFM	3800	3725
OA CFM	1000	1039
RL Voltage	-	211/212/211
RL Amperage	-	9.6/9.4/9.5
SF Rotation	-	CW
RA Damper Position	-	30%
Min OA Damper Position	-	30%
Min OA Damper Type	-	ECONOMIZER

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.56
Fan Suction SP	-	-1.09”
Fan Discharge SP	-	1.19
Total ESP	1.0"	1.75"
Fan Total SP	-	1.64"

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

Completed By: Jacob Davidson on 03/18/2022

Notes: [1] HUMIDITY SENSOR WIRING IS NOT CORRECT

System/Unit: AHU/RTU

Diffuser Supply (GRD)

RTU1 / DINING

Asset	Area Served	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
SGRD1	DINING	SD1	12"	525	1	1455	548	548	104.4
SGRD2	DINING	SD1	12"	525	1	488	493	493	93.9
SGRD3	DINING	SD1	12"	525	1	537	524	524	99.8
SGRD4	DINING	SD1	12"	505	1	556	514	514	101.8
SGRD5	DINING	SD1	12"	505	1	516	473	473	93.7
SGRD6	DINING	SD1	12"	505	1	478	455	455	90.1
SGRD7	DINING	SD1	12"	505	1	553	518	518	102.6
SGRD8	DINING	SD1	12"	505	1	531	481	481	95.2
SGRD9	DINING	SD1	12"	505	1	565	548	548	108.5
SGRD10	WOMENS RR	SD5	6"	50	1	120	116	116	232.0
SGRD11	MENS RR	SD5	6"	50	1	131	94	94	188.0

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Asset	Area Served	Notes
SGRD10	WOMENS RR	OBD DAMPER NOT INSTALLED. UNABLE TO ADJUST FLOW FURTHER
SGRD11	MENS RR	OBD DAMPER NOT INSTALLED. UNABLE TO ADJUST FLOW FURTHER

System/Unit: FAN - Exhaust

Asset: EF1 AREA: WOMENS RESTROOM

Unit Data		
	Design	**Actual**
MFG	COOK	LOREN COOK
Model Num	GC-146	GEMINI 140 SERIES SONEBUSTER
Serial Num	-	NL
Type	CEILING	CEILING
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	LOREN COOK
Frame	-	NL
Horsepower	30.3W	NA
Motor Rpm	-	NL
Phase	1	1
Voltage (rated)	120	115
Amperage (rated)	-	0.4
Service Factor	-	NL

Test Data		
	Design	**Actual**
CFM	75	78
Fan RPM	900	NA
Fan Rotation	-	NA
Motor RPM	-	NA
System SetPt	-	NA
RL Voltage	-	NA
RL Amperage	-	NA
Total ESP	0.25"	NA
Fan Inlet SP	-	NA
Fan Discharge SP	-	NA

Completed By: Jacob Davidson on 03/18/2022

Notes: [1] CEILING MOUNTED EXHAUST FAN INSTALLED IN HARD CEILING

System/Unit: FAN - Exhaust

Asset: EF2 AREA: MENS RR

Unit Data		
	Design	**Actual**
MFG	COOK	LOREN COOK
Model Num	GC-186	GEMINI 180 SERIES SONEBUSTER
Serial Num	-	NL
Type	CEILING	CEILING
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	LOREN COOK
Frame	-	NL
Horsepower	63.3W	NL
Motor Rpm	-	NL
Phase	1	1
Voltage (rated)	120	115
Amperage (rated)	-	1.0
Service Factor	-	NL

Test Data		
	Design	**Actual**
CFM	150	105 [1]
Fan RPM	820	NA
Fan Rotation	-	NA
Motor RPM	-	NA
System SetPt	-	NA
RL Voltage	-	NA
RL Amperage	-	NA
Total ESP	0.25"	NA
Fan Inlet SP	-	NA
Fan Discharge SP	-	NA

Completed By: Jacob Davidson on 03/18/2022

Notes: [1] CEILING MOUNTED EXHAUST FAN INSTALLED IN HARD CEILING. SPEED DIAL MAXED OUT

System/Unit: FAN - Exhaust

Asset: KEF1 AREA: HD1 RANGE

Unit Data		
	Design	**Actual**
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	CASRE18DD	CASRE18DD
Serial Num	-	4955887
Type	UTILITY	UTILITY
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	NEMA PREMIUM
Frame	-	145T
Horsepower	1	1
Motor Rpm	-	1150
Phase	3	3
Voltage (rated)	208	230/460
Amperage (rated)	-	3.44/1.72
Service Factor	-	1.15

