Report By:

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

Report: Twin Peaks (Louisville, KY) TAB REPORT

Function: Test, Adjust, & Balance

Date: 11/21/2023

PROJECT

Twin Peaks (Louisville, KY)

302 Bullitt Lane

Louisville, KY 40222

Client

R. E. Moore Construction

National TAB

Project: Twin Peaks (Louisville, KY)

Table Of Contents

CERTIFICATION

PROJECT: Twin Peaks (Louisville, KY)

The data presented in this report is a record of system measurements and final adjustments that have been obtained in accordance with the current edition of the NEBB *Procedural Standards for Testing, Adjusting, and Balancing of Environmental Systems.* Any variances from design quantities, which exceed NEBB tolerances, are noted in the Test-Adjust-Balance Report Project Summary.

The air distribution system has been tested and balanced and final adjustments have been made in accordance with NEBB standards and the project specifications.

NEBB TAB FIRM:	National TAB
REGISTRATION NO:	3629
CERTIFIED BY:	Joe Hertenstein
DATE:	11/13/2023

The hydronic distribution system has been tested and balanced and final adjustments have been made in accordance with NEBB standards and the project specifications.

NEBB TAB FIRM:	National TAB
REGISTRATION NO:	3629
CERTIFIED BY:	Joe Hertenstein
DATE:	

Submitted and Certified by:

NEBB TAB FIRM:	National TAB
TAB PROFESSIONAL:	Joe Hertenstein
SIGNATURE:	Joe Hertenstein
REGISTRATION NO:	3629
CERTIFICATION EXP:	12/31/2023

