

Report By:

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



Report: Test and Balance

Date: 8/7/2015

PROJECT

KROGER 034-917 GRANBURY, TX NEW STORE

East Corner Hwy 377 & Fm 4
Granbury, TX 76049

Client

Kroger Division 034
1331 E. Airport Frwy
Irving, TX 75062

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Project: KROGER 034-917 GRANBURY, TX NEW STORE

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Project Summary

All units balanced to within +/-10% of the design airflow unless otherwise noted. There were numerous punchlist items that are described below. See picture page for additional clarification.

PUNCHLIST

- [1] Diffuser 8 is not installed for the pharmacy RTU. The flex duct is hanging loose in the ceiling. The mechanical was notified and stated that they had one ordered.
- [2] RTU 19 (mezz office) has some vibration coming from the unit. This noise is loud in the mezz offices. Mechanical notified and stated that this was a factory issue.
- [3] RTU 6 & RTU 20 penetration inside unit needs to be sealed.
- [4] Install new filters on all units. All filters were dirty and removed during testing
- [5] Hood 2 is missing a filter. GC was notified of issue. One of the filters from hood 1 was removed and placed in this hood to perform the TAB and then put back into hood 1.
- [6] EFR3 register #3 ductwork is capped off and could not be balanced. (future add-on)
- [7] MEZZ breakroom RTU diffuser 3 has no damper handle installed. Diffuser taped open with duct tape.
- [8] Condensate drains missing for some RTU's. Need to be installed.
- [9] RTU 15 is operating at 88% of design with the VFD set at 60 HZ. Diffusers were proportionally balanced for the low airflow. The ductwork appears to be run per design and no installation issues were observed.
- [10] RTU-20 is operating at 86% of the design airflow with the VFD set to maximum speed (60 HZ). Diffuser 11 has an excess amount of flex resulting in an airflow restriction to this register. No additional installation issues were noted that would result in low airflow.
- [11] EF R4 register #2 is slightly low on airflow at 87% of design. The ductwork is installed differently that what was designed (see pictures sheet) and appears to be the source of the low airflow. Closed the damper on register #1 as much as possible without causing significant noise. A line damper is recommended if airflow within 10% at register #2 is desired.

Site Revisit Scope and Notes 8/3/15

1. Finish diffuser balance of Pharmacy RTU
RTU-15 was measured out and found to be running at 88% of design at max VFD setting with the filters removed due to excess buildup of dirt. No source of significant leakage was observed. It is not anticipated that this low airflow will cause any significant comfort issues. Unit was porportionally balanced with diffusers 8 and 11 low but fully open.
2. Balance EF-R3 (Restrooms)
EF-R3 has not been completed yet becasue the little clinic has not been constructed. The airflow to the installed registers was balanced high to account for additional exhaust required once the new restroom is complete.
3. Verify airflow for diffuser 20-3 now that damper properly installed
Diffuser is installed and is operating at 265/270 CFM.
4. Rebalance EF-R4 with line damper installed.
EF-R4 was balanced to design

Also verified

5. RTU-19 is no longer vibrating
RTU-19 is still vibrating really bad.
6. Filter installed for Hood 2
Filter has been installed to Hood 2
7. Condensate drains all installed
Condensate drains have been installed on all unit except RTU-13 and RTU-21

REMAINING PUNCHLIST ITEMS 8-3-15

1. Install condensate drains for RTU-13 and RTU-21
2. RTU-19 is vibrating significantly on roof.



DIRTY DX COILS PHARMACY RTU



RTU 21 (TYPICAL 8-TON)



EF-CC



RTU 1



RTU 17



EF SEAFOOD GRILLER



EF S



EF SEAFOOD HOOD (STEAM)



EF G1 AND EF G2



DELI RTU (TYPICAL 15-TON)



MAU



EF 8-FT DELI HOOD



EF H-1



EF 6-FT HOOD



TYPICAL CAPTIVE AIRE DR12HFA FAN



RTU 5 (TYPICAL 5-TON)



RTU 20 (TYPICAL 10-TON)



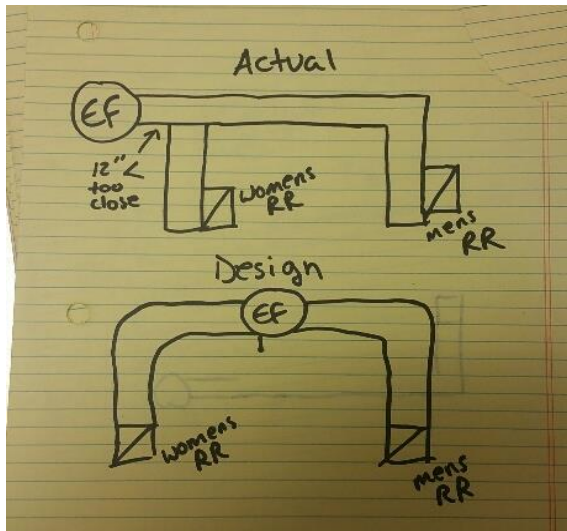
CAPPED OFF EXHAUST DUCTWORK IN THE LITTLE CLINIC AREA



FLEX HANGING IN PHARMACY AREA WHERE VAV DIFFUSER GOES (CONSULTING)



EXCESS AMOUNT OF FLEX IN PHARMACY AREA (REGISTER IN FRONT OF RESTROOMS)

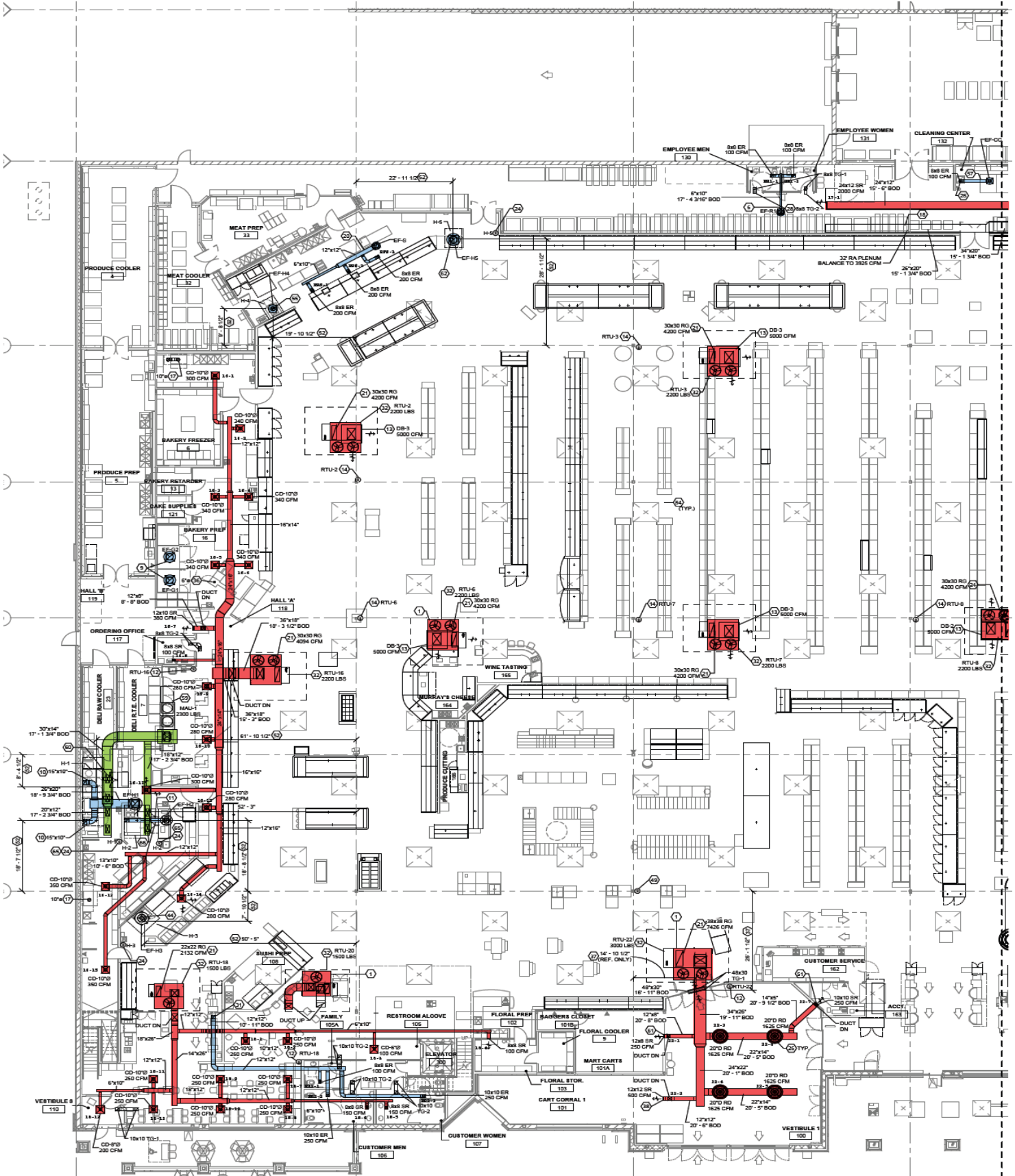


SKETCH OF MEZZANINE RESTROOM EXHAUST FAN DUCTWORK (ACTUAL VS DESIGN)

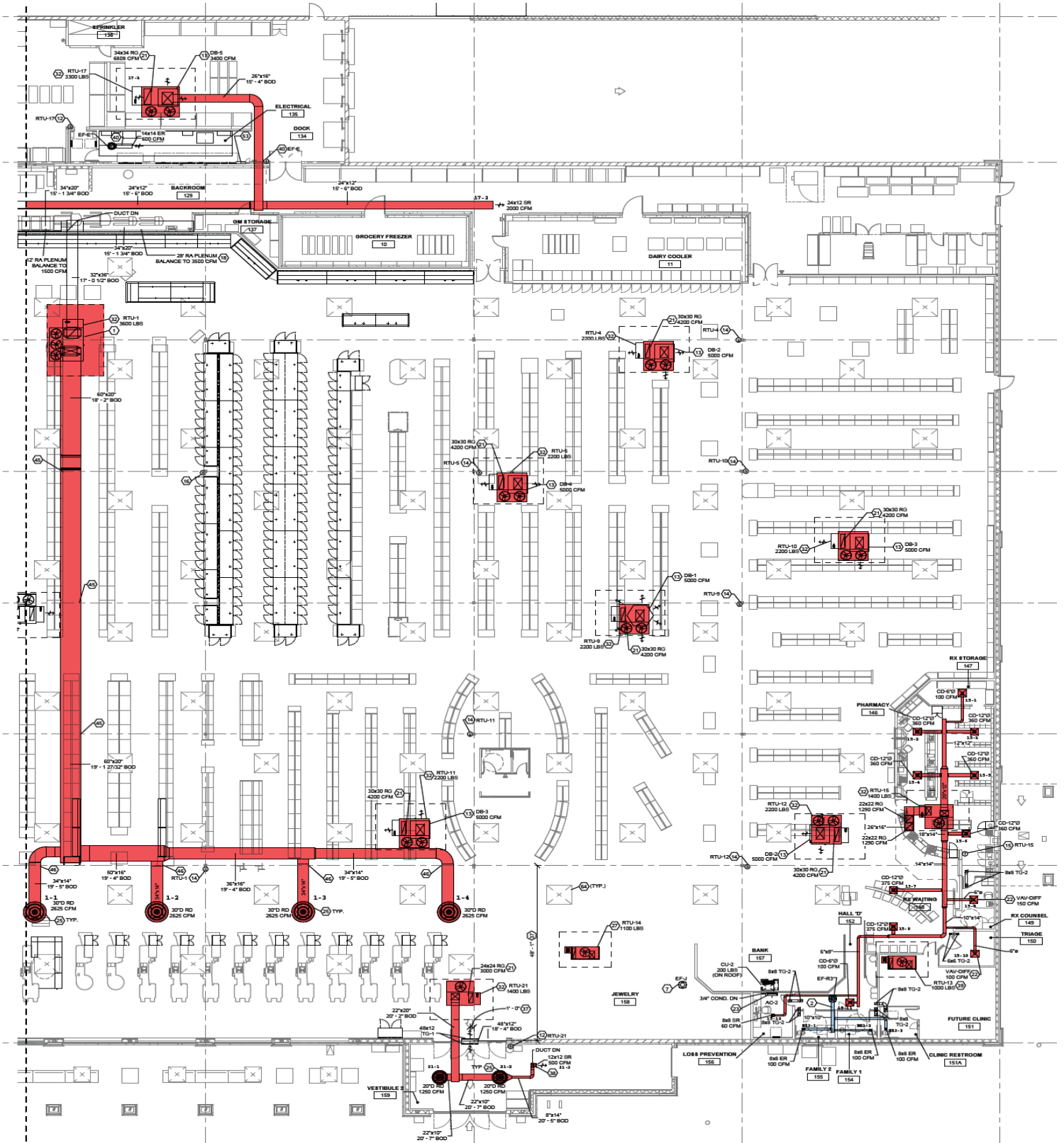


MEZZANINE BREAK RTU DIFFUSER 3 IS MISSING A DAMPER HANDLE. THIS IMAGE IS SHOWING THE DUCT TAPE THAT WAS PLACED ON DAMPER TO KEEP IT IN POSITION.