Test Data		
	Design	**Actual**
CFM	1600	1652
Fan RPM	1105	1136
Fan Rotation	-	CCW
Motor RPM	-	1136
System SetPt	-	61.7 HZ
RL Voltage	-	178 VFD
RL Amperage	-	3.3 VFD
Total ESP	1.4"	[1]
Fan Inlet SP	-	[1]
Fan Discharge SP	-	[1]

Completed By: Jacob Davidson on 03/18/2022

Notes: [1] NOT ABLE TO TAKE PRESSURES ON UTILITY FAN

System/Unit: FAN - Exhaust

Asset: KEF2 AREA: HD2 FRYERS

Unit Data		
	Design	**Actual**
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	DU50HFA	DU50HFA
Serial Num	-	4955887
Type	UPBLAST	UPBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	TELCO GREEN
Frame	-	NL
Horsepower	0.5	0.5
Motor Rpm	-	1800
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	6.3
Service Factor	-	1

Test Data		
	Design	**Actual**
CFM	775	807
Fan RPM	1532	DD
Fan Rotation	-	CCW
Motor RPM	-	DD
System SetPt	-	63%
RL Voltage	-	122
RL Amperage	-	1
Total ESP	1.25"	[1]
Fan Inlet SP	-	[1]
Fan Discharge SP	-	[1]

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Notes: [1] HINGE KIT FOR KEF2 NOT INSTALLED. UNABLE TO SAFELY GET PRESSURES UNTIL KIT IS SECURED.

System/Unit: FAN - Exhaust

Asset: KEF3 AREA: HD3 DISH

Unit Data		
	Design	**Actual**
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	DU33HFA	DU33HFA
Serial Num	-	4955887
Type	UPBLAST	UPBLAST
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	TELCO GREEN
Frame	-	NL
Horsepower	0.333	0.333
Motor Rpm	-	1800
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	4.3
Service Factor	-	1

Test Data		
	Design	**Actual**
CFM	525	526
Fan RPM	1487	1122
Fan Rotation	-	DD
Motor RPM	-	1122
System SetPt	-	60%
RL Voltage	-	122
RL Amperage	-	1.5
Total ESP	0.8"	0.11"
Fan Inlet SP	-	0.11"
Fan Discharge SP	-	ATM

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Notes: [1] NO BACKDRAFT DAMPER INSTALLED.

System/Unit: Kitchen Hood Type I

Asset: HD1 AREA: RANGE

Unit Data		
	Design	**Actual**
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	5424 ND-2	5424 ND-2
Job / Serial Num	-	4955887
Type	TYPE I LOW PROXIMITY	TYPE I LOW PROXIMITY
Hood length	96"	96"
Hood Width	54"	54"

Test Data Exhaust		
	Design	**Actual**
Filter Type	SOLO	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	-	193
Filter2 FPM	-	213
Filter3 FPM	-	214
Filter4 FPM	-	198
Filter5 FPM	-	202
Filter Ave FPM(corr)	-	204
CFM	1600	1652

Cooking Equipment		
	Design	**Actual**
Item 1	-	GRIDDLE
Item 2	-	

Performance Data		
	Design	**Actual**
Smoke Generation Type	-	45 SECOND SMOKE EMITTER
Hood Capture %	-	100%
End Panels Installed (Y/N)	-	Y

General		
	Design	**Actual**
Third Party Witness	-	ERIC GARVER
Third Party Company	-	CDO GROUP
Tech Witness	-	GREG ODAY

Completed By: Jacob Davidson on 03/18/2022

Notes:

System/Unit: Kitchen Hood Type I

Asset: HD2 AREA: FRYERS

Unit Data		
	Design	**Actual**
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	5424 ND-2	5424 ND-2
Job / Serial Num	-	4955887
Type	TYPE I LOW PROXIMITY	TYPE I LOW PROXIMITY
Hood length	60"	60"
Hood Width	54"	54"

Test Data Exhaust		
	Design	**Actual**
Filter Type	SOLO	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	-	186
Filter2 FPM	-	183
Filter3 FPM	-	158
Filter4 FPM	-	
Filter5 FPM	-	
Filter Ave FPM(corr)	-	175
CFM	775	807

Cooking Equipment		
	Design	**Actual**
Item 1	-	FRYERS
Item 2	-	

Performance Data		
	Design	**Actual**
Smoke Generation Type	-	45 SECOND SMOKE EMITTER
Hood Capture %	-	100%
End Panels Installed (Y/N)	-	Y