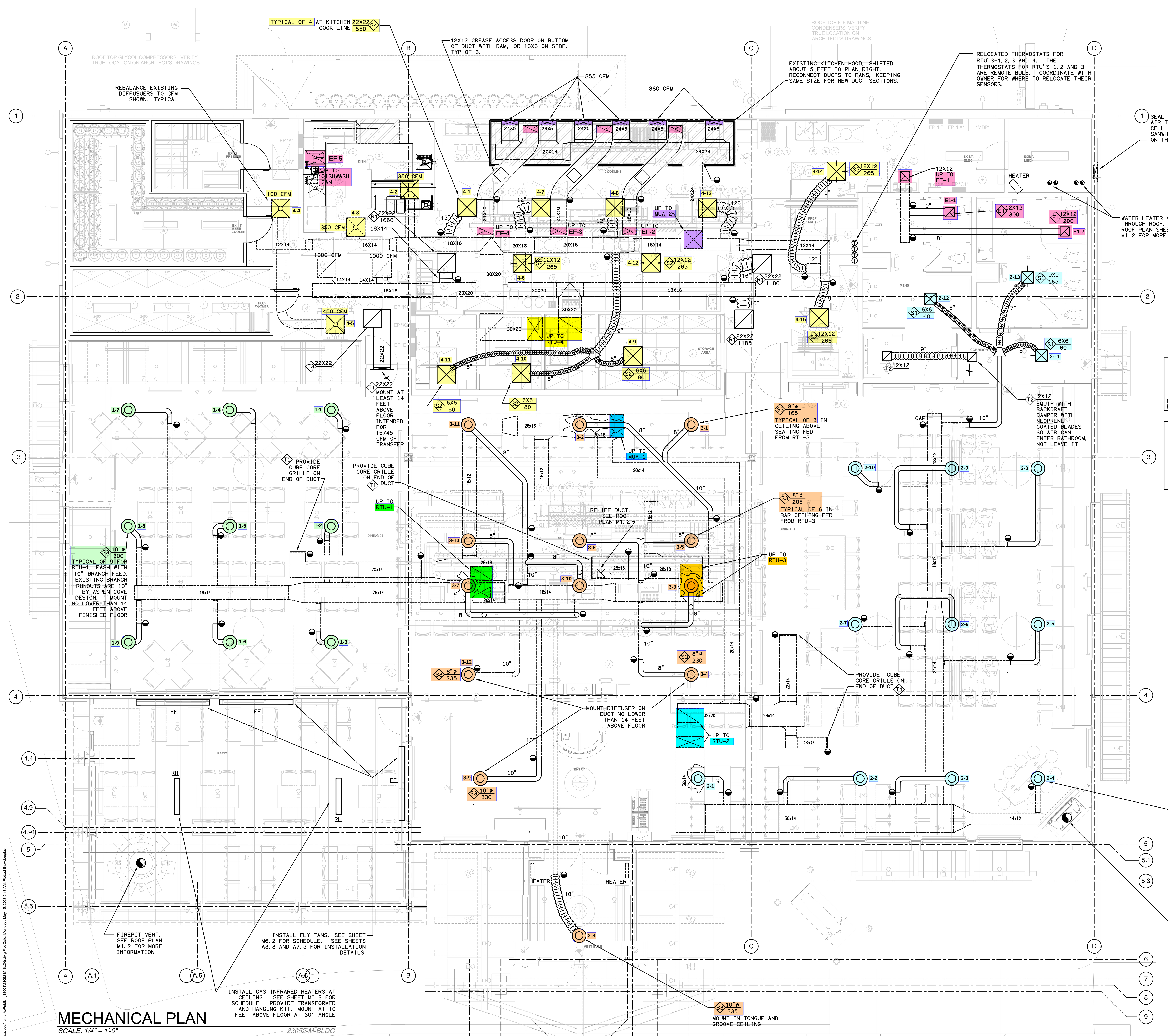
National TAB

Testing, Adjusting, and Balancing Equipment

Function		Range	Minimum Accuracy	Instrument Information	Calibration Date	Date Due
AIR	AIR PRESSURE	0 in wg to 10 in wg	2% +/- 0.001 in wg	Shortridge ADM-860C S/N M19547	10/17/2023	10/16/2024
	AIR VELOCITY INSTRUMENT	50 fpm to 3900 fpm	+/- 5 % +/- 7 fpm	Shortridge ADM-860C S/N M19548	10/17/2023	10/16/2024
	DIRECT HOOD READING	100 cfm to 2000 cfm	+/- 3 % +/- 7 cfm	Shortridge Flow Hood	10/17/2023	10/16/2024
TEMPERATURE	AIR METER	-20 F to 240 F	+/- .5 % 2 F	Cooper ATKINS - SRH77A S/N 081820093	10/20/2023	10/19/2024
	AIR PROBE	-20 F to 240 F	+/- .5 % 2 F	Cooper ATKINS - PD1388 7-6 S/N 5028	10/20/2023	10/19/2024
	IMMERSION METER	-20 F to 240 F	+/- .5 % 2 F	Cooper ATKINS - SRH77A S/N 081820093	10/20/2023	10/19/2024
	IMMERSION PROBE	-20 F to 240 F	+/- .5 % 2 F	Cooper ATKINS - PD1388 7-6 S/N 1075	10/20/2023	10/19/2024
	CONTACT METER	-20 F to 240 F	+/- .5 % 2 F	Cooper ATKINS - SRH77A S/N 081820093	10/20/2023	10/19/2024
	CONTACT PROBE	-20 F to 240 F	+/- .5 % 2 F	Cooper ATKINS - PD1388 7-6 S/N 4011	10/20/2023	10/19/2024
HUMIDITY	HUMIDITY PROBE	10 % RH to 90 % RH	3% of reading	Cooper ATKINS - SRH77A S/N 090315046	10/20/2023	10/19/2024
ELECTRICAL	VOLTAGE MEASUREMENT	0 VAC to 600 VAC	2 % reading +/- 5 digits	Dwyer CM-1 - S/N 190800099	10/16/2023	10/15/2024
	AMPERAGE MEASUREMENT	0 Amperers to 100 Amperes	2 % reading +/- 5 digits	Dwyer CM-1 - S/N 190800099	10/16/2023	10/15/2024
ROTATION	ROTATION MEASUREMENT	60 rpm to 5000 rpm	2 % reading 2 rpm	Dwyer TAC-L - S/N S1100123	10/16/2023	10/15/2024
HYDRONIC	PRESSURE MEASUREMENT	-30 in Hg to 200 psi	±2% of reading +/- 1 psi	Dwyer 490W-6 - S/N 01L6NK	6/21/2023	6/20/2024
	DIFFERENTIAL PRESSURE MEASUREMENT	0 psi - 80 psi	±2% of reading +/- 1 psi	Dwyer 490W-6 - S/N 01L6NK	6/21/2023	6/20/2024
DALT	DUCT LEAKAGE	-10"- +10" wc	±1% of reading +/- 0.004" wc	Kanomax DALT 6900 S/N: 080439	5/2023	5/2024

Abbreviation List

A = Area (ft^2)	S.F. = Service Factor
AHU = Air Handling Unit	SF = Supply Fan
A_k = Effective Area	SP = Static Pressure
BHP = Brake Horsepower (IP) HP	SR = Supply Register
Btu = British Thermal Unit	T = Temperature
Btu/h = Btuh = BTUH = BTU/Hour	T_{ma} = Mixed Air Temperature
CL = Center Distance (used in belt formula)	T_{oa} = Outside Air Temperature
CD = Ceiling Diffuser	T_{ra} = Return Air Temperature
CF = Correction Factor	H = Head (in wc, ft wc, psi)
CFM = Volumetric Flow: Cubic Feet Per Minute	h = Enthalpy
CO2 = Carbon Dioxide	HP = Horsepower
CO = Carbon Monoxide	hr = Hour
C_v = Flow Constant	K_v = Flow constant (SI)
d = Diameter (in.) IP	kW = Kilowatt = 1000 Watts
Δ = Difference or Change (Final - Initial)	LAT = Leaving Air Temperature
DB = Dry Bulb	lb = Pounds
EA = Exhaust Air	LWT = Leaving Water Temperature
EAT = Entering Air Temperature	ma = Mixed Air
EF = Exhaust Fan	MIN = Minimum
Eff = Efficiency	MAX = Maximum
EG = Exhaust Grille	N/A = Not Applicable
ESP = External Static Pressure	NA = No Access
EWT = Entering Water Temperature	NL = Not Listed
°F = Degrees Fahrenheit, °F	NPSHA = Net Positive Suction Head Available
FPB = Fan Powered Box	NS = Not Specified
FLA = Full Load Amps	OA = Outside Air
fpm = Feet per Minute (fpm)	OAT = Outside Air Temperature
ft = Foot	PD = Sheave Pitch Diameter
gal = Gallons	P.D. = Pressure Drop
GPM = Gallons Per Minute (GPM)	PF = Power Factor
h = Enthalpy (BTU/lb dry air)	SG = Supply Grille
P = Pressure	SR = Supply Register
ppm = parts per million	TP = Total Pressure
psi = Pounds Per Square Inch	T_{ra} = Return Air Temperature
psid = PSI Differential	TS = Tip Speed (fpm) IP, (m/s) SI
r = Radius (in)	TSP = Total Static Pressure
$\%_{ra}$ = % of Return Air	V = Velocity
RA = Return Air	VAV = Variable Air Volume
RAT = Return Air Temperature	VD = Volume Damper
RF = Return Fan	VFD = Variable Frequency Drive
RG = Return Grille	W = Watt
RH = Relative Humidity	WB = Wet Bulb
RPM = Revolutions Per Minute	wg = wc = water gauge = water column
RTU = Roof Top Unit	WHP = Water Horsepower (IP)
SA = Supply Air	ω = Humidity Ratio


TYPICAL OF 4 AT KITCHEN COOK LINE 22X22 550
12X12 GREASE ACCESS DOOR ON BOTTOM OF DUCT WITH DAM, OR 10X6 ON SIDE. TYP OF 3.
855 CFM
880 CFM
EXISTING KITCHEN HOOD, SHIFTED ABOUT 5 FEET TO PLAN RIGHT. RECONNECT DUCTS TO FANS, KEEPING SAME SIZE FOR NEW DUCT SECTIONS.
RELOCATED THERMOSTATS FOR RTU'S-1, 2, 3 AND 4. THE THERMOSTATS FOR RTU'S-1, 2 AND 3 ARE REMOTE BULB. COORDINATE WITH OWNER FOR WHERE TO RELOCATE THEIR SENSORS.
SEAL OFF COMBUSTION AIR LOUVERS AIR TIGHT. USE MINIMUM R-8 CLOSED CELL ISOMERIC INSULATION SANWHICHED IN BETWEEN SHEET METAL ON THE INSIDE OF THE LOUVERS
REBALANCE EXISTING DIFFUSERS TO CFM SHOWN. TYPICAL
ROOF TOP GLYCOL COMPRESSORS. VERIFY TRUE LOCATION ON ARCHITECT'S DRAWINGS.
ROOF TOP ICE MACHINE CONDENSERS. VERIFY TRUE LOCATION ON ARCHITECT'S DRAWINGS
WATER HEATER VENTS THROUGH ROOF. SEE ROOF PLAN SHEET M1.2 FOR MORE
UP TO EF-5
UP TO DISHWASH FAN
UP TO EF-4
UP TO EF-3
UP TO EF-2
UP TO MUA-2
UP TO EF-1
UP TO RTU-4
UP TO MUA-1
UP TO RTU-1
UP TO RTU-3
UP TO RTU-2
MOUNT AT LEAST 14 FEET ABOVE FLOOR. INTENDED FOR 15745 CFM OF TRANSFER
PROVIDE CUBE CORE GRILLE ON END OF DUCT
TYPICAL OF 3 IN CEILING ABOVE SEATING FED FROM RTU-3
TYPICAL OF 6 IN BAR CEILING FED FROM RTU-3
RELIEF DUCT. SEE ROOF PLAN M1.2
TYPICAL OF 9 FOR RTU-1. EACH WITH 10" BRANCH FEED. EXISTING BRANCH RUNOUTS ARE 10" BY ASPEN COVE DESIGN. MOUNT NO LOWER THAN 14 FEET ABOVE FINISHED FLOOR
EQUIP WITH BACKDRAFT DAMPER WITH NEOPRENE COATED BLADES SO AIR CAN ENTER BATHROOM, NOT LEAVE IT
MOUNT DIFFUSER ON DUCT NO LOWER THAN 14 FEET ABOVE FLOOR
TYPICAL OF 10 FOR RTU-2, EACH WITH 10" BRANCH FEED. EXISTING BRANCH RUNOUTS ARE 10" BY ASPEN COVE DESIGN. MOUNT NO LOWER THAN 14 FEET ABOVE FINISHED FLOOR
FIREPIT VENT. SEE ROOF PLAN M1.2 FOR MORE INFORMATION
INSTALL FLY FANS. SEE SHEET M6.2 FOR SCHEDULE. SEE SHEETS A3.3 AND A7.3 FOR INSTALLATION DETAILS.
INSTALL GAS INFRARED HEATERS AT CEILING. SEE SHEET M6.2 FOR SCHEDULE. PROVIDE TRANSFORMER AND HANGING KIT. MOUNT AT 10 FEET ABOVE FLOOR AT 30° ANGLE
MOUNT IN TONGUE AND GROOVE CEILING
FIREPLACE VENT. SEE ROOF PLAN M1.2 FOR MORE INFORMATION
HEATER
MECHANICAL PLAN
SCALE: 1/4" = 1'-0"
23052-M-BLDG

HVAC RENOVATION

- NEW OR RELOCATED
- EXISTING TO REMAIN
- EXISTING TO REMAIN ENDS AND NEW OR RELOCATED BEGINS

KITCHEN AIR BALANCE:	
RTU-4 OUTSIDE AIR:	+385 CFM
DISHWASH EXHAUST:	-900 CFM
KITCHEN HOOD EXHAUST:	-6300 CFM
KITCHEN HOOD MAKEUP:	+5230 CFM
NET:	-1585 CFM

NEGATIVE PRESSURE IS MADE UP BY TRANSFER FROM DINING

BUILDING AIR BALANCE:	
KITCHEN:	-1585 CFM
BATHROOMS:	-500 CFM
DINING OUTSIDE AIR:	+4140 CFM
NET:	+2055 CFM

PRESSURE WILL BE RELIEVED VIA ROOF OPENING (SEE ROOF PLAN) AS WELL AS WINDOWS AND DOORS AND ENVELOPE LEAKAGE

MUCH OF THE DINING ROOM CEILING WILL BE MADE OPEN. THEREFORE
A. CLEAN, PRIME AND PAINT VISIBLE DUCTS AND AIR DEVICES, AND HANGERS, BOTH EXISTING AND NEW, COLOR BY ARCHITECT
B. KEEP VISIBLE DUCTS AS HIGH AS POSSIBLE. IF EXISTING DUCTS ARE BELOW 14 FEET ABOVE FLOOR, RAISE THEM.
C. ROUTE NEW SUPPLY AND RETURN DUCTS AS FIBERBOARD OR UNINSULATED GALV STEEL - EXTERNALLY INSULATED GALV STEEL IS NOT ALLOWED IN OPEN CEILING AREAS, NOR IS FLEX.

KEEP THE DUCT MOUNTED SMOKE DETECTORS IN THE SUPPLY OF MUA-1 AND IN THE SUPPLY AND RETURN OF RTU'S-1, 2, 3 AND 4.

BALANCING DAMPERS SHOWN IN EXISTING DUCTS ARE REQUIRED ONLY IF REMOVED OR NOT CURRENTLY THERE.

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TWIN PEAKS
EATS • DRINKS • SCENIC VIEWS

Project
302 BULLITT LN.
LOUISVILLE, KY 40222

CLIENT:
JEB FOOD GROUP LLC.
3001 HIGHWAY #121
EULESS, TX 76039

MiGre Engineers LLC
760 FLORIDA CENTRAL PARKWAY
SUITE 224
LONGWOOD, FL 32750
PH: 407.636.7999
PROJECT #: 23052

	Date	Issued for:
0	05/05/23	Review Set
0	05/15/23	Initial Permit

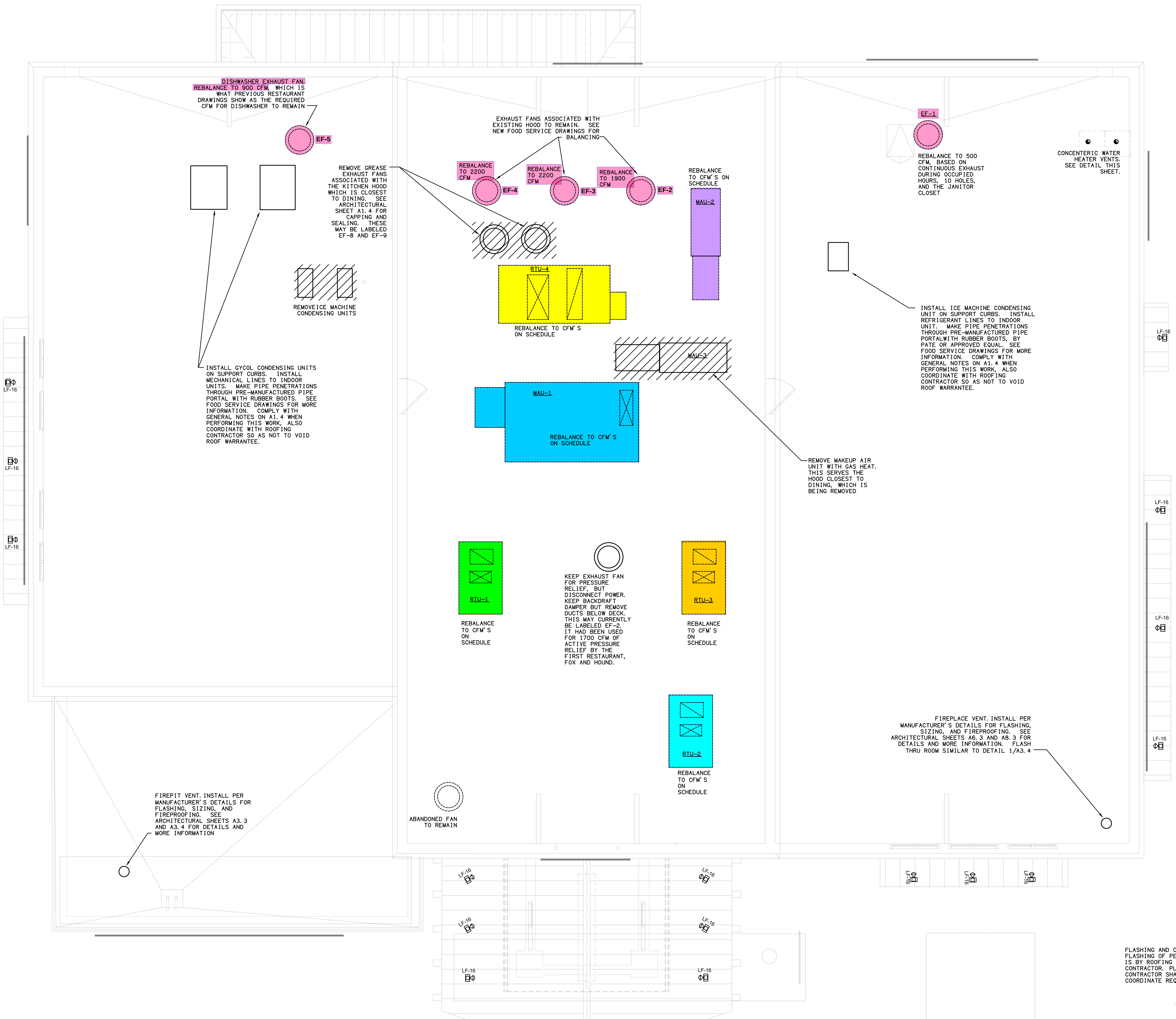
Job No.
2151500.108

Project Title
RENOVATIONS TO EXISTING BUILDING FOR: TWIN PEAKS RESTAURANT

Sheet Title
MECHANICAL PLAN

Sheet No.
M1.1

STATE OF KENTUCKY
GREG H. KLEBANOFF
28933
LICENSED
PROFESSIONAL ENGINEER



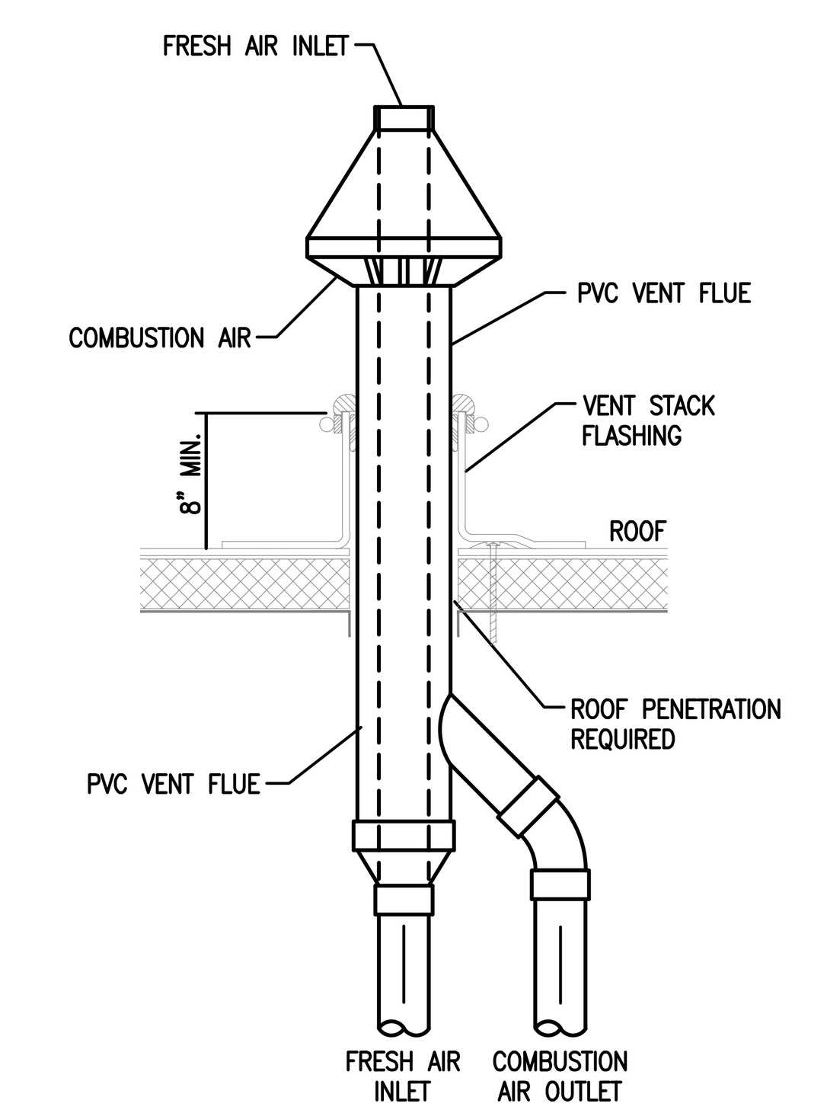
DISHWASHER EXHAUST FAN. REBALANCE TO 900 CFM, WHICH IS WHAT PREVIOUS RESTAURANT DRAWINGS SHOW AS THE REQUIRED CFM FOR DISHWASHER TO REMAIN
EF-5
EXHAUST FANS ASSOCIATED WITH EXISTING HOOD TO REMAIN. SEE NEW FOOD SERVICE DRAWINGS FOR BALANCING
REMOVE GREASE EXHAUST FANS ASSOCIATED WITH THE KITCHEN HOOD WHICH IS CLOSEST TO DINING. SEE ARCHITECTURAL SHEET A1.4 FOR CAPPING AND SEALING. THESE MAY BE LABELED EF-8 AND EF-9
REBALANCE TO 2200 CFM
EF-4
REBALANCE TO 2200 CFM
EF-3
REBALANCE TO 1900 CFM
EF-2
REBALANCE TO CFM'S ON SCHEDULE
MAU-2
EF-1
REBALANCE TO 500 CFM, BASED ON CONTINUOUS EXHAUST DURING OCCUPIED HOURS, 10 HOLES, AND THE JANITOR CLOSET
CONCENTERIC WATER HEATER VENTS. SEE DETAIL THIS SHEET.
REMOVEICE MACHINE CONDENSING UNITS
RTU-4
REBALANCE TO CFM'S ON SCHEDULE
MAU-3
INSTALL ICE MACHINE CONDENSING UNIT ON SUPPORT CURBS. INSTALL REFRIGERANT LINES TO INDOOR UNIT. MAKE PIPE PENETRATIONS THROUGH PRE-MANUFACTURED PIPE PORTALWITH RUBBER BOOTS, BY PATE OR APPROVED EQUAL. SEE FOOD SERVICE DRAWINGS FOR MORE INFORMATION. COMPLY WITH GENERAL NOTES ON A1.4 WHEN PERFORMING THIS WORK, ALSO COORDINATE WITH ROOFING CONTRACTOR SO AS TO VOID ROOF WARRANTEE.
INSTALL GYCOL CONDENSING UNITS ON SUPPORT CURBS. INSTALL MECHANICAL LINES TO INDOOR UNITS. MAKE PIPE PENETRATIONS THROUGH PRE-MANUFACTURED PIPE PORTAL WITH RUBBER BOOTS. SEE FOOD SERVICE DRAWINGS FOR MORE INFORMATION. COMPLY WITH GENERAL NOTES ON A1.4 WHEN PERFORMING THIS WORK, ALSO COORDINATE WITH ROOFING CONTRACTOR SO AS NOT TO VOID ROOF WARRANTEE.
MAU-1
REBALANCE TO CFM'S ON SCHEDULE
REMOVE MAKEUP AIR UNIT WITH GAS HEAT. THIS SERVES THE HOOD CLOSEST TO DINING, WHICH IS BEING REMOVED
LF-16
RTU-1
REBALANCE TO CFM'S ON SCHEDULE
KEEP EXHAUST FAN FOR PRESSURE RELIEF, BUT DISCONNECT POWER. KEEP BACKDRAFT DAMPER BUT REMOVE DUCTS BELOW DECK. THIS MAY CURRENTLY BE LABELED EF-2. IT HAD BEEN USED FOR 1700 CFM OF ACTIVE PRESSURE RELIEF BY THE FIRST RESTAURANT, FOX AND HOUND.
RTU-3
REBALANCE TO CFM'S ON SCHEDULE
FIREPLACE VENT. INSTALL PER MANUFACTURER'S DETAILS FOR FLASHING, SIZING, AND FIREPROOFING. SEE ARCHITECTURAL SHEETS A6.3 AND A8.3 FOR DETAILS AND MORE INFORMATION. FLASH THRU ROOM SIMILAR TO DETAIL 1/A3.4
RTU-2
REBALANCE TO CFM'S ON SCHEDULE
FIREPIT VENT. INSTALL PER MANUFACTURER'S DETAILS FOR FLASHING, SIZING, AND FIREPROOFING. SEE ARCHITECTURAL SHEETS A3.3 AND A3.4 FOR DETAILS AND MORE INFORMATION
ABANDONED FAN TO REMAIN

ROOF - MECHANICAL PLAN

SCALE: 1/4" = 1'-0" *23052-M-BLDG*

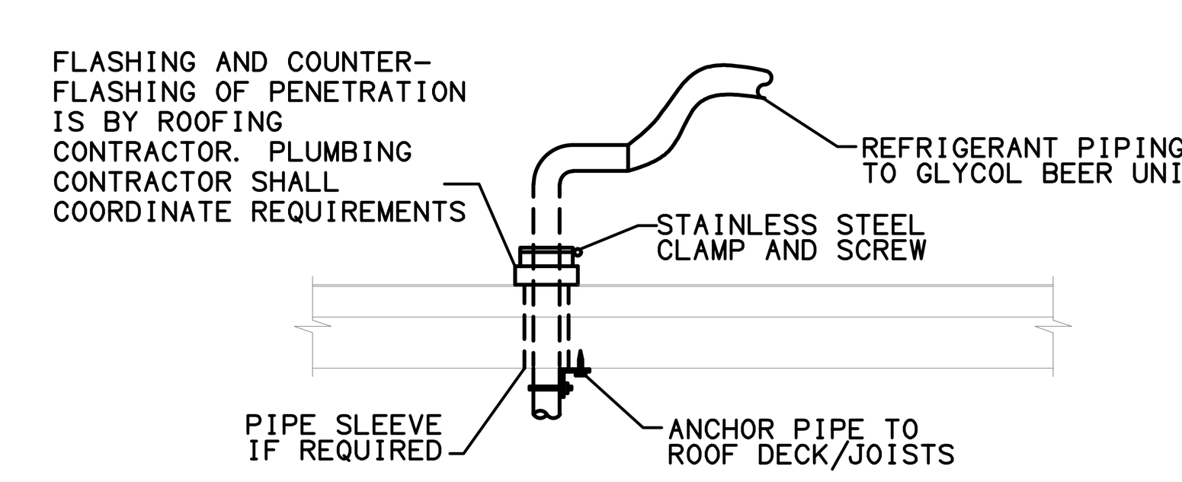
HVAC DEMO/RENO LEGEND

- NEW OR RELOCATED