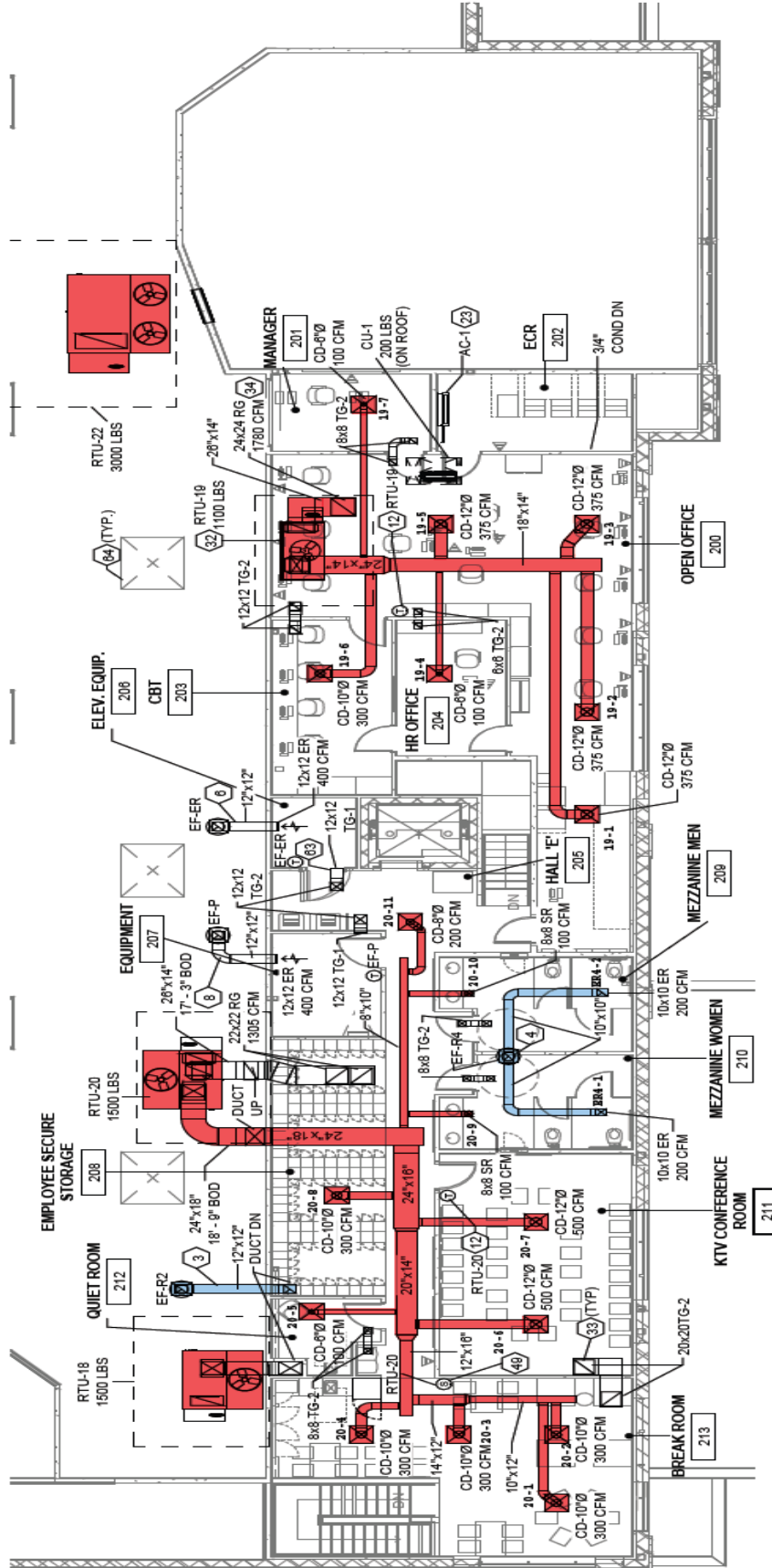
HVAC Floor Plan - East



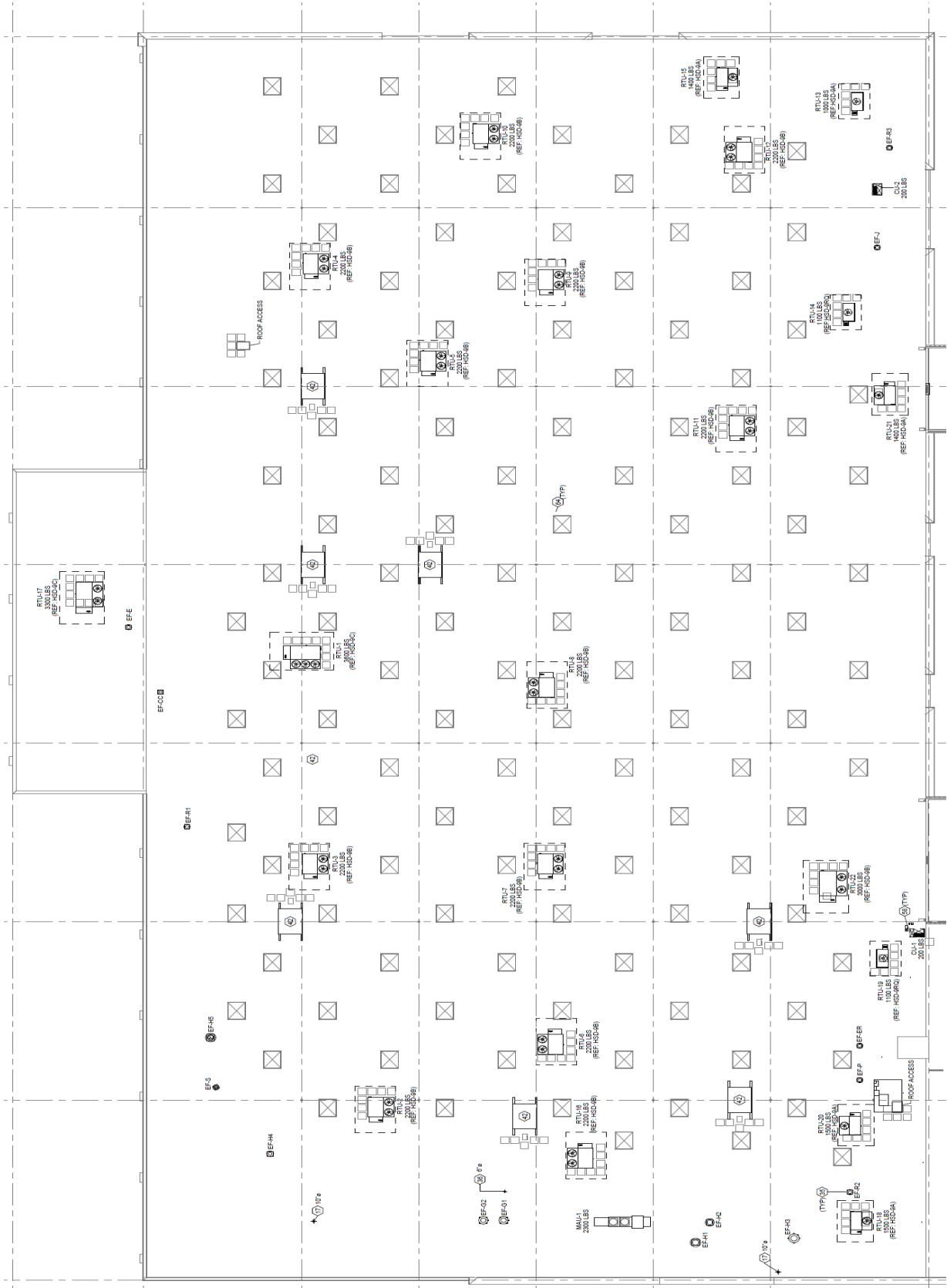
HVAC Floor Plan - West



Mezzanine



Roof plan





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Project: KROGER 034-917 GRANBURY, TX NEW STORE



BUILDING PRESSURE AND SMOKE CONTAINMENT TEST

Assigned Organization: National TAB

Status: Submitted

Asset:

HOOD CAPTURE TEST	
LIST EQUIPMENT TURNED ON FOR TESTING	NO EQUIPMENT ABLE TO BE TURNED ON
LIST SMOKE CANDLE TYPE USED	45 SECOND SMOKE CANDLE
SMOKE TEST CAPTURE - PERIMETER OF HOOD	100%
SMOKE TEST CAPTURE - TOP OF COOKING SURFACE	100%
WITNESS	
DATE TEST WAS COMPLETED	3/26/2015
TAB TECH NAME / FIRM	KYLE MAUZEY / NATIONAL TAB
SITE SUPR NAME / FIRM	NA
OWNER REPRESENTATIVE NAME / FIRM (IF APPLICABLE)	NA
CODE OFFICIAL NAME / FIRM (IF APPLICABLE)	NA
BUILDING PRESSUR AT FRONT & BACK DOORS (ALL SYSTEMS ON)	NEUTRAL, NO OBSERVABLE AIR RUSHING IN OR OUT OF THE SPACE

Notes/Comments:



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Project: KROGER 034-917 GRANBURY, TX NEW STORE



EXHAUST FAN SITE EVAL

Assigned Organization: National TAB

Status: Submitted

Asset:

EXHAUST FAN	
- Verify units marked for easy identification	Yes
- Unit sealed and properly seated to roof curb	Yes
- No unusual vibration or noise	Yes
- Belts properly tensioned and free of damage	Yes
- Pulleys properly aligned	Yes
- Blower wheel moves freely by hand	Yes
- Unit is providing required airflow	Yes
- Verify on/off disconnect works	Yes
- Verify voltage input is correct	Yes
- Fan rotation is correct (compare to arrow	Yes

Notes/Comments:



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Project: KROGER 034-917 GRANBURY, TX NEW STORE



HVAC SITE EVAL

Assigned Organization: National TAB

Status: Submitted

Asset:

HVAC DUCTWORK CHECKLIST	
- Ductwork and diffusers are installed per design	No
- Balance dampers installed and functional	Yes
- Balance dampers are accessible	Yes
- Ductwork is properly covered with insulation, & Insulation is secured	Yes
- Tops of diffusers are properly insulated	Yes
- Installed diffusers match design	Yes

Notes/Comments:

EXHAUST FAN MEZZ RESTROOM DUCTWORK DOES NOT MATCH DESIGN



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Project: KROGER 034-917 GRANBURY, TX NEW STORE



RTU SITE EVAL

Assigned Organization: National TAB

Status: Submitted

Asset:

RTU CHECKLIST	
- Units are labeled and installed at proper locations	Yes
- Units size matches its design (nameplate)	Yes
- Clean filters are installed at DX coil	No
- Belts are tight and in good working order	Yes
- Pulleys are properly aligned	Yes
- Motors rotating correctly	Yes
- Motors are operating under full load amps	Yes
- Units sealed and properly seated to roof curb	Yes
- Evaporator coils clean and free of debris	Yes
- Gas piping installed	Yes
- Gas valves turned in the on position	Yes
- Condensate lines and P-traps installed correctly	No
- Disconnect switch installed	Yes
- No noticeable vibration or noise exist correct?	No
- Economizer filters installed	Yes
- Outside air dampers installed and functioning	Yes
- Outside air damper positions are clearly marked	Yes
- Is unit bringing in sufficient amount of outside air	Yes
- Unit is providing required supply airflow	No
- Condensor coil clean and free of damage	Yes
- Verify voltage input correct	Yes
- Compressors operating in correct rotation	Yes
- Heating mode tested satisfactorily	Yes
- Cooling mode tested satisfactorily	Yes



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Notes/Comments:

[1] PHARMACY RTU'S INTERIOR IS VERY DIRTY, FILTERS HAS LOTS OF DIRTY FALLING OFF OF THEM RESULTING IN THE INTERIOR OF THE RTU TO BE COVERED IN DIRT.

[2] NOT ALL P-TRAP/CONDESATE LINES ARE INSTALLED

[3] RTU MEZZ OFFICE HAS VIBRATION CAUSING NOISE

[4] MULTIPLE ISSUES WITH GETTING DESIGN AIRFLOW. SEE REPORT SUMMARY (RTU PHARM AND RTU MEZZ BREAK)



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Project: KROGER 034-917 GRANBURY, TX NEW STORE

System/Unit: AHU/RTU



Asset: AHU1

AREA: SALES

Unit Data		
	Design	Actual
MFG	AAON	AAON
Model Num	RN-030	RN-030
Serial Num	-	201410-BNGT39423
Inventory Tag ID	-	NOT FOUND
Type	RTU	RTU
Configuration	VERTICAL DISCHARGE	VERTICAL DISCHARGE
Num OA Filters 1	-	1
OA Filter Size 1	-	31X60
Num OA Filters 2	-	NA
OA Filter Size 2	-	NA
Num Final Filter 1	-	9
Final Filter Size 1	-	16X20X2
Num Final Filter 2	-	NA
Final Filter Size 2	-	NA

Test Data		
	Design	Actual
SF CFM	10500	11160
SF RPM	-	1530
RA CFM	8925	9571
OA CFM	1575	1589
RL Voltage	-	390
RL Amperage	-	15.36
SF Rotation	-	CW
VFD Max SetPt	-	51
SF Motor Freq(HZ)	-	51
RA Damper Position	-	4 1/4" OPEN
RA Damper Type	-	ACTUATED BLADE
OA Damper Position	-	1/2" OPEN
OA Damper Type	-	ACTUATED BLADE

Motor Data		
	Design	Actual
Motor MFG	-	BALDOR
Frame	-	254T
Horsepower	-	15
Motor Rpm	-	1765
Phase	3	3
Rated Voltage	480	230/460
Rated Amperage	-	35.4/17.7
Service Factor	-	1.15
Efficiency	-	93
Power Factor	-	86

Performance Data		
	Design	Actual
Fan Suction SP	-	-1.48"
Fan Discharge SP	-	0.894"
Total ESP	1.00"	1.994"
Fan Total SP	-	2.374"

Electrical		
	Design	Actual
VFD Phase Voltage (line)	-	496
VFD Min Setpt	-	41
VFD Max Setpt	-	51
Phase Brownout Dial Setpt (v)	-	10
Phase Brownout Volt Variance	-	10S
Freeze Stat Setpt	-	NA
Compressor Lockout Setpt	-	42

Completed By: Kyle Mauzey on 03/27/2015

Notes: [1] Filters removed for TAB.



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Project: KROGER 034-917 GRANBURY, TX NEW STORE

System/Unit: AHU/RTU



Diffuser Supply (GRD)

AHU1 / SALES

Asset	Area Served	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
AHU1-SGRD1	SALES	ROUND	50"	2625	2.5	3755	2886	2886	109.9
AHU1-SGRD2	SALES	ROUND	50"	2625	2.5	2465	2719	2719	103.6
AHU1-SGRD3	SALES	ROUND	50"	2625	2.5	2402	2743	2743	104.5
AHU1-SGRD4	SALES	ROUND	50"	2625	2.5	2675	2812	2812	107.1

Completed By: Taylor Long on

Asset	Area Served	Notes



National TAB

Project: KROGER 034-917 GRANBURY, TX NEW STORE

System/Unit: AHU/RTU



Asset: AHU2

AREA: SALES

Unit Data		
	Design	Actual
MFG	AAON	AAON
Model Num	RN-015	RN-015
Serial Num	-	201410-ANGL39395
Inventory Tag ID	-	NOT FOUND
Type	RTU	RTU
Configuration	VERTICAL DISCHARGE	VERTICAL DISCHARGE
Num OA Filters 1	-	1
OA Filter Size 1	-	50X25
Num OA Filters 2	-	NA
OA Filter Size 2	-	NA
Num Final Filter 1	-	4
Final Filter Size 1	-	20X25X2
Num Final Filter 2	-	NA
Final Filter Size 2	-	NA

Test Data		
	Design	Actual
SF CFM	5000	5051
SF RPM	-	1470
RA CFM	4200	4230
OA CFM	800	821
RL Voltage	-	313
RL Amperage	-	4.06
SF Rotation	-	CW
VFD Max SetPt	-	49
SF Motor Freq(HZ)	-	49
RA Damper Position	-	NO DAMPER
RA Damper Type	-	NO DAMPER
OA Damper Position	-	1/2" OPEN
OA Damper Type	-	ACTUATED BLADE

Motor Data		
	Design	Actual
Motor MFG	-	BALDOR
Frame	-	184T
Horsepower	-	5
Motor Rpm	-	1750
Phase	3	3
Rated Voltage	480	208-230/460
Rated Amperage	-	14-13.2/6.6
Service Factor	-	1.15
Efficiency	-	89.5
Power Factor	-	80

Performance Data		
	Design	Actual
Fan Suction SP	-	-0.391
Fan Discharge SP	-	0.111
Total ESP	0.50"	0.343"
Fan Total SP	-	0.502"

Electrical		
	Design	Actual
VFD Phase Voltage (line)	-	491
VFD Min Setpt	-	39
VFD Max Setpt	-	49
Phase Brownout Dial Setpt (v)	-	10
Phase Brownout Volt Variance	-	10S
Freeze Stat Setpt	-	NA
Compressor Lockout Setpt	-	42

Completed By: Kyle Mauzey on 03/27/2015

Notes: [1] Filters removed during TAB.



National TAB

Project: KROGER 034-917 GRANBURY, TX NEW STORE

System/Unit: AHU/RTU



Asset: AHU3

AREA: SALES

Unit Data		
	Design	Actual
MFG	AAON	AAON
Model Num	RN-015	RN-015
Serial Num	-	201410-ANGL39396
Inventory Tag ID	-	NOT FOUND
Type	RTU	RTU
Configuration	VERTICAL DISCHARGE	VERTICAL DISCHARGE
Num OA Filters 1	-	1
OA Filter Size 1	-	50X25
Num OA Filters 2	-	NA
OA Filter Size 2	-	NA
Num Final Filter 1	-	4
Final Filter Size 1	-	20X25X2
Num Final Filter 2	-	NA
Final Filter Size 2	-	NA

Test Data		
	Design	Actual
SF CFM	5000	4999
SF RPM	-	1530
RA CFM	4200	4180
OA CFM	800	819
RL Voltage	-	326
RL Amperage	-	4.11
SF Rotation	-	CW
VFD Max SetPt	-	51
SF Motor Freq(HZ)	-	51
RA Damper Position	-	NO DAMPER
RA Damper Type	-	NO DAMPER
OA Damper Position	-	3/8" OPEN
OA Damper Type	-	ACTUATED BLADE

Motor Data		
	Design	Actual
Motor MFG	-	BALDOR
Frame	-	184T
Horsepower	-	5
Motor Rpm	-	1750
Phase	3	3
Rated Voltage	480	208-230/460
Rated Amperage	-	14-13.2/6.6
Service Factor	-	1.15
Efficiency	-	89.5
Power Factor	-	80

Performance Data		
	Design	Actual
Fan Suction SP	-	-0.375"
Fan Discharge SP	-	0.106"
Total ESP	0.50"	0.336"
Fan Total SP	-	0.481"

Electrical		
	Design	Actual
VFD Phase Voltage (line)	-	494
VFD Min Setpt	-	41
VFD Max Setpt	-	51
Phase Brownout Dial Setpt (v)	-	10
Phase Brownout Volt Variance	-	10S
Freeze Stat Setpt	-	NA
Compressor Lockout Setpt	-	42

Completed By: Will Turnbough on 04/01/2015

Notes: [1] Filters dirty. Removed during TAB.



National TAB

Project: KROGER 034-917 GRANBURY, TX NEW STORE

System/Unit: AHU/RTU



Asset: AHU4

AREA: SALES

Unit Data		
	Design	Actual
MFG	AAON	AAON
Model Num	RN-015	RN-015
Serial Num	-	201410-ANGL39397
Inventory Tag ID	-	NOT FOUND
Type	RTU	RTU
Configuration	VERTICAL DISCHARGE	VERTICAL DISCHARGE
Num OA Filters 1	-	1
OA Filter Size 1	-	50X25
Num OA Filters 2	-	NA
OA Filter Size 2	-	NA
Num Final Filter 1	-	4
Final Filter Size 1	-	20X25X2
Num Final Filter 2	-	NA
Final Filter Size 2	-	NA

Test Data		
	Design	Actual
SF CFM	5000	5063
SF RPM	-	1650
RA CFM	4200	4240
OA CFM	800	823
RL Voltage	-	369
RL Amperage	-	4.55
SF Rotation	-	CW
VFD Max SetPt	-	55
SF Motor Freq(HZ)	-	55
RA Damper Position	-	NO DAMPER
RA Damper Type	-	NO DAMPER
OA Damper Position	-	1/2" OPEN
OA Damper Type	-	ACTUATED BLADE

Motor Data		
	Design	Actual
Motor MFG	-	BALDOR
Frame	-	184T
Horsepower	-	5
Motor Rpm	-	1750
Phase	3	3
Rated Voltage	480	208-230/460
Rated Amperage	-	14-13.2/6.6
Service Factor	-	1.15
Efficiency	-	89.5
Power Factor	-	80

Performance Data		
	Design	Actual
Fan Suction SP	-	-0.376
Fan Discharge SP	-	0.119
Total ESP	0.50"	0.371"
Fan Total SP	-	0.495"

Electrical		
	Design	Actual
VFD Phase Voltage (line)	-	495
VFD Min Setpt	-	44
VFD Max Setpt	-	55
Phase Brownout Dial Setpt (v)	-	10
Phase Brownout Volt Variance	-	10S
Freeze Stat Setpt	-	NA
Compressor Lockout Setpt	-	42

Completed By: Kyle Mauzey on 03/27/2015

Notes: [1] Filters dirty. Removed during TAB.



National TAB

Project: KROGER 034-917 GRANBURY, TX NEW STORE

System/Unit: AHU/RTU



Asset: AHU5

AREA: SALES

Unit Data		
	Design	Actual
MFG	AAON	AAON
Model Num	RN-015	RN-015
Serial Num	-	201410-ANGL39398
Inventory Tag ID	-	NOT FOUND
Type	RTU	RTU
Configuration	VERTICAL DISCHARGE	VERTICAL DISCHARGE
Num OA Filters 1	-	1
OA Filter Size 1	-	50X25
Num OA Filters 2	-	NA
OA Filter Size 2	-	NA
Num Final Filter 1	-	4
Final Filter Size 1	-	20X25X2
Num Final Filter 2	-	NA
Final Filter Size 2	-	NA

Test Data		
	Design	Actual
SF CFM	5000	5315
SF RPM	-	1650
RA CFM	4200	4484
OA CFM	800	831
RL Voltage	-	349
RL Amperage	-	4.53
SF Rotation	-	CW
VFD Max SetPt	-	55
SF Motor Freq(HZ)	-	55
RA Damper Position	-	NO DAMPER
RA Damper Type	-	NO DAMPER
OA Damper Position	-	1/2" OPEN
OA Damper Type	-	ACTUATED BLADE

Motor Data		
	Design	Actual
Motor MFG	-	BALDOR
Frame	-	184T
Horsepower	-	5
Motor Rpm	-	1750
Phase	3	3
Rated Voltage	480	208-230/460
Rated Amperage	-	14-13.2/6.6
Service Factor	-	1.15
Efficiency	-	89.5
Power Factor	-	80

Performance Data		
	Design	Actual
Fan Suction SP	-	-0.443"
Fan Discharge SP	-	0.0663"
Total ESP	0.50"	0.3693"
Fan Total SP	-	0.5093"

Electrical		
	Design	Actual
VFD Phase Voltage (line)	-	496
VFD Min Setpt	-	44
VFD Max Setpt	-	55
Phase Brownout Dial Setpt (v)	-	10
Phase Brownout Volt Variance	-	10S
Freeze Stat Setpt	-	NA
Compressor Lockout Setpt	-	42

Completed By: Kyle Mauzey on 03/27/2015

Notes: [1] Filters dirty. Removed during TAB.



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Project: KROGER 034-917 GRANBURY, TX NEW STORE

System/Unit: AHU/RTU



Asset: AHU6

AREA: SALES

Unit Data		
	Design	Actual
MFG	AAON	AAON
Model Num	RN-015	RN-015
Serial Num	-	201410-ANGL39405
Inventory Tag ID	-	NOT FOUND
Type	RTU	RTU
Configuration	VERTICAL DISCHARGE	VERTICAL DISCHARGE
Num OA Filters 1	-	1
OA Filter Size 1	-	50X25
Num OA Filters 2	-	NA
OA Filter Size 2	-	NA
Num Final Filter 1	-	4
Final Filter Size 1	-	20X25X2
Num Final Filter 2	-	NA
Final Filter Size 2	-	NA

Test Data		
	Design	Actual
SF CFM	5000	4894
SF RPM	-	1560
RA CFM	4200	4092
OA CFM	800	802
RL Voltage	-	335
RL Amperage	-	4.17
SF Rotation	-	CW
VFD Max SetPt	-	52
SF Motor Freq(HZ)	-	52
RA Damper Position	-	NO DAMPER
RA Damper Type	-	NO DAMPER
OA Damper Position	-	3/8" OPEN
OA Damper Type	-	ACTUATED BLADE

Motor Data		
	Design	Actual
Motor MFG	-	BALDOR
Frame	-	184T
Horsepower	-	5
Motor Rpm	-	1750
Phase	3	3
Rated Voltage	480	208-230/460
Rated Amperage	-	14-13.2/6.6
Service Factor	-	1.15
Efficiency	-	89.5
Power Factor	-	80

Performance Data		
	Design	Actual
Fan Suction SP	-	-0.217"
Fan Discharge SP	-	0.109"
Total ESP	0.50"	0.322"
Fan Total SP	-	0.326"

Electrical		
	Design	Actual
VFD Phase Voltage (line)	-	493
VFD Min Setpt	-	52
VFD Max Setpt	-	42
Phase Brownout Dial Setpt (v)	-	10
Phase Brownout Volt Variance	-	10S
Freeze Stat Setpt	-	NA
Compressor Lockout Setpt	-	42

Completed By: Will Turnbough on 04/01/2015

Notes: [1] Penetration inside unit needs to be sealed.
 [2] Filters dirty. Removed during TAB.



National TAB

Project: KROGER 034-917 GRANBURY, TX NEW STORE

System/Unit: AHU/RTU





National TAB

Project: KROGER 034-917 GRANBURY, TX NEW STORE

System/Unit: AHU/RTU



Asset: AHU7

AREA: SALES

Unit Data		
	Design	Actual
MFG	AAON	AAON
Model Num	RN-015	RN-015
Serial Num	-	201410-ANGL39399
Inventory Tag ID	-	NOT FOUND
Type	RTU	RTU
Configuration	VERTICAL DISCHARGE	VERTICAL DISCHARGE
Num OA Filters 1	-	1
OA Filter Size 1	-	50X25
Num OA Filters 2	-	NA
OA Filter Size 2	-	NA
Num Final Filter 1	-	4
Final Filter Size 1	-	20X25X2
Num Final Filter 2	-	NA
Final Filter Size 2	-	NA

Test Data		
	Design	Actual
SF CFM	5000	5051
SF RPM	-	1470
RA CFM	4200	4230
OA CFM	800	812
RL Voltage	-	313
RL Amperage	-	4.08
SF Rotation	-	CW
VFD Max SetPt	-	49
SF Motor Freq(HZ)	-	49
RA Damper Position	-	NO DAMPER
RA Damper Type	-	NO DAMPER
OA Damper Position	-	1/2" OPEN
OA Damper Type	-	ACTUATED BLADE

Motor Data		
	Design	Actual
Motor MFG	-	BALDOR
Frame	-	184T
Horsepower	-	5
Motor Rpm	-	1750
Phase	3	3
Rated Voltage	480	208-230/460
Rated Amperage	-	14-13.2/6.6
Service Factor	-	1.15
Efficiency	-	89.5
Power Factor	-	80

Performance Data		
	Design	Actual
Fan Suction SP	-	-0.397"
Fan Discharge SP	-	0.113"
Total ESP	0.50"	0.369"
Fan Total SP	-	0.51"

Electrical		
	Design	Actual
VFD Phase Voltage (line)	-	492
VFD Min Setpt	-	39
VFD Max Setpt	-	49
Phase Brownout Dial Setpt (v)	-	10
Phase Brownout Volt Variance	-	10S
Freeze Stat Setpt	-	NA
Compressor Lockout Setpt	-	42

Completed By: Kyle Mauzey on 03/27/2015

Notes: [1] Filters removed during TAB.



National TAB

Project: KROGER 034-917 GRANBURY, TX NEW STORE

System/Unit: AHU/RTU



Asset: AHU8

AREA: SALES

Unit Data		
	Design	Actual
MFG	AAON	AAON
Model Num	RN-015	RN-015
Serial Num	-	201410-ANGL39400
Inventory Tag ID	-	NOT FOUND
Type	RTU	RTU
Configuration	VERTICAL DISCHARGE	VERTICAL DISCHARGE
Num OA Filters 1	-	1
OA Filter Size 1	-	50X25
Num OA Filters 2	-	NA
OA Filter Size 2	-	NA
Num Final Filter 1	-	4
Final Filter Size 1	-	20X25X2
Num Final Filter 2	-	NA
Final Filter Size 2	-	NA

Test Data		
	Design	Actual
SF CFM	5000	5278
SF RPM	-	1650
RA CFM	4200	4454
OA CFM	800	824
RL Voltage	-	353
RL Amperage	-	4.67
SF Rotation	-	CW
VFD Max SetPt	-	55
SF Motor Freq(HZ)	-	55
RA Damper Position	-	NO DAMPER
RA Damper Type	-	NO DAMPER
OA Damper Position	-	1/2" OPEN
OA Damper Type	-	ACTUATED BLADE

Motor Data		
	Design	Actual
Motor MFG	-	BALDOR
Frame	-	184T
Horsepower	-	5
Motor Rpm	-	1750
Phase	3	3
Rated Voltage	480	208-230/460
Rated Amperage	-	14-13.2/6.6
Service Factor	-	1.15
Efficiency	-	89.5
Power Factor	-	80

Performance Data		
	Design	Actual
Fan Suction SP	-	-0.509"
Fan Discharge SP	-	0.103"
Total ESP	0.50"	0.399"
Fan Total SP	-	0.612"

Electrical		
	Design	Actual
VFD Phase Voltage (line)	-	496
VFD Min Setpt	-	44
VFD Max Setpt	-	55
Phase Brownout Dial Setpt (v)	-	10
Phase Brownout Volt Variance	-	10S
Freeze Stat Setpt	-	NA
Compressor Lockout Setpt	-	42

Completed By: Kyle Mauzey on 03/27/2015

Notes: [1] Filters removed during TAB.



National TAB

Project: KROGER 034-917 GRANBURY, TX NEW STORE

System/Unit: AHU/RTU



Asset: AHU9

AREA: SALES

Unit Data		
	Design	Actual
MFG	AAON	AAON
Model Num	RN-015	RN-015
Serial Num	-	201410-ANGL39401
Inventory Tag ID	-	NOT FOUND
Type	RTU	RTU
Configuration	VERTICAL DISCHARGE	VERTICAL DISCHARGE
Num OA Filters 1	-	1
OA Filter Size 1	-	50X25
Num OA Filters 2	-	NA
OA Filter Size 2	-	NA
Num Final Filter 1	-	4
Final Filter Size 1	-	20X25X2
Num Final Filter 2	-	NA
Final Filter Size 2	-	NA

Test Data		
	Design	Actual
SF CFM	5000	5028
SF RPM	-	1650
RA CFM	4200	4188
OA CFM	800	840
RL Voltage	-	368
RL Amperage	-	4.5
SF Rotation	-	CW
VFD Max SetPt	-	55
SF Motor Freq(HZ)	-	55
RA Damper Position	-	NO DAMPER
RA Damper Type	-	NO DAMPER
OA Damper Position	-	3/8" OPEN
OA Damper Type	-	ACTUATED BLADE

Motor Data		
	Design	Actual
Motor MFG	-	BALDOR
Frame	-	184T
Horsepower	-	5
Motor Rpm	-	1750
Phase	3	3
Rated Voltage	480	208-230/460
Rated Amperage	-	14-13.2/6.6
Service Factor	-	1.15
Efficiency	-	89.5
Power Factor	-	80

Performance Data		
	Design	Actual
Fan Suction SP	-	-0.425"
Fan Discharge SP	-	0.159"
Total ESP	0.50"	-0.268"
Fan Total SP	-	0.427"

Electrical		
	Design	Actual
VFD Phase Voltage (line)	-	491
VFD Min Setpt	-	44
VFD Max Setpt	-	55
Phase Brownout Dial Setpt (v)	-	10
Phase Brownout Volt Variance	-	10S
Freeze Stat Setpt	-	NA
Compressor Lockout Setpt	-	42

Completed By: Kyle Mauzey on 03/27/2015

Notes: [1] Filters removed during TAB.



National TAB

Project: KROGER 034-917 GRANBURY, TX NEW STORE

System/Unit: AHU/RTU



Asset: AHU10

AREA: SALES

Unit Data		
	Design	Actual
MFG	AAON	AAON
Model Num	RN-015	RN-015
Serial Num	-	201410-ANGL39402
Inventory Tag ID	-	NOT FOUND
Type	RTU	RTU
Configuration	VERTICAL DISCHARGE	VERTICAL DISCHARGE
Num OA Filters 1	-	1
OA Filter Size 1	-	50X25
Num OA Filters 2	-	NA
OA Filter Size 2	-	NA
Num Final Filter 1	-	4
Final Filter Size 1	-	20X25X2
Num Final Filter 2	-	NA
Final Filter Size 2	-	NA

Test Data		
	Design	Actual
SF CFM	5000	5124
SF RPM	-	1530
RA CFM	4200	4290
OA CFM	800	834
RL Voltage	-	324
RL Amperage	-	4.23
SF Rotation	-	CW
VFD Max SetPt	-	51
SF Motor Freq(HZ)	-	51
RA Damper Position	-	NO DAMPER
RA Damper Type	-	NO DAMPER
OA Damper Position	-	1/2" OPEN
OA Damper Type	-	ACTUATED BLADE

Motor Data		
	Design	Actual
Motor MFG	-	BALDOR
Frame	-	184T
Horsepower	-	5
Motor Rpm	-	1750
Phase	3	3
Rated Voltage	480	208-230/460
Rated Amperage	-	14-13.2/6.6
Service Factor	-	1.15
Efficiency	-	89.5
Power Factor	-	80

Performance Data		
	Design	Actual
Fan Suction SP	-	-0.365"
Fan Discharge SP	-	0.121"
Total ESP	0.50"	0.353"
Fan Total SP	-	0.486"

Electrical		
	Design	Actual
VFD Phase Voltage (line)	-	497
VFD Min Setpt	-	41
VFD Max Setpt	-	51
Phase Brownout Dial Setpt (v)	-	10
Phase Brownout Volt Variance	-	10S
Freeze Stat Setpt	-	NA
Compressor Lockout Setpt	-	42

Completed By: Will Turnbough on 04/01/2015

Notes: [1] Filters removed during TAB.



National TAB

Project: KROGER 034-917 GRANBURY, TX NEW STORE

System/Unit: AHU/RTU



Asset: AHU11

AREA: SALES

Unit Data		
	Design	Actual
MFG	AAON	AAON
Model Num	RN-015	RN-015
Serial Num	-	201410-ANGL39403
Inventory Tag ID	-	NOT FOUND
Type	RTU	RTU
Configuration	VERTICAL DISCHARGE	VERTICAL DISCHARGE
Num OA Filters 1	-	1
OA Filter Size 1	-	50X25
Num OA Filters 2	-	NA
OA Filter Size 2	-	NA
Num Final Filter 1	-	4
Final Filter Size 1	-	20X25X2
Num Final Filter 2	-	NA
Final Filter Size 2	-	NA

Test Data		
	Design	Actual
SF CFM	5000	4924
SF RPM	-	1470
RA CFM	4200	4093
OA CFM	800	831
RL Voltage	-	292
RL Amperage	-	3.91
SF Rotation	-	CW
VFD Max SetPt	-	49
SF Motor Freq(HZ)	-	49
RA Damper Position	-	NO DAMPER
RA Damper Type	-	NO DAMPER
OA Damper Position	-	1/2" OPEN
OA Damper Type	-	ACTUATED BLADE

Motor Data		
	Design	Actual
Motor MFG	-	BALDOR
Frame	-	184T
Horsepower	-	5
Motor Rpm	-	1750
Phase	3	3
Rated Voltage	480	208-230/460
Rated Amperage	-	14-13.2/6.6
Service Factor	-	1.15
Efficiency	-	89.5
Power Factor	-	80

Performance Data		
	Design	Actual
Fan Suction SP	-	-0.334"
Fan Discharge SP	-	0.114"
Total ESP	0.50"	0.326"
Fan Total SP	-	0.448"

Electrical		
	Design	Actual
VFD Phase Voltage (line)	-	495
VFD Min Setpt	-	39
VFD Max Setpt	-	49
Phase Brownout Dial Setpt (v)	-	10
Phase Brownout Volt Variance	-	10S
Freeze Stat Setpt	-	NA
Compressor Lockout Setpt	-	42

Completed By: Kyle Mauzey on 03/27/2015

Notes: [1] Filters removed during TAB.



National TAB

Project: KROGER 034-917 GRANBURY, TX NEW STORE

System/Unit: AHU/RTU



Asset: AHU12

AREA: SALES

Unit Data		
	Design	Actual
MFG	AAON	AAON
Model Num	RN-015	RN-015
Serial Num	-	201410-ANGL39404
Inventory Tag ID	-	NOT FOUND
Type	RTU	RTU
Configuration	VERTICAL DISCHARGE	VERTICAL DISCHARGE
Num OA Filters 1	-	1
OA Filter Size 1	-	50X25
Num OA Filters 2	-	NA
OA Filter Size 2	-	NA
Num Final Filter 1	-	4
Final Filter Size 1	-	20X25X2
Num Final Filter 2	-	NA
Final Filter Size 2	-	NA

Test Data		
	Design	Actual
SF CFM	5000	5158
SF RPM	-	1650
RA CFM	4200	4339
OA CFM	800	819
RL Voltage	-	366
RL Amperage	-	4.44
SF Rotation	-	CW
VFD Max SetPt	-	55
SF Motor Freq(HZ)	-	55
RA Damper Position	-	NO DAMPER
RA Damper Type	-	NO DAMPER
OA Damper Position	-	1/2" OPEN
OA Damper Type	-	ACTUATED BLADE

Performance Data		
	Design	Actual
Fan Suction SP	-	-0.432
Fan Discharge SP	-	0.113
Total ESP	0.50"	0.385"
Fan Total SP	-	0.545"

Motor Data		
	Design	Actual
Motor MFG	-	BALDOR
Frame	-	184T
Horsepower	-	5
Motor Rpm	-	1750
Phase	3	3
Rated Voltage	480	208-230/460
Rated Amperage	-	14-13.2/6.6
Service Factor	-	1.15
Efficiency	-	89.5
Power Factor	-	80

Electrical		
	Design	Actual
VFD Phase Voltage (line)	-	493
VFD Min Setpt	-	44
VFD Max Setpt	-	55
Phase Brownout Dial Setpt (v)	-	10
Phase Brownout Volt Variance	-	10S
Freeze Stat Setpt	-	NA
Compressor Lockout Setpt	-	42

Completed By: Kyle Mauzey on 03/27/2015

Notes: [1] Filters removed during TAB.



National TAB

Project: KROGER 034-917 GRANBURY, TX NEW STORE

System/Unit: AHU/RTU



Asset: AHU15

AREA: PHARMACY

Unit Data		
	Design	Actual
MFG	AAON	AAON
Model Num	RN-008	RN-008
Serial Num	-	201410- ANGH39410
Inventory Tag ID	-	NOT FOUND
Type	RTU	RTU
Configuration	VERTICAL DISCHARGE	VERTICAL DISCHARGE
Num OA Filters 1	-	1
OA Filter Size 1	-	40X20
Num OA Filters 2	-	NA
OA Filter Size 2	-	NA
Num Final Filter 1	-	4
Final Filter Size 1	-	16X20X2
Num Final Filter 2	-	NA
Final Filter Size 2	-	NA

Test Data		
	Design	Actual
SF CFM	3054	2642
SF RPM	-	1800
RA CFM	2634	2272
OA CFM	420	421
RL Voltage	-	400
RL Amperage	-	1.84
SF Rotation	-	CW
VFD Max SetPt	-	60
SF Motor Freq(HZ)	-	60
RA Damper Position	-	NO DAMPER
RA Damper Type	-	NO DAMPER
OA Damper Position	-	3/8" OPEN
OA Damper Type	-	ACTUATED BLADE

Motor Data		
	Design	Actual
Motor MFG	-	ENERGY SAVER
Frame	-	182T
Horsepower	-	3
Motor Rpm	-	1756
Phase	3	3
Rated Voltage	480	230/460
Rated Amperage	-	7.8/3.8
Service Factor	-	NL
Efficiency	-	89.5
Power Factor	-	79.5

Performance Data		
	Design	Actual
Fan Suction SP	-	-0.28"
Fan Discharge SP	-	0.31"
Total ESP	1.00"	0.48"
Fan Total SP	-	0.59"

Electrical		
	Design	Actual
VFD Phase Voltage (line)	-	496
VFD Min Setpt	-	48
VFD Max Setpt	-	60
Phase Brownout Dial Setpt (v)	-	10
Phase Brownout Volt Variance	-	10S
Freeze Stat Setpt	-	NA
Compressor Lockout Setpt	-	42

Completed By: Kyle Mauzey on 03/27/2015

Notes:



National TAB

Project: KROGER 034-917 GRANBURY, TX NEW STORE

System/Unit: AHU/RTU



- [1] All diffusers proportionally balanced for the low airflow. Unit operating at 88% of the design airflow.
- [2] Filters dirty, removed during TAB.

Diffuser Supply (GRD)

AHU15 / PHARMACY

Asset	Area Served	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
AHU15-SGRD1	PHARMACY	4-WAY	8"X8"	86	100	48	75	82	95.3
AHU15-SGRD2	PHARMACY	4-WAY	15"X15"	310	360	193	336	348	112.3
AHU15-SGRD3	PHARMACY	4-WAY	15"X15"	310	360	223	363	341	110.0
AHU15-SGRD4	PHARMACY	4-WAY	15"X15"	310	360	171	294	310	100.0
AHU15-SGRD5	PHARMACY	4-WAY	15"X15"	310	360	144	245	293	94.5
AHU15-SGRD6	PHARMACY	4-WAY	15"X15"	310	360	240	412	318	102.6
AHU15-SGRD7	PHARMACY	4-WAY	15"X15"	323	375	219	364	344	106.5
AHU15-SGRD8	PHARMACY	NOT INSTALLED	NOT INSTALLED	129	150	0	0	82	63.6
AHU15-SGRD9	PHARMACY	4-WAY	15"X15"	323	375	217	387	313	96.9
AHU15-SGRD10	PHARMACY	VAV	24"X24"	86	100	49	76	88	102.3
AHU15-SGRD11	PHARMACY	4-WAY	8"X8"	86	100	23	31	65	75.6
AHU15-SGRD12	PHARMACY	SG	8"X8"	53	60	58	124	58	109.4

Completed By: Travis Halter on 08/03/2015

Asset	Area Served	Notes
AHU15-SGRD1	PHARMACY	Damper is open 100%
AHU15-SGRD8	PHARMACY	[1] Damper is 100% open.
AHU15-SGRD11	PHARMACY	[1] Excess amount of flex restricting airflow. [2] Damper is 100% open.



National TAB

Project: KROGER 034-917 GRANBURY, TX NEW STORE

System/Unit: AHU/RTU



Asset: AHU16

AREA: DELI/BAKERY

Unit Data		
	Design	Actual
MFG	AAON	AAON
Model Num	RN-015	RN-015
Serial Num	-	201410-ANGL39406
Inventory Tag ID	-	NOT FOUND
Type	RTU	RTU
Configuration	VERTICAL DISCHARGE	VERTICAL DISCHARGE
Num OA Filters 1	-	1
OA Filter Size 1	-	50X25
Num OA Filters 2	-	NA
OA Filter Size 2	-	NA
Num Final Filter 1	-	4
Final Filter Size 1	-	20X25X2
Num Final Filter 2	-	NA
Final Filter Size 2	-	NA

Test Data		
	Design	Actual
SF CFM	4600	4731
SF RPM	-	1560
RA CFM	4094	4199
OA CFM	506	532
RL Voltage	-	336
RL Amperage	-	4.17
SF Rotation	-	CW
VFD Max SetPt	-	52
SF Motor Freq(HZ)	-	52
RA Damper Position	-	NO DAMPER
RA Damper Type	-	NO DAMPER
OA Damper Position	-	1/4" OPEN
OA Damper Type	-	ACTUATED BLADE

Motor Data		
	Design	Actual
Motor MFG	-	BALDOR
Frame	-	184T
Horsepower	-	5
Motor Rpm	-	1750
Phase	3	3
Rated Voltage	480	208-230/460
Rated Amperage	-	14-13.2/6.6
Service Factor	-	1.15
Efficiency	-	89.5
Power Factor	-	80

Performance Data		
	Design	Actual
Fan Suction SP	-	-0.348"
Fan Discharge SP	-	0.564"
Total ESP	1.00"	0.831"
Fan Total SP	-	0.894"

Electrical		
	Design	Actual
VFD Phase Voltage (line)	-	496
VFD Min Setpt	-	42
VFD Max Setpt	-	52
Phase Brownout Dial Setpt (v)	-	10
Phase Brownout Volt Variance	-	10S
Freeze Stat Setpt	-	NA
Compressor Lockout Setpt	-	42

Completed By: Kyle Mauzey on 03/27/2015

Notes: [1] Filters removed during TAB.



National TAB

Project: KROGER 034-917 GRANBURY, TX NEW STORE

System/Unit: AHU/RTU



Diffuser Supply (GRD)

AHU16 / DELI/BAKERY

Asset	Area Served	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
AHU16-SGRD1	DELI/BAKERY	4-WAY	15"X15"	300	1	303	326	328	109.3
AHU16-SGRD2	DELI/BAKERY	4-WAY	15"X15"	340	1	298	363	375	110.3
AHU16-SGRD3	DELI/BAKERY	4-WAY	15"X15"	340	1	357	417	334	98.2
AHU16-SGRD4	DELI/BAKERY	4-WAY	15"X15"	340	1	260	307	348	102.4
AHU16-SGRD5	DELI/BAKERY	4-WAY	15"X15"	340	1	343	398	350	102.9
AHU16-SGRD6	DELI/BAKERY	4-WAY	15"X15"	340	1	307	371	353	103.8
AHU16-SGRD7	DELI/BAKERY	SG	12"X8"	380	1	594.	431	359	94.5
AHU16-SGRD8	DELI/BAKERY	SG	8"X8"	100	1	412	69	91	91.0
AHU16-SGRD9	DELI/BAKERY	4-WAY	15"X15"	280	1	408	365	268	95.7
AHU16-SGRD10	DELI/BAKERY	4-WAY	15"X15"	280	1	326	231	271	96.8
AHU16-SGRD11	DELI/BAKERY	2-WAY	24"X24"	300	1	241	275	328	109.3
AHU16-SGRD12	DELI/BAKERY	4-WAY	15"X15"	280	1	354	284	306	109.3
AHU16-SGRD13	DELI/BAKERY	4-WAY	15"X15"	350	1	265	303	340	97.1
AHU16-SGRD14	DELI/BAKERY	2-WAY	24"X24"	280	1	257	389	294	105.0
AHU16-SGRD15	DELI/BAKERY	4-WAY	15"X15"	350	1	318	322	386	110.3

Completed By: Taylor Long on

Asset	Area Served	Notes



National TAB

Project: KROGER 034-917 GRANBURY, TX NEW STORE

System/Unit: AHU/RTU



Asset: AHU17

AREA: DOCK/BACKROOM

Unit Data		
	Design	Actual
MFG	AAON	AAON
Model Num	RN-020	RN-020
Serial Num	-	201410-BNGP39424
Inventory Tag ID	-	NOT FOUND
Type	RTU	RTU
Configuration	VERTICAL DISCHARGE	VERTICAL DISCHARGE
Num OA Filters 1	-	1
OA Filter Size 1	-	31X60
Num OA Filters 2	-	NA
OA Filter Size 2	-	NA
Num Final Filter 1	-	6
Final Filter Size 1	-	20X25X2
Num Final Filter 2	-	NA
Final Filter Size 2	-	NA

Test Data		
	Design	Actual
SF CFM	7400	7406
SF RPM	-	980
RA CFM	6808	6796
OA CFM	592	610
RL Voltage	-	291
RL Amperage	-	6.48
SF Rotation	-	CW
VFD Max SetPt	-	49
SF Motor Freq(HZ)	-	49
RA Damper Position	-	4 1/2" OPEN
RA Damper Type	-	ACTUATED BLADE
OA Damper Position	-	1/4" OPEN
OA Damper Type	-	ACTUATED BLADE

Motor Data		
	Design	Actual
Motor MFG	-	BALDOR
Frame	-	254T
Horsepower	-	7.5
Motor Rpm	-	1180
Phase	3	3
Rated Voltage	480	230/460
Rated Amperage	-	22.4/11
Service Factor	-	1.15
Efficiency	-	90.2
Power Factor	-	70

Performance Data		
	Design	Actual
Fan Suction SP	-	-0.642"
Fan Discharge SP	-	0.542"
Total ESP	0.55"	1.075"
Fan Total SP	-	1.184"

Electrical		
	Design	Actual
VFD Phase Voltage (line)	-	497
VFD Min Setpt	-	38
VFD Max Setpt	-	49
Phase Brownout Dial Setpt (v)	-	10
Phase Brownout Volt Variance	-	10S
Freeze Stat Setpt	-	NA
Compressor Lockout Setpt	-	42

Completed By: Kyle Mauzey on 03/27/2015

Notes: [1] Filters removed during TAB.



National TAB

Project: KROGER 034-917 GRANBURY, TX NEW STORE

System/Unit: AHU/RTU



Diffuser Supply (GRD)

AHU17 / DOCK/BACKROOM

Asset	Area Served	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
AHU17-SGRD1	DOCK/BACKROOM	SG	12"X24"	2000	1.77	1600	1670	1971	98.6
AHU17-SGRD2	DOCK/BACKROOM	SG	12"X24"	2000	1.77	1460	1896	2023	101.2
AHU17-SGRD3	DOCK/BACKROOM	CONCENTRIC	CONCENTRIC	3400	1	3758	3858	3412	100.4

Completed By: Taylor Long on

Asset	Area Served	Notes



National TAB

Project: KROGER 034-917 GRANBURY, TX NEW STORE

System/Unit: AHU/RTU



Asset: AHU18

AREA: SEATING

Unit Data		
	Design	Actual
MFG	AAON	AAON
Model Num	RN-010	RN-010
Serial Num	-	201410-ANGJ39411
Inventory Tag ID	-	NOT FOUND
Type	RTU	RTU
Configuration	VERTICAL DISCHARGE	VERTICAL DISCHARGE
Num OA Filters 1	-	1
OA Filter Size 1	-	41X20
Num OA Filters 2	-	NA
OA Filter Size 2	-	NA
Num Final Filter 1	-	4
Final Filter Size 1	-	16X20X2
Num Final Filter 2	-	NA
Final Filter Size 2	-	NA

Test Data		
	Design	Actual
SF CFM	2700	2792
SF RPM	-	1680
RA CFM	2132	2194
OA CFM	568	598
RL Voltage	-	375
RL Amperage	-	1.78
SF Rotation	-	CW
VFD Max SetPt	-	56
SF Motor Freq(HZ)	-	56
RA Damper Position	-	4" OPEN
RA Damper Type	-	ACTUATED BLADE
OA Damper Position	-	1/2" OPEN
OA Damper Type	-	ACTUATED BLADE

Motor Data		
	Design	Actual
Motor MFG	-	WEG
Frame	-	143/5T
Horsepower	-	2
Motor Rpm	-	1740
Phase	3	3
Rated Voltage	480	208-230/460
Rated Amperage	-	5.95-5.38/2.69
Service Factor	-	1.15
Efficiency	-	86.5
Power Factor	-	81

Performance Data		
	Design	Actual
Fan Suction SP	-	-0.459"
Fan Discharge SP	-	0.426"
Total ESP	1.00"	0.816"
Fan Total SP	-	0.885"

Electrical		
	Design	Actual
VFD Phase Voltage (line)	-	497
VFD Min Setpt	-	44.8
VFD Max Setpt	-	56
Phase Brownout Dial Setpt (v)	-	10
Phase Brownout Volt Variance	-	10S
Freeze Stat Setpt	-	NA
Compressor Lockout Setpt	-	42

Completed By: Kyle Mauzey on 03/27/2015

Notes: [1] Filters removed during TAB.



National TAB

Project: KROGER 034-917 GRANBURY, TX NEW STORE

System/Unit: AHU/RTU



Diffuser Supply (GRD)

AHU18 / SEATING

Asset	Area Served	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
AHU18-SGRD1	SEATING	4-WAY	15"X15"	250	1	284	280	271	108.4
AHU18-SGRD2	SEATING	4-WAY	15"X15"	250	1	271	283	252	100.8
AHU18-SGRD3	SEATING	4-WAY	8"X8"	100	1	22	96	109	109.0
AHU18-SGRD4	FLORAL PREP	SG	8"X8"	100	1	88	88	99	99.0
AHU18-SGRD5	RESTROOM	SG	8"X8"	150	1	202	202	160	106.7
AHU18-SGRD6	RESTROOM	SG	8"X8"	150	1	179	173	161	107.3
AHU18-SGRD7	SEATING	4-WAY	15"X15"	250	1	272	252	241	96.4
AHU18-SGRD8	SEATING	4-WAY	15"X15"	250	1	205	196	253	101.2
AHU18-SGRD9	SEATING	4-WAY	15"X15"	250	1	301	304	271	108.4
AHU18-SGRD10	SEATING	4-WAY	15"X15"	250	1	191	197	260	104.0
AHU18-SGRD11	SEATING	4-WAY	15"X15"	250	1	350	344	268	107.2
AHU18-SGRD12	SEATING	4-WAY	15"X15"	250	1	351	363	239	95.6
AHU18-SGRD13	SEATING	4-WAY	12"X12"	200	1	189	185	208	104.0

Completed By: Taylor Long on

Asset	Area Served	Notes



National TAB

Project: KROGER 034-917 GRANBURY, TX NEW STORE

System/Unit: AHU/RTU



Asset: AHU19

AREA: MEZZ OFFICE

Unit Data		
	Design	Actual
MFG	AAON	AAON
Model Num	RQ-005	RQ-005
Serial Num	-	201410-AYGE08565
Inventory Tag ID	-	NOT FOUND
Type	RTU	RTU
Configuration	VERTICAL DISCHARGE	VERTICAL DISCHARGE
Num OA Filters 1	-	1
OA Filter Size 1	-	18X13
Num OA Filters 2	-	NA
OA Filter Size 2	-	NA
Num Final Filter 1	-	2
Final Filter Size 1	-	20X20X2
Num Final Filter 2	-	NA
Final Filter Size 2	-	NA

Test Data		
	Design	Actual
SF CFM	2000	2154
SF RPM	-	1620
RA CFM	1780	1919
OA CFM	220	235
RL Voltage	-	356
RL Amperage	-	2.2
SF Rotation	-	CW
VFD Max SetPt	-	54
SF Motor Freq(HZ)	-	54
RA Damper Position	-	5" OPEN
RA Damper Type	-	ACTUATED BLADE
OA Damper Position	-	1/8" OPEN
OA Damper Type	-	ACTUATED BLADE

Motor Data		
	Design	Actual
Motor MFG	-	BALDOR
Frame	-	56Z
Horsepower	-	2 AIR OVER
Motor Rpm	-	1755
Phase	3	3
Rated Voltage	480	208-230/460
Rated Amperage	-	6.8-6.3/3.15
Service Factor	-	1.15
Efficiency	-	84
Power Factor	-	71

Performance Data		
	Design	Actual
Fan Suction SP	-	-0.884"
Fan Discharge SP	-	0.977"
Total ESP	0.50"	1.724"
Fan Total SP	-	1.862"

Electrical		
	Design	Actual
VFD Phase Voltage (line)	-	495
VFD Min Setpt	-	43
VFD Max Setpt	-	54
Phase Brownout Dial Setpt (v)	-	10
Phase Brownout Volt Variance	-	10S
Freeze Stat Setpt	-	NA
Compressor Lockout Setpt	-	42

Completed By: Kyle Mauzey on 03/27/2015

Notes:



National TAB

Project: KROGER 034-917 GRANBURY, TX NEW STORE

System/Unit: AHU/RTU



[1] Filters removed during TAB.

[2] Some vibration is coming from the blower. This is very loud in the mezz offices. Mechanical notified and stated that this was a factory issue.

[3] Diffusers balanced high to account for the additional loading when filters are installed.

Diffuser Supply (GRD)

AHU19 / MEZZ OFFICE

Asset	Area Served	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
AHU19-SGRD1	OFFICE	4-WAY	15"X15"	375	1	391	399	399	106.4
AHU19-SGRD2	OFFICE	4-WAY	15"X15"	375	1	550	413	413	110.1
AHU19-SGRD3	OFFICE	4-WAY	15"X15"	375	1	455	389	389	103.7
AHU19-SGRD4	OFFICE	4-WAY	8"X8"	100	1	111	110	110	110.0
AHU19-SGRD5	OFFICE	4-WAY	15"X15"	375	1	431	407	407	108.5
AHU19-SGRD6	OFFICE	4-WAY	15"X15"	300	1	306	334	334	111.3
AHU19-SGRD7	OFFICE	4-WAY	8"X8"	100	1	83	102	102	102.0

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Asset	Area Served	Notes



National TAB

Project: KROGER 034-917 GRANBURY, TX NEW STORE

System/Unit: AHU/RTU



Asset: AHU20

AREA: MEZZ BREAK

Unit Data		
	Design	Actual
MFG	AAON	AAON
Model Num	RN-010	RN-010
Serial Num	-	201410-ANGJ39412
Inventory Tag ID	-	NOT FOUND
Type	RTU	RTU
Configuration	VERTICAL DISCHARGE	VERTICAL DISCHARGE
Num OA Filters 1	-	1
OA Filter Size 1	-	41X20
Num OA Filters 2	-	NA
OA Filter Size 2	-	NA
Num Final Filter 1	-	4
Final Filter Size 1	-	16X20X2
Num Final Filter 2	-	NA
Final Filter Size 2	-	NA

Test Data		
	Design	Actual
SF CFM	3000	2567
SF RPM	-	1800
RA CFM	2408	2174
OA CFM	392	393
RL Voltage	-	423
RL Amperage	-	2.02
SF Rotation	-	CW
VFD Max SetPt	-	60
SF Motor Freq(HZ)	-	60
RA Damper Position	-	4 3/4" OPEN
RA Damper Type	-	ACTUATED BLADE
OA Damper Position	-	1/8" OPEN
OA Damper Type	-	ACTUATED BLADE

Motor Data		
	Design	Actual
Motor MFG	-	WEG
Frame	-	143/5T
Horsepower	-	2
Motor Rpm	-	1740
Phase	3	3
Rated Voltage	480	208-230/460
Rated Amperage	-	5.95-5.38/2.69
Service Factor	-	1.15
Efficiency	-	86.5
Power Factor	-	81

Performance Data		
	Design	Actual
Fan Suction SP	-	-0.475"
Fan Discharge SP	-	0.600"
Total ESP	1.00"	0.978"
Fan Total SP	-	1.075"

Electrical		
	Design	Actual
VFD Phase Voltage (line)	-	491
VFD Min Setpt	-	48
VFD Max Setpt	-	60
Phase Brownout Dial Setpt (v)	-	10
Phase Brownout Volt Variance	-	10S
Freeze Stat Setpt	-	NA
Compressor Lockout Setpt	-	42

Completed By: Kyle Mauzey on 03/27/2015

Notes:



National TAB

Project: KROGER 034-917 GRANBURY, TX NEW STORE

System/Unit: AHU/RTU



- [1] Speed is maximized at 60 HZ, unable to obtain design airflow. Duct work matches design and no installation issues noted. Filters were dirty and removed during TAB.
- [2] Penetration inside the unit is not sealed.

Diffuser Supply (GRD)

AHU20 / MEZZ BREAK

Asset	Area Served	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
AHU20-SGRD1	MEZZ BREAK	4-WAY	15"X15"	300	1	219	225	225	75.0
AHU20-SGRD2	MEZZ BREAK	4-WAY	15"X15"	300	1	192	239	239	79.7
AHU20-SGRD3	MEZZ BREAK	4-WAY	15"X15"	300	1	102	270	270	90.0
AHU20-SGRD4	MEZZ BREAK	4-WAY	15"X15"	300	1	275	293	293	97.7
AHU20-SGRD5	MEZZ BREAK	4-WAY	8"X8"	100	1	86	92	92	92.0
AHU20-SGRD6	MEZZ BREAK	4-WAY	15"X15"	500	1	376	350	350	70.0
AHU20-SGRD7	MEZZ BREAK	4-WAY	15"X15"	500	1	410	434	434	86.8
AHU20-SGRD8	MEZZ BREAK	4-WAY	15"X15"	300	1	283	288	288	96.0
AHU20-SGRD9	MEZZ BREAK	SG	8"X8"	100	1	250	97	97	97.0
AHU20-SGRD10	MEZZ BREAK	SG	8"X8"	100	1	235	91	91	91.0
AHU20-SGRD11	MEZZ BREAK	4-WAY	15"X15"	200	1	179	188	188	94.0

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Asset	Area Served	Notes
AHU20-SGRD3	MEZZ BREAK	[1] Damper handle not installed. Damper taped open during TAB.



National TAB

Project: KROGER 034-917 GRANBURY, TX NEW STORE

System/Unit: AHU/RTU



Asset: AHU21

AREA: VESTIBULE

Unit Data		
	Design	Actual
MFG	AAON	AAON
Model Num	RN-008	RN-008
Serial Num	-	201410- ANGH39413
Inventory Tag ID	-	NOT FOUND
Type	RTU	RTU
Configuration	VERTICAL DISCHARGE	VERTICAL DISCHARGE
Num OA Filters 1	-	1
OA Filter Size 1	-	40X20
Num OA Filters 2	-	NA
OA Filter Size 2	-	NA
Num Final Filter 1	-	4
Final Filter Size 1	-	16X20X2
Num Final Filter 2	-	NA
Final Filter Size 2	-	NA

Test Data		
	Design	Actual
SF CFM	3000	3138
SF RPM	-	1740
RA CFM	3000	3138
OA CFM	0	0
RL Voltage	-	392
RL Amperage	-	2.65
SF Rotation	-	CW
VFD Max SetPt	-	58
SF Motor Freq(HZ)	-	58
RA Damper Position	-	5 1/2" OPEN
RA Damper Type	-	ACTUATED BLADE
OA Damper Position	-	CLOSED
OA Damper Type	-	ACTUATED BLADE

Motor Data		
	Design	Actual
Motor MFG	-	ENERGY SAVER
Frame	-	182T
Horsepower	-	3
Motor Rpm	-	1756
Phase	3	3
Rated Voltage	480	230/460
Rated Amperage	-	7.8/3.8
Service Factor	-	NL
Efficiency	-	89.5
Power Factor	-	79.5

Performance Data		
	Design	Actual
Fan Suction SP	-	-0.641"
Fan Discharge SP	-	0.823"
Total ESP	1.00"	1.404"
Fan Total SP	-	1.464"

Electrical		
	Design	Actual
VFD Phase Voltage (line)	-	493
VFD Min Setpt	-	46
VFD Max Setpt	-	58
Phase Brownout Dial Setpt (v)	-	10
Phase Brownout Volt Variance	-	10S
Freeze Stat Setpt	-	NA
Compressor Lockout Setpt	-	42

Completed By: Kyle Mauzey on 03/27/2015

Notes:



National TAB

Project: KROGER 034-917 GRANBURY, TX NEW STORE

System/Unit: AHU/RTU



Diffuser Supply (GRD)

AHU21 / VESTIBULE

Asset	Area Served	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
AHU21-SGRD1	VESTIBULE	ROUND	33"	1250	1.69	1272	1289	1289	103.1
AHU21-SGRD2	VESTIBULE	ROUND	33"	1250	1.69	1124	1311	1311	104.9
AHU21-SGRD3	VESTIBULE	SG	12"X12"	500	1	781	538	538	107.6

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Asset	Area Served	Notes



National TAB

Project: KROGER 034-917 GRANBURY, TX NEW STORE

System/Unit: AHU/RTU



Asset: AHU22

AREA: VESTIBULE

Unit Data		
	Design	Actual
MFG	AAON	AAON
Model Num	RN-016	RN-016
Serial Num	-	201410-BNGM39425
Inventory Tag ID	-	NOT FOUND
Type	RTU	RTU
Configuration	VERTICAL DISCHARGE	VERTICAL DISCHARGE
Num OA Filters 1	-	1
OA Filter Size 1	-	31X60
Num OA Filters 2	-	NA
OA Filter Size 2	-	NA
Num Final Filter 1	-	6
Final Filter Size 1	-	20X25X2
Num Final Filter 2	-	NA
Final Filter Size 2	-	NA

Test Data		
	Design	Actual
SF CFM	7500	7768
SF RPM	-	1140
RA CFM	7476	7689
OA CFM	74	79
RL Voltage	-	362
RL Amperage	-	7.61
SF Rotation	-	CW
VFD Max SetPt	-	57
SF Motor Freq(HZ)	-	57
RA Damper Position	-	NO DAMPER
RA Damper Type	-	NO DAMPER
OA Damper Position	-	CLOSED
OA Damper Type	-	ACTUATED BLADE

Motor Data		
	Design	Actual
Motor MFG	-	BALDOR
Frame	-	254T
Horsepower	-	7.5
Motor Rpm	-	1180
Phase	3	3
Rated Voltage	480	230/460
Rated Amperage	-	22.4/11
Service Factor	-	1.15
Efficiency	-	90.2
Power Factor	-	70

Performance Data		
	Design	Actual
Fan Suction SP	-	-0.484"
Fan Discharge SP	-	0.798"
Total ESP	1.00"	1.101"
Fan Total SP	-	1.282"

Electrical		
	Design	Actual
VFD Phase Voltage (line)	-	497
VFD Min Setpt	-	46
VFD Max Setpt	-	57
Phase Brownout Dial Setpt (v)	-	10
Phase Brownout Volt Variance	-	10S
Freeze Stat Setpt	-	NA
Compressor Lockout Setpt	-	42

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Notes:



National TAB

Project: KROGER 034-917 GRANBURY, TX NEW STORE

System/Unit: AHU/RTU



Diffuser Supply (GRD)

AHU22 / VESTIBULE

Asset	Area Served	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
AHU22-SGRD1	VESTIBULE	SG	12"X8"	250	1	691	270	270	108.0
AHU22-SGRD2	VESTIBULE	SG	12"X12"	500	1	724	547	547	109.4
AHU22-SGRD3	VESTIBULE	ROUND	33"	1625	1.71	2492	1671	1671	102.8
AHU22-SGRD4	VESTIBULE	ROUND	33"	1625	1.71	2281	1684	1684	103.6
AHU22-SGRD5	VESTIBULE	ROUND	33"	1625	1.71	632	1694	1694	104.2
AHU22-SGRD6	VESTIBULE	ROUND	33"	1625	1.71	931	1662	1662	102.3
AHU22-SGRD7	VESTIBULE	SG	10"X10"	250	1	57	240	240	96.0

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Asset	Area Served	Notes



National TAB

Project: KROGER 034-917 GRANBURY, TX NEW STORE

System/Unit: FAN - Supply



Asset: MAU-1

AREA: DELI PREP

Unit Data		
	Design	Actual
MFG	CAPTIVE-AIRE	CAPTIVE-AIRE
Model Num	A2-D.250-G15-MPU	A2-D.250-G15-MPU
Serial Num	-	2196480
Type	MAU	MAU
Configuration	DOWN DISCHARGE	VERTICAL DISCHARGE

Test Data		
	Design	Actual
CFM	3184	3304
SF RPM	-	738
SF Rotation	-	CCW
Motor RPM	-	1767
RL Voltage	-	213 / 213 / 214
RL Amperage	-	3.9 / 4 / 4.1

Motor Data		
	Design	Actual
Motor MFG	-	WEG
Frame	-	56HZ
Horsepower	2	2
Motor Rpm	-	1740
Phase	3	3
Voltage (rated)	208	208-230/460
Amperage (rated)	-	6.88-6.22/3.11
Service Factor	-	1.15
Efficiency	-	78.5
Power Factor	-	77

General		
	Design	Actual
Fan Rotation Correct	-	YES

Drive Data		
	Design	Actual
Motor Sheave Size	-	3 3/4
Motor Bore Size	-	7/8
Fan Sheave Size	-	6 1/2
Fan Sheave Bore	-	1
Belt CL Distance	-	17
Num of Belts	-	1
Belt Size	-	AX47
Belt Alignment Verified	-	YES

Gas Heat		
	Design	Actual
Heater Operates (y/n)	-	YES
Flame Status (pass/fail)	-	PASS
Inlet Air Temp SetPt	55	55
Discharge Air Temp SetPt	60	60 (AC SETPT 74)

Completed By: Kyle Mauzey on 03/27/2015

Notes: [1] BURNER DP: 0.392"



National TAB

Project: KROGER 034-917 GRANBURY, TX NEW STORE

System/Unit: FAN - Exhaust



Asset: EF-CC1

AREA: CLEANING CENTER

Unit Data		
	Design	Actual
MFG	CAPTIVE-AIRE	CAPTIVE-AIRE
Model Num	DR10HFA	DR10HFA
Serial Num	-	2196480
Type	CENTRIFUGAL	CENTRIFUGAL
Configuration	DOWNBLAST	DOWNBLAST

Test Data		
	Design	Actual
CFM	100	97
Fan RPM	-	DD
Fan Rotation	-	CCW
Motor RPM	-	DD
RL Voltage	-	121
RL Amperage	-	0.5
Total ESP	0.125"	0.0615"
Fan Inlet SP	-	-0.0615"
Fan Discharge SP	-	ATM

Motor Data		
	Design	Actual
Motor MFG	-	HSSA
Frame	-	NL
Horsepower	0.08	1/15
Motor Rpm	-	1550
Phase	1	1
Voltage (rated)	120	115/230
Amperage (rated)	-	0.94/0.49
Service Factor	-	NL

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

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Notes:



National TAB

Project: KROGER 034-917 GRANBURY, TX NEW STORE

System/Unit: FAN - Exhaust



Asset: EF-E1

AREA: ELECTRIC ROOM

Unit Data		
	Design	Actual
MFG	CAPTIVE-AIRE	CAPTIVE-AIRE
Model Num	DR12HFA	DR12HFA
Serial Num	-	2196480
Type	CENTRIFUGAL	CENTRIFUGAL
Configuration	DOWNBLAST	DOWNBLAST

Test Data		
	Design	Actual
CFM	600	624
Fan RPM	-	DD
Fan Rotation	-	CCW
Motor RPM	-	DD
RL Voltage	-	NR
RL Amperage	-	NR
Total ESP	0.125"	NR
Fan Inlet SP	-	NR
Fan Discharge SP	-	ATM

Motor Data		
	Design	Actual
Motor MFG	-	HSSA
Frame	-	42Y
Horsepower	0.18	1/6
Motor Rpm	-	1625
Phase	1	1
Voltage (rated)	120	115/230
Amperage (rated)	-	1.9/0.96
Service Factor	-	1.0

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

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Notes: [1] Fan stopped running while obtaining final data.



National TAB

Project: KROGER 034-917 GRANBURY, TX NEW STORE

System/Unit: FAN - Exhaust



Asset: EF-G1

AREA: DOUBLE RACK OVEN

Unit Data		
	Design	Actual
MFG	CAPTIVE-AIRE	CAPTIVE-AIRE
Model Num	NCA14HPFA	NCA14HPFA
Serial Num	-	2196480
Type	CENTRIFUGAL	CENTRIFUGAL
Configuration	DOWNBLAST	UPBLAST

Test Data		
	Design	Actual
CFM	900	928
Fan RPM	-	1128
Fan Rotation	-	CCW
Motor RPM	-	1761
RL Voltage	-	UTO
RL Amperage	-	UTO
Total ESP	1.20"	0.665"
Fan Inlet SP	-	-0.665"
Fan Discharge SP	-	ATM

Motor Data		
	Design	Actual
Motor MFG	-	WEG
Frame	-	C56
Horsepower	0.50	1/2
Motor Rpm	-	1730
Phase	1	1
Voltage (rated)	120	115/208-230
Amperage (rated)	-	7.7/4.2-3.9
Service Factor	-	1.0

Drive Data		
	Design	Actual
Motor Sheave Size	-	3 3/4
Motor Bore Size	-	5/8
Motor Sheave SetPt	-	4 1/2 TURNS OPEN
Fan Sheave Size	-	4 1/2
Fan Sheave Bore	-	3/4
Belt CL Distance	-	5 1/2
Num of Belts	-	1
Belt Size	-	AX21

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Notes:



National TAB

Project: KROGER 034-917 GRANBURY, TX NEW STORE

System/Unit: FAN - Exhaust



Asset: EF-G2

AREA: DOUBLE RACK OVEN

Unit Data		
	Design	Actual
MFG	CAPTIVE-AIRE	CAPTIVE-AIRE
Model Num	NCA14HPFA	NCA14HPFA
Serial Num	-	2196480
Type	CENTRIFUGAL	CENTRIFUGAL
Configuration	DOWNBLAST	UPBLAST

Test Data		
	Design	Actual
CFM	900	916
Fan RPM	-	1122
Fan Rotation	-	CCW
Motor RPM	-	1761
RL Voltage	-	UTO
RL Amperage	-	UTO
Total ESP	1.20"	0.624"
Fan Inlet SP	-	-0.624"
Fan Discharge SP	-	ATM

Motor Data		
	Design	Actual
Motor MFG	-	WEG
Frame	-	C56
Horsepower	0.50	1/2
Motor Rpm	-	1730
Phase	1	1
Voltage (rated)	120	115/208-230
Amperage (rated)	-	7.7/4.2-3.9
Service Factor	-	1.0

Drive Data		
	Design	Actual
Motor Sheave Size	-	3 3/4
Motor Bore Size	-	5/8
Motor Sheave SetPt	-	4 1/2 TURNS OPEN
Fan Sheave Size	-	4 1/2
Fan Sheave Bore	-	3/4
Belt CL Distance	-	5 1/2
Num of Belts	-	1
Belt Size	-	AX21

Completed By: Kyle Mauzey on 03/27/2015

Notes:



National TAB

Project: KROGER 034-917 GRANBURY, TX NEW STORE

System/Unit: FAN - Exhaust



Asset: EF-H1

AREA: 18' HOOD

Unit Data		
	Design	Actual
MFG	CAPTIVE-AIRE	CAPTIVE-AIRE
Model Num	NCA16FA	NCA16FA
Serial Num	-	2196480
Type	CENTRIFUGAL	CENTRIFUGAL
Configuration	UPBLAST	UPBLAST

Test Data		
	Design	Actual
CFM	3150	3121
Fan RPM	-	1233
Fan Rotation	-	CCW
Motor RPM	-	1712
RL Voltage	-	214 / 214 / 215
RL Amperage	-	4.2 / 4.1 / 4.2
Total ESP	0.349"	0.864"
Fan Inlet SP	-	-0.864"
Fan Discharge SP	-	ATM

Motor Data		
	Design	Actual
Motor MFG	-	WEG
Frame	-	56
Horsepower	1.50	1
Motor Rpm	-	1750
Phase	3	3
Voltage (rated)	208	208-230/460
Amperage (rated)	-	3.98-3.60/1.80
Service Factor	-	1.15

Drive Data		
	Design	Actual
Motor Sheave Size	-	3 3/4
Motor Bore Size	-	5/8
Motor Sheave SetPt	-	CLOSED
Fan Sheave Size	-	5 1/4
Fan Sheave Bore	-	1
Belt CL Distance	-	6 3/4
Num of Belts	-	1
Belt Size	-	AX25

Completed By: Kyle Mauzey on 03/27/2015

Notes:



National TAB

Project: KROGER 034-917 GRANBURY, TX NEW STORE

System/Unit: FAN - Exhaust



Asset: EF-H2

AREA: 8' HOOD

Unit Data		
	Design	Actual
MFG	CAPTIVE-AIRE	CAPTIVE-AIRE
Model Num	NCA10FA	NCA10FA
Serial Num	-	2196480
Type	CENTRIFUGAL	CENTRIFUGAL
Configuration	UPBLAST	UPBLAST

Test Data		
	Design	Actual
CFM	1400	1361
Fan RPM	-	1331
Fan Rotation	-	CCW
Motor RPM	-	1767
RL Voltage	-	214 / 214 / 215
RL Amperage	-	1.46 / 1.5 / 1.39
Total ESP	0.338"	0.548"
Fan Inlet SP	-	-0.548"
Fan Discharge SP	-	ATM

Motor Data		
	Design	Actual
Motor MFG	-	WEG
Frame	-	56
Horsepower	0.50	1/2
Motor Rpm	-	1755
Phase	3	3
Voltage (rated)	208	208-230/460
Amperage (rated)	-	2.16-1.95/0.98
Service Factor	-	1.25

Drive Data		
	Design	Actual
Motor Sheave Size	-	3 3/4
Motor Bore Size	-	5/8
Motor Sheave SetPt	-	APPROX 2 TURNS OPEN
Fan Sheave Size	-	4 1/2
Fan Sheave Bore	-	3/4
Belt CL Distance	-	4 7/8
Num of Belts	-	1
Belt Size	-	AX20

Completed By: Kyle Mauzey on 03/27/2015

Notes:



National TAB

Project: KROGER 034-917 GRANBURY, TX NEW STORE

System/Unit: FAN - Exhaust



Asset: EF-H3

AREA: 6' HOOD

Unit Data		
	Design	Actual
MFG	CAPTIVE-AIRE	CAPTIVE-AIRE
Model Num	NCA24HPFA	NCA14HPFA
Serial Num	-	2196480
Type	CENTRIFUGAL	CENTRIFUGAL
Configuration	UPBLAST	UPBLAST

Test Data		
	Design	Actual
CFM	1350	1328
Fan RPM	-	1371
Fan Rotation	-	CCW
Motor RPM	-	1756
RL Voltage	-	214
RL Amperage	-	2.2
Total ESP	1.00"	0.684"
Fan Inlet SP	-	-0.684"
Fan Discharge SP	-	ATM

Motor Data		
	Design	Actual
Motor MFG	-	WEG
Frame	-	56
Horsepower	0.75	3/4
Motor Rpm	-	1755
Phase	3	3
Voltage (rated)	208	208-230/460
Amperage (rated)	-	2.96-2.68/1.34
Service Factor	-	1.25

Drive Data		
	Design	Actual
Motor Sheave Size	-	3 3/4
Motor Bore Size	-	5/8
Motor Sheave SetPt	-	APPROX 2 TURNS OPEN
Fan Sheave Size	-	4 1/2
Fan Sheave Bore	-	3/4
Belt CL Distance	-	6
Num of Belts	-	1
Belt Size	-	AX22

Completed By: Kyle Mauzey on 03/27/2015

Notes: [1] CAPTIVE-AIRE NCA14HPFA INSTALLED INSTEAD OF A NCA24HPFA



National TAB

Project: KROGER 034-917 GRANBURY, TX NEW STORE

System/Unit: FAN - Exhaust



Asset: EF-H4

AREA: SEAFOOD HOOD

Unit Data		
	Design	Actual
MFG	CAPTIVE-AIRE	CAPTIVE-AIRE
Model Num	DU30HFA	DU30HFA
Serial Num	-	2196480
Type	CENTRIFUGAL	CENTRIFUGAL
Configuration	DOWNBLAST	DOWNBLAST

Test Data		
	Design	Actual
CFM	600	568
Fan RPM	-	DD
Fan Rotation	-	CCW
Motor RPM	-	DD
RL Voltage	-	123
RL Amperage	-	2.1
Total ESP	0.25"	0.0986"
Fan Inlet SP	-	-0.0986"
Fan Discharge SP	-	ATM

Motor Data		
	Design	Actual
Motor MFG	-	HSSA
Frame	-	48Y
Horsepower	0.25	1/4
Motor Rpm	-	1625
Phase	1	1
Voltage (rated)	120	115/230
Amperage (rated)	-	3/1.5
Service Factor	-	1

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

Completed By: Kyle Mauzey on 03/27/2015

Notes:



National TAB

Project: KROGER 034-917 GRANBURY, TX NEW STORE

System/Unit: FAN - Exhaust



Asset: EF-H5

AREA: SEAFOOD GRILLER

Unit Data		
	Design	Actual
MFG	CAPTIVE-AIRE	CAPTIVE-AIRE
Model Num	NCA18HPFA	NCA18HPFA
Serial Num	-	2196480
Type	CENTRIFUGAL	CENTRIFUGAL
Configuration	UPBLAST	UPBLAST

Test Data		
	Design	Actual
CFM	2000	2203
Fan RPM	-	925
Fan Rotation	-	CCW
Motor RPM	-	1743
RL Voltage	-	214
RL Amperage	-	2.38
Total ESP	1.00"	0.796"
Fan Inlet SP	-	-0.796"
Fan Discharge SP	-	ATM

Motor Data		
	Design	Actual
Motor MFG	-	WEG
Frame	-	56
Horsepower	0.75	3/4
Motor Rpm	-	1755
Phase	3	3
Voltage (rated)	208	208-230/460
Amperage (rated)	-	2.96-2.68/1.34
Service Factor	-	1.25

Drive Data		
	Design	Actual
Motor Sheave Size	-	3 3/4
Motor Bore Size	-	5/8
Motor Sheave SetPt	-	APPROX 3 1/2 TURNS OPEN
Fan Sheave Size	-	6 1/2
Fan Sheave Bore	-	1
Belt CL Distance	-	6 3/4
Num of Belts	-	1
Belt Size	-	AX27

Completed By: Kyle Mauzey on 03/27/2015

Notes:



National TAB

Project: KROGER 034-917 GRANBURY, TX NEW STORE

System/Unit: FAN - Exhaust



Asset: EF-P1

AREA: EQUIPMENT

Unit Data		
	Design	Actual
MFG	CAPTIVE-AIRE	CAPTIVE-AIRE
Model Num	DR12HFA	DR12HFA
Serial Num	-	2196480
Type	CENTRIFUGAL	CENTRIFUGAL
Configuration	DOWNBLAST	DOWNBLAST

Test Data		
	Design	Actual
CFM	400	391
Fan RPM	-	DD
Fan Rotation	-	CCW
Motor RPM	-	DD
RL Voltage	-	123
RL Amperage	-	1.21
Total ESP	0.125"	0.217"
Fan Inlet SP	-	-0.217"
Fan Discharge SP	-	ATM

Motor Data		
	Design	Actual
Motor MFG	-	HSSA
Frame	-	42Y
Horsepower	0.50	1/6
Motor Rpm	-	1625
Phase	1	1
Voltage (rated)	120	115/230
Amperage (rated)	-	1.9/0.96
Service Factor	-	1.0

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

Completed By: Kyle Mauzey on 03/27/2015

Notes:



National TAB

Project: KROGER 034-917 GRANBURY, TX NEW STORE

System/Unit: FAN - Exhaust



Asset: EF-R1

AREA: EMPLOYEE RR

Unit Data		
	Design	Actual
MFG	CAPTIVE-AIRE	CAPTIVE-AIRE
Model Num	DR12HFA	DR12HFA
Serial Num	-	2196480
Type	CENTRIFUGAL	CENTRIFUGAL
Configuration	DOWNBLAST	DOWNBLAST

Test Data		
	Design	Actual
CFM	200	200
Fan RPM	-	DD
Fan Rotation	-	CCW
Motor RPM	-	DD
RL Voltage	-	123
RL Amperage	-	1.21
Total ESP	0.125"	0.201"
Fan Inlet SP	-	-0.201"
Fan Discharge SP	-	ATM

Motor Data		
	Design	Actual
Motor MFG	-	HSSA
Frame	-	42Y
Horsepower	0.18	1/6
Motor Rpm	-	1625
Phase	1	1
Voltage (rated)	120	115/230
Amperage (rated)	-	1.9/0.96
Service Factor	-	1.0

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

Completed By: Kyle Mauzey on 03/27/2015

Notes:

Diffuser Ret/Exh (GRD)

EF-R1 / EMPLOYEE RR

Asset	Area Served	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
EF1-EGRD1	EMPLOYEE RR	EG	8"X8"	100	1	262	85	94	94.0
EF1-EGRD2	EMPLOYEE RR	EG	8"X8"	100	1	243	86	106	106.0

Completed By: Taylor Long on

Asset	Area Served	Notes



National TAB

Project: KROGER 034-917 GRANBURY, TX NEW STORE

System/Unit: FAN - Exhaust



Asset: EF-R2

AREA: CUSTOMER RR

Unit Data		
	Design	Actual
MFG	CAPTIVE-AIRE	CAPTIVE-AIRE
Model Num	DR12HFA	DR12HFA
Serial Num	-	2196480
Type	CENTRIFUGAL	CENTRIFUGAL
Configuration	DOWNBLAST	DOWNBLAST

Test Data		
	Design	Actual
CFM	600	609
Fan RPM	-	DD
Fan Rotation	-	CCW
Motor RPM	-	DD
RL Voltage	-	122
RL Amperage	-	1.27
Total ESP	0.125"	0.365"
Fan Inlet SP	-	-0.365"
Fan Discharge SP	-	ATM

Motor Data		
	Design	Actual
Motor MFG	-	HSSA
Frame	-	42Y
Horsepower	0.18	1/6
Motor Rpm	-	1625
Phase	1	1
Voltage (rated)	120	115/230
Amperage (rated)	-	1.9/0.96
Service Factor	-	1.0

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

Completed By: Kyle Mauzey on 03/27/2015

Notes:

Diffuser Ret/Exh (GRD)

EF-R2 / CUSTOMER RR

Asset	Area Served	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
EF2-EGRD1	CUSTOMER RR	EG	8"X8"	100	1	122	96	96	96.0
EF2-EGRD2	CUSTOMER RR	EG	10"X10"	250	1	159	262	262	104.8
EF2-EGRD3	CUSTOMER RR	EG	10"X10"	250	1	185	251	251	100.4

Completed By: Taylor Long on

Asset	Area Served	Notes



National TAB

Project: KROGER 034-917 GRANBURY, TX NEW STORE

System/Unit: FAN - Exhaust



Asset: EF-R3

AREA: FAMILY RR

Unit Data		
	Design	Actual
MFG	CAPTIVE-AIRE	CAPTIVE-AIRE
Model Num	DR12HFA	DR12HFA
Serial Num	-	2196480
Type	CENTRIFUGAL	CENTRIFUGAL
Configuration	DOWNBLAST	DOWNBLAST

Test Data		
	Design	Actual
CFM	300	303
Fan RPM	-	DD
Fan Rotation	-	CCW
Motor RPM	-	DD
RL Voltage	-	123
RL Amperage	-	1.45
Total ESP	0.125"	0.412"
Fan Inlet SP	-	-0.412"
Fan Discharge SP	-	ATM

Motor Data		
	Design	Actual
Motor MFG	-	HSSA
Frame	-	42Y
Horsepower	0.18	1/6
Motor Rpm	-	1625
Phase	1	1
Voltage (rated)	120	115/230
Amperage (rated)	-	1.9/0.96
Service Factor	-	1.0

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

Completed By: Kyle Mauzey on 03/27/2015

Notes: [1] TOTAL SET, DUCTWORK NOT COMPLETE. SEE IMAGES.
 [2] Ductwork not finished during revisit. Picture attached.



National TAB

Project: KROGER 034-917 GRANBURY, TX NEW STORE

System/Unit: FAN - Exhaust



Diffuser Ret/Exh (GRD)

EF-R3 / FAMILY RR

Asset	Area Served	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
EF3-EGRD1	FAMILY RR	EG	8"X8"	150	1	222	154	154	102.7
EF3-EGRD2	FAMILY RR	EG	8"X8"	150	1	249	149	149	99.3
EF3-EGRD3	FAMILY RR	CAPPED OFF	CAPPED OFF	0	1	0	0	0	-

Completed By: Kyle Mauzey on

Asset	Area Served	Notes
EF3-EGRD3	FAMILY RR	[1] DUCTWORK NOT COMPLETE IN LITTLE CLINIC, EXHAUST GRILL CAPPED OFF. DESIGN CFM DISPERSED EVENLY TO OTHER 2 EXHAUST GRILLS.



National TAB

Project: KROGER 034-917 GRANBURY, TX NEW STORE

System/Unit: FAN - Exhaust



Asset: EF-R4

AREA: MEZZANNINE RR

Unit Data		
	Design	Actual
MFG	CAPTIVE-AIRE	CAPTIVE-AIRE
Model Num	DR12HFA	DR12HFA
Serial Num	-	2196480
Type	CENTRIFUGAL	CENTRIFUGAL
Configuration	DOWNBLAST	DOWNBLAST

Test Data		
	Design	Actual
CFM	400	408
Fan RPM	-	DD
Fan Rotation	-	CCW
Motor RPM	-	DD
RL Voltage	-	124
RL Amperage	-	1.2
Total ESP	0.125"	0.34"
Fan Inlet SP	-	-0.34"
Fan Discharge SP	-	ATM

Motor Data		
	Design	Actual
Motor MFG	-	HSSA
Frame	-	42Y
Horsepower	0.18	1/6
Motor Rpm	-	1625
Phase	1	1
Voltage (rated)	120	115/230
Amperage (rated)	-	1.9/0.96
Service Factor	-	1.0

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

Completed By: Kyle Mauzey on 03/27/2015

- Notes: [1] DUCTWORK INSTALLATION DIFFERS FROM DESIGN. THIS MAY BE CAUSING REDUCED AIRFLOW AT THE WOMEN'S RESTROOM. MEN'S RESTROOM WAS DAMPERED AS MUCH AS POSSIBLE WITHOUT CAUSING NOISE ISSUES. A LINE DAMPER IS RECOMMENDED TO FURTHER DAMPER AIRFLOW.
 [2] Re-read on revisit and unit balanced out within parameters.



National TAB

Project: KROGER 034-917 GRANBURY, TX NEW STORE

System/Unit: FAN - Exhaust



Diffuser Ret/Exh (GRD)

EF-R4 / MEZZANNINE RR

Asset	Area Served	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
EF4-EGRD1	MEZZANNINE RR	EG	10"X10"	200	1	333	212	219	109.5
EF4-EGRD2	MEZZANNINE RR	EG	10"X10"	200	1	126	174	189	94.5

Completed By: Taylor Long on

Asset	Area Served	Notes
EF4-EGRD1	MEZZANNINE RR	DAMPER CLOSED AS MUCH AS POSSIBLE TO MINIMIZE NOISE.
EF4-EGRD2	MEZZANNINE RR	DAMPER OPEN 100%



National TAB

Project: KROGER 034-917 GRANBURY, TX NEW STORE

System/Unit: FAN - Exhaust



Asset: EF-S1

AREA: SEAFOOD

Unit Data		
	Design	Actual
MFG	CAPTIVE-AIRE	CAPTIVE-AIRE
Model Num	DR30HFA	DR30HFA
Serial Num	-	2196480
Type	CENTRIFUGAL	CENTRIFUGAL
Configuration	DOWNBLAST	DOWNBLAST

Test Data		
	Design	Actual
CFM	600	620
Fan RPM	-	DD
Fan Rotation	-	CCW
Motor RPM	-	DD
RL Voltage	-	123
RL Amperage	-	2.3
Total ESP	0.125"	0.280"
Fan Inlet SP	-	-0.280"
Fan Discharge SP	-	ATM

Motor Data		
	Design	Actual
Motor MFG	-	HSSA
Frame	-	48Y
Horsepower	0.18	1/4
Motor Rpm	-	1625
Phase	1	1
Voltage (rated)	120	115/230
Amperage (rated)	-	3/1.5
Service Factor	-	1.0

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

Completed By: Kyle Mauzey on 03/27/2015

Notes:

Diffuser Ret/Exh (GRD)

EF-S1 / SEAFOOD

Asset	Area Served	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)	FINAL CFM	% to design
EF1-EGRD1	SEAFOOD	EG	8"X8"	200	1	282	185	208	104.0
EF1-EGRD2	SEAFOOD	EG	8"X8"	200	1	340	227	199	99.5
EF1-EGRD3	SEAFOOD	EG	8"X8"	200	1	337	229	213	106.5

Completed By: Taylor Long on

Asset	Area Served	Notes



National TAB

Project: KROGER 034-917 GRANBURY, TX NEW STORE

System/Unit: Kitchen Hood Type I



Asset: HD1

AREA: 18' DELI PREP LEFT

Unit Data		
	Design	Actual
MFG	CAPTIVE-AIRE	CAPTIVE-AIRE
Model Num	6024 ND-2-PSP-F	6024 ND-2
Job / Serial Num	-	2199199
Type	TYPE I CANOPY	TYPE I CANOPY
Hood length	108	108
Hood Width	60	60
Supply Plenum Type	PSP	PSP
Supply Plenum Width	12	12
Supply Plenum Length	108	108

Test Data Exhaust		
	Design	Actual
Filter Type	CAPTRATE SOLO	BAFFLE
Filter Size 1	16X16	16X16
Filter Size 2	-	NA
Filter Qty 1	6	6
Filter Qty 2	-	NA
Filter AK factor size 1	1.62	1.62
Filters AK factor size 2	-	NA
Filter Total AK Area	9.72	9.72
Filter1 FPM	-	164
Filter2 FPM	-	170
Filter3 FPM	-	192
Filter4 FPM	-	196
Filter5 FPM	-	165
Filter6 FPM	-	158
Filter7 FPM	-	NA
Filter8 FPM	-	NA
Filter9 FPM	-	NA
Filter10 FPM	-	NA
Filter11 FPM	-	NA
Filter12 FPM	-	NA
Filter High FPM(corr)	-	196
Filter Low FPM (corr)	-	158
Filter Ave FPM(corr)	-	174
CFM	1575	1692

Cooking Equipment		
	Design	Actual
Item 1	-	OVEN
Item 2	-	OVEN
Item 3	-	NA
Item 4	-	NA

Test Data Supply		
	Design	Actual
AK factor	1	1
Total AK Area	9	9
Kv factor (Vel)	0.87	0.87
Num of Readings	-	8
Reading1 FPM	-	184
Reading2 FPM	-	146
Reading3 FPM	-	135
Reading4 FPM	-	164
Reading5 FPM	-	165
Reading6 FPM	-	123
Reading7 FPM	-	152
Reading8 FPM	-	167
Reading9 FPM	-	NA
Reading10 FPM	-	NA
Reading11 FPM	-	NA
Reading12 FPM	-	NA
Reading13 FPM	-	NA
Reading14 FPM	-	NA
High FPM(corr)	-	184
Low FPM(corr)	-	123
Ave FPM(corr)	-	154
CFM	1102	1206

Performance Data		
	Design	Actual
Exh-Supply Net CFM	473	486
Smoke Generation Type	-	45 SECOND SMOKE CANDLE
Cooking Equip Heat On	-	NOT ABLE
Hood Capture %	-	100%

General		
	Design	Actual
Third Party Witness	-	NA
Third Party Company	-	NA
Tech Witness	-	KYLE MAUZEY
Tech Company	-	NATIONAL TAB
Code Official Witness	-	NA
Jurisdiction	-	NA



National TAB

Project: KROGER 034-917 GRANBURY, TX NEW STORE

System/Unit: Kitchen Hood Type I



Cooking Equipment		
	Design	Actual
Item 5	-	NA

Completed By: Kyle Mauzey on 03/24/2015

Notes:



National TAB

Project: KROGER 034-917 GRANBURY, TX NEW STORE

System/Unit: Kitchen Hood Type I



Asset: HD1

AREA: 18' DELI PREP RIGHT

Unit Data		
	Design	Actual
MFG	CAPTIVE-AIRE	CAPTIVE-AIRE
Model Num	6024 ND-2-PSP-F	6024 ND-2
Job / Serial Num	-	2199199
Type	TYPE I CANOPY	TYPE I CANOPY
Hood length	108	108
Hood Width	60	60
Supply Plenum Type	PSP	PSP
Supply Plenum Width	12	12
Supply Plenum Length	108	108

Test Data Exhaust		
	Design	Actual
Filter Type	CAPTRATE SOLO	BAFFLE
Filter Size 1	16X16	16X16
Filter Size 2	-	NA
Filter Qty 1	6	6
Filter Qty 2	-	NA
Filter AK factor size 1	1.62	1.62
Filters AK factor size 2	-	NA
Filter Total AK Area	9.72	9.72
Filter1 FPM	-	128
Filter2 FPM	-	143
Filter3 FPM	-	163
Filter4 FPM	-	170
Filter5 FPM	-	146
Filter6 FPM	-	133
Filter7 FPM	-	NA
Filter8 FPM	-	NA
Filter9 FPM	-	NA
Filter10 FPM	-	NA
Filter11 FPM	-	NA
Filter12 FPM	-	NA
Filter High FPM(corr)	-	170
Filter Low FPM (corr)	-	128
Filter Ave FPM(corr)	-	147
CFM	1575	1429

Cooking Equipment		
	Design	Actual
Item 1	-	FRYER
Item 2	-	FRYER
Item 3	-	FRYER
Item 4	-	NA

Test Data Supply		
	Design	Actual
AK factor	1	1
Total AK Area	9	9
Kv factor (Vel)	0.87	0.87
Num of Readings	-	8
Reading1 FPM	-	171
Reading2 FPM	-	150
Reading3 FPM	-	139
Reading4 FPM	-	165
Reading5 FPM	-	165
Reading6 FPM	-	133
Reading7 FPM	-	154
Reading8 FPM	-	165
Reading9 FPM	-	NA
Reading10 FPM	-	NA
Reading11 FPM	-	NA
Reading12 FPM	-	NA
Reading13 FPM	-	NA
Reading14 FPM	-	NA
High FPM(corr)	-	171
Low FPM(corr)	-	133
Ave FPM(corr)	-	155
CFM	1102	1214

Performance Data		
	Design	Actual
Exh-Supply Net CFM	473	215
Smoke Generation Type	-	45 SECOND SMOKE CANDLE
Cooking Equip Heat On	-	NOT ABLE
Hood Capture %	-	100%

General		
	Design	Actual
Third Party Witness	-	NA
Third Party Company	-	NA
Tech Witness	-	KYLE MAUZEY
Tech Company	-	NATIONAL TAB
Code Official Witness	-	NA
Jurisdiction	-	NA



National TAB

Project: KROGER 034-917 GRANBURY, TX NEW STORE

System/Unit: Kitchen Hood Type I



Cooking Equipment		
	Design	Actual
Item 5	-	NA

Completed By: Kyle Mauzey on 03/24/2015

Notes:



National TAB

Project: KROGER 034-917 GRANBURY, TX NEW STORE

System/Unit: Kitchen Hood Type I



Asset: HD2

AREA: 8' DELI PREP

Unit Data		
	Design	Actual
MFG	CAPTIVE-AIRE	CAPTIVE-AIRE
Model Num	6024 ND-2-PSP-F	6024 ND-2
Job / Serial Num	-	2199199
Type	TYPE I CANOPY	TYPE I CANOPY
Hood length	96	96
Hood Width	60	60
Supply Plenum Type	PSP	PSP
Supply Plenum Width	12	12
Supply Plenum Length	96	96

Test Data Exhaust		
	Design	Actual
Filter Type	CAPTRATE SOLO	BAFFLE
Filter Size 1	16X16	16X16
Filter Size 2	-	NA
Filter Qty 1	5	5
Filter Qty 2	-	NA
Filter AK factor size 1	1.62	1.62
Filters AK factor size 2	-	NA
Filter Total AK Area	8.1	8.1
Filter1 FPM	-	166
Filter2 FPM	-	168
Filter3 FPM	-	178
Filter4 FPM	-	175
Filter5 FPM	-	154
Filter6 FPM	-	NA
Filter7 FPM	-	NA
Filter8 FPM	-	NA
Filter9 FPM	-	NA
Filter10 FPM	-	NA
Filter11 FPM	-	NA
Filter12 FPM	-	NA
Filter High FPM(corr)	-	178
Filter Low FPM (corr)	-	154
Filter Ave FPM(corr)	-	168
CFM	1400	1361

Cooking Equipment		
	Design	Actual
Item 1	-	BURNER
Item 2	-	OVEN
Item 3	-	NA
Item 4	-	NA

Test Data Supply		
	Design	Actual
AK factor	1	1
Total AK Area	8	8
Kv factor (Vel)	0.87	0.87
Num of Readings	-	7
Reading1 FPM	-	134
Reading2 FPM	-	129
Reading3 FPM	-	117
Reading4 FPM	-	140
Reading5 FPM	-	119
Reading6 FPM	-	122
Reading7 FPM	-	127
Reading8 FPM	-	NA
Reading9 FPM	-	NA
Reading10 FPM	-	NA
Reading11 FPM	-	NA
Reading12 FPM	-	NA
Reading13 FPM	-	NA
Reading14 FPM	-	NA
High FPM(corr)	-	140
Low FPM(corr)	-	117
Ave FPM(corr)	-	127
CFM	980	884

Performance Data		
	Design	Actual
Exh-Supply Net CFM	420	477
Smoke Generation Type	-	45 SECOND SMOKE CANDLE
Cooking Equip Heat On	-	NOT ABLE
Hood Capture %	-	100%

General		
	Design	Actual
Third Party Witness	-	NA
Third Party Company	-	NA
Tech Witness	-	KYLE MAUZEY
Tech Company	-	NATIONAL TAB
Code Official Witness	-	NA
Jurisdiction	-	NA



National TAB

Project: KROGER 034-917 GRANBURY, TX NEW STORE

System/Unit: Kitchen Hood Type I



Cooking Equipment		
	Design	Actual
Item 5	-	NA

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Notes: [1] Missing 1 filter



National TAB

Project: KROGER 034-917 GRANBURY, TX NEW STORE

System/Unit: Kitchen Hood Type I



Asset: HD3

AREA: 6' DELI

Unit Data		
	Design	Actual
MFG	CAPTIVE-AIRE	CAPTIVE-AIRE
Model Num	6024 ND-2	6024 ND-2
Job / Serial Num	-	2199199
Type	TYPE I CANOPY	TYPE I CANOPY
Hood length	72	72
Hood Width	60	60

Performance Data		
	Design	Actual
Smoke Generation Type	-	45 SECOND SMOKE CANDLE
Hood Capture %	-	100%

Test Data Exhaust		
	Design	Actual
Filter Type	CAPTRATE SOLO	BAFFLE
Filter Size 1	16X16	16X16
Filter Size 2	16X20	NA
Filter Qty 1	2	4
Filter Qty 2	2	NA
Filter AK factor size 1	1.62	1.62
Filters AK factor size 2	2.08	NA
Filter Total AK Area	7.4	6.48
Filter1 FPM	-	199
Filter2 FPM	-	213
Filter3 FPM	-	210
Filter4 FPM	-	200
Filter5 FPM	-	NA
Filter6 FPM	-	NA
Filter7 FPM	-	NA
Filter8 FPM	-	NA
Filter9 FPM	-	NA
Filter10 FPM	-	NA
Filter11 FPM	-	NA
Filter12 FPM	-	NA
Filter High FPM(corr)	-	213
Filter Low FPM (corr)	-	199
Filter Ave FPM(corr)	-	205
CFM	1350	1328

Completed By: Kyle Mauzey on 03/24/2015

Notes:



National TAB

Project: KROGER 034-917 GRANBURY, TX NEW STORE

System/Unit: Kitchen Hood Type I



Asset: HD5

AREA: SEAFOOD GRILLER

Unit Data		
	Design	Actual
MFG	CAPTIVE AIRE	CAPTIVE AIRE
Model Num	6030 NDI	6030 NDI
Job / Serial Num	-	2199199
Type	ISLAND	ISLAND
Hood length	-	50
Hood Width	-	60

Performance Data		
	Design	Actual
Smoke Generation Type	-	45 SECOND SMOKE CANDLE
Hood Capture %	-	

Test Data Exhaust		
	Design	Actual
Filter Type	BAFFLE	BAFFLE
Filter Size 1	16X16	16X16
Filter Size 2	NA	NA
Filter Qty 1	4	4
Filter Qty 2	NA	NA
Filter AK factor size 1	1.62	1.62
Filters AK factor size 2	NA	NA
Filter Total AK Area	6.48	6.48
Filter1 FPM	-	344
Filter2 FPM	-	324
Filter3 FPM	-	342
Filter4 FPM	-	349
Filter5 FPM	-	NA
Filter6 FPM	-	NA
Filter7 FPM	-	NA
Filter8 FPM	-	NA
Filter9 FPM	-	NA
Filter10 FPM	-	NA
Filter11 FPM	-	NA
Filter12 FPM	-	NA
Filter High FPM(corr)	-	349
Filter Low FPM (corr)	-	324
Filter Ave FPM(corr)	-	340
CFM	2000	2203

Completed By: Kyle Mauzey on 03/24/2015

Notes:



National TAB

Project: KROGER 034-917 GRANBURY, TX NEW STORE

System/Unit: Kitchen Hood Type II



Asset: HD4

AREA: SEAFOOD PREP

Unit Data		
	Design	Actual
MFG	CAPTIVE-AIRE	CAPTIVE-AIRE
Model Num	6024 VHB-G	6024 VHB-G
Serial Num	-	2199199
Type	TYPE II CANOPY	TYPE II CANOPY
Hood length	48	48
Hood Width	60	60

Test Data		
	Design	Actual
Exhaust CFM	600	568

Completed By: Kyle Mauzey on 03/24/2015

Notes:



National TAB

Project: KROGER 034-917 GRANBURY, TX NEW STORE



Rectangular Duct Traverse Report

System: AHU1 (AAON-RN-030-SALES)

Service:

Altitude: Density: Factor:

Duct		Design	Actual
Width: 60	Readings: 12	SCFM:	SCFM:
Height: 21	Readings: 5	FPM:	FPM: 1355
Area: 8.75		CFM:	CFM: 11856
S.P.:	Temp:		

Notes:

Total

Duct Traverse Data Points

1225	1241	1321	1226	1129	982	1229	1309	1372	1412	1348	1181
1388	1406	1389	1310	1216	1103	1298	1422	1489	1488	1451	1323
1417	1489	1443	1384	1261	1159	1217	1400	1552	1502	1542	1260
1412	1519	1537	1404	1325	1191	1226	1386	1498	1581	1515	1412
1421	1506	1494	1383	1299	1214	1252	1368	1430	1441	1311	1299



National TAB

Project: KROGER 034-917 GRANBURY, TX NEW STORE



Rectangular Duct Traverse Report

System: AHU2 (AAON-RN-015-SALES)

Service:

Altitude: Density: Factor:

Duct		Design	Actual
Width: 20	Readings: 5	SCFM:	SCFM:
Height: 36	Readings: 7	FPM:	FPM: 1134
Area: 5.00		CFM:	CFM: 5670
S.P.:	Temp:		

Notes:

Total

Duct Traverse Data Points

980	1125	1109	1072	1095
1132	1049	989	988	997
1051	867	816	802	860
986	744	807	769	789
1282	911	1109	1157	1026
1637	1687	1607	1489	1316
1432	1502	1502	1549	1450



National TAB

Project: KROGER 034-917 GRANBURY, TX NEW STORE



Rectangular Duct Traverse Report

System: AHU5 (AAON-RN-015-SALES)

Service:

Altitude: Density: Factor:

Duct		Design	Actual
Width: 20	Readings: 5	SCFM:	SCFM:
Height: 36	Readings: 7	FPM:	FPM: 1063
Area: 5.00		CFM:	CFM: 5315
S.P.:	Temp:		

Notes:

Total

Duct Traverse Data Points

1090	1041	1076	1063	805
870	959	918	850	908
1014	847	722	715	687
1106	960	783	598	760
1429	1176	886	866	946
1400	1252	1248	1130	1324
1432	1636	1511	1607	1586



National TAB

Project: KROGER 034-917 GRANBURY, TX NEW STORE



Rectangular Duct Traverse Report

System: AHU9 (AAON-RN-015-SALES)

Service:

Altitude: Density: Factor:

Duct		Design	Actual
Width: 26	Readings: 6	SCFM:	SCFM:
Height: 26	Readings: 6	FPM:	FPM: 1071
Area: 4.69		CFM:	CFM: 5028
S.P.:	Temp:		

Notes:

Total

Duct Traverse Data Points

694	903	973	899	908	887
888	812	836	897	1022	1144
910	879	895	930	1049	1230
877	979	982	1007	1063	1365
847	1024	1202	1097	1326	1523
1014	1259	1420	1528	1552	1730



National TAB

Project: KROGER 034-917 GRANBURY, TX NEW STORE



Rectangular Duct Traverse Report

System: AHU12 (AAON-RN-015-SALES)

Service:

Altitude: Density: Factor:

Duct		Design	Actual
Width: 19	Readings: 5	SCFM:	SCFM:
Height: 36	Readings: 7	FPM:	FPM: 1086
Area: 4.75		CFM:	CFM: 5158
S.P.:	Temp:		

Notes:

Total

Duct Traverse Data Points

1153	965	923	937	928
1087	990	910	849	783
1078	816	859	662	698
1071	963	930	746	978
1460	1167	987	748	1069
1394	1287	1065	942	1328
1423	1668	1661	1632	1840



National TAB

Project: KROGER 034-917 GRANBURY, TX NEW STORE



Rectangular Duct Traverse Report

System: AHU17 (AAON-RN-020-DOCK/BACKROOM)

Service:

Altitude: Density: Factor:

Duct		Design	Actual
Width: 16	Readings: 4	SCFM:	SCFM:
Height: 26	Readings: 6	FPM:	FPM: 1055
Area: 2.89		CFM:	CFM: 3048
S.P.:	Temp:		

Notes:

Hallway total for k factor

Duct Traverse Data Points

1013	1062	1093	1030
940	1110	1109	1018
1018	1110	1109	1090
1064	1102	1103	1120
973	1071	1055	1094
959	992	1051	1033



National TAB

Project: KROGER 034-917 GRANBURY, TX NEW STORE



Rectangular Duct Traverse Report

System: AHU17 (AAON-RN-020-DOCK/BACKROOM)

Service:

Altitude: Density: Factor:

Duct		Design	Actual
Width: 22	Readings: 5	SCFM:	SCFM:
Height: 22	Readings: 5	FPM:	FPM: 1118
Area: 3.36		CFM:	CFM: 3758
S.P.:	Temp:		

Notes:

Dropbox diffuser total

Duct Traverse Data Points

1244	1184	761	1233	1499
1075	1084	824	1300	1561
855	876	469	1262	1433
1010	999	417	1384	1205
1229	1323	1024	1370	1318



National TAB

Project: KROGER 034-917 GRANBURY, TX NEW STORE



Rectangular Duct Traverse Report

System: AHU21 (AAON-RN-008-VESTIBULE)

Service:

Altitude: Density: Factor:

Duct		Design	Actual
Width: 20	Readings: 6	SCFM:	SCFM:
Height: 22	Readings: 5	FPM:	FPM: 904
Area: 3.06		CFM:	CFM: 2762
S.P.:	Temp:		

Notes:

Total

Duct Traverse Data Points

626	910	840	847	1037	931
798	858	872	931	1001	1062
809	916	832	813	948	1020
914	927	861	802	923	1020
830	923	932	963	982	1005



National TAB

Project: KROGER 034-917 GRANBURY, TX NEW STORE



Rectangular Duct Traverse Report

System: AHU22 (AAON-RN-016-VESTIBULE)

Service:

Altitude: Density: Factor:

Duct		Design	Actual
Width: 26	Readings: 6	SCFM:	SCFM:
Height: 34	Readings: 7	FPM:	FPM: 1269
Area: 6.14		CFM:	CFM: 7790
S.P.:	Temp:		

Notes:

Total

Duct Traverse Data Points

900	957	1153	1130	1172	1184
1131	1135	1365	1412	1365	1426
1068	1074	1496	1394	1511	1235
1076	1260	1413	1602	1523	1393
1054	1180	1429	1555	1620	1197
977	1203	1268	1485	1480	1384
932	1107	1099	1324	1323	1298



National TAB

Project: KROGER 034-917 GRANBURY, TX NEW STORE



Round Duct Traverse Report

System: EF-G1 (CAPTIVE-AIRE-NCA14HPFA-DOUBLE RACK OVEN)

Service:

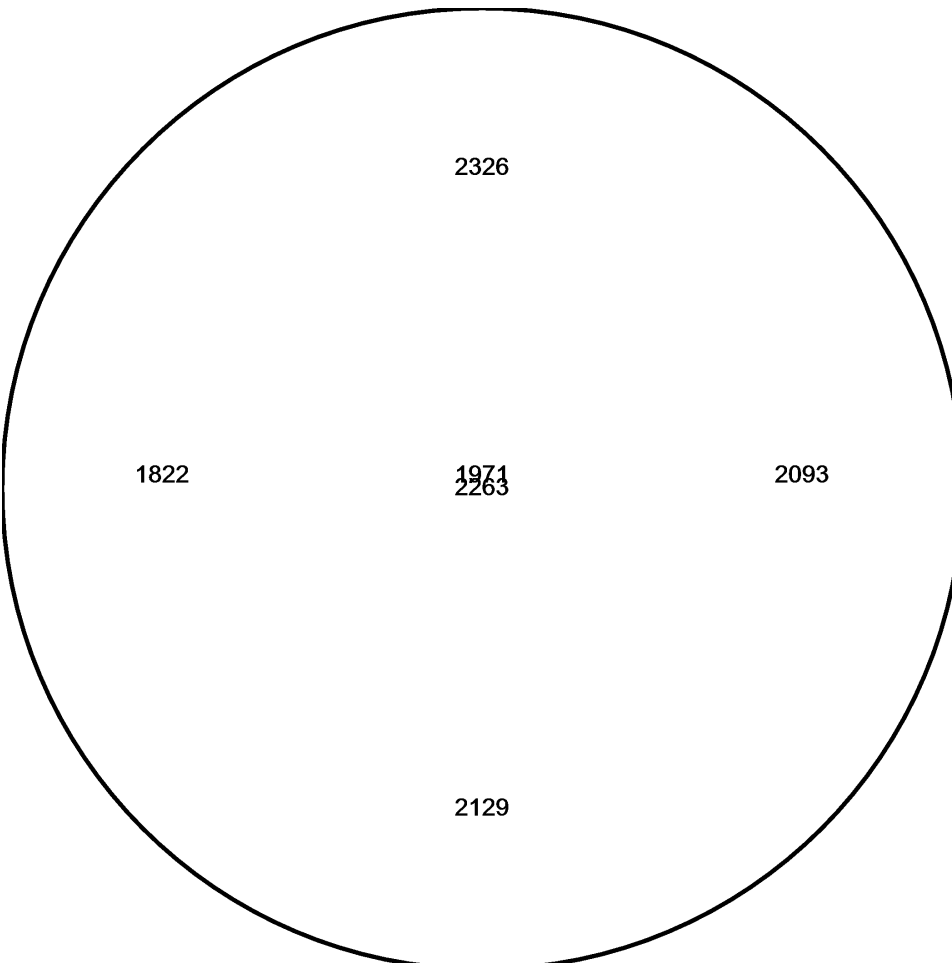
Altitude: Density: Factor:

Duct		Design	Actual
Diameter: 9	Readings: 3	SCFM:	SCFM:
Area: 0.44		FPM:	FPM: 2101
S.P.:	Temp:	CFM:	CFM: 928

Notes:

Total traverse

Duct Traverse Data Points





National TAB

Project: KROGER 034-917 GRANBURY, TX NEW STORE



Round Duct Traverse Report

System: EF-G2 (CAPTIVE-AIRE-NCA14HPFA-DOUBLE RACK OVEN)

Service:

Altitude: Density: Factor:

Duct		Design	Actual
Diameter: 9	Readings: 3	SCFM:	SCFM:
Area: 0.44		FPM:	FPM: 2074
S.P.:	Temp:	CFM:	CFM: 916

Notes:

Total traverse

Duct Traverse Data Points