General		
	Design	**Actual**
Third Party Witness	-	ERIC GARVER
Third Party Company	-	CDO GROUP
Tech Witness	-	GREG ODAY

Completed By: Jacob Davidson on 03/18/2022

Notes:

System/Unit: Kitchen Hood Type II

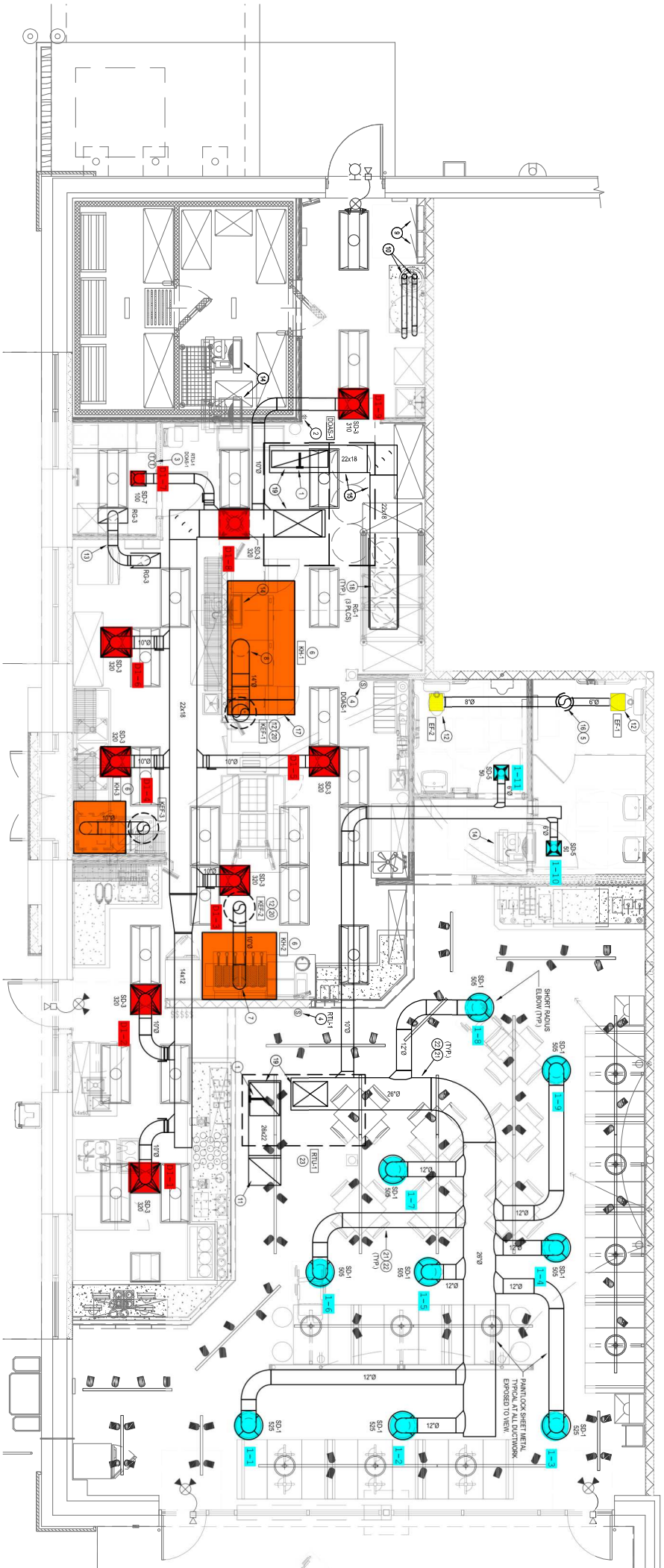
Asset: HD3 AREA: DISH

Unit Data		
	Design	**Actual**
MFG	CAPTIVEAIRE	CAPTIVEAIRE
Model Num	4224 VHB-G	4224 VHB
Serial Num	-	4955887
Type	TYPE II CANOPY	TYPE II CANOPY
Hood length	42"	42"
Hood Width	42"	42"

Test Data		
	Design	**Actual**
Exhaust CFM	525	526

Completed By: Jacob Davidson on 03/17/2022

Notes:


SHORT RADIUS ELBOW (TYP.)
PAINTLOCK SHEET METAL TYPICAL AT ALL DUCTWORK EXPOSED TO VIEW
(TYP.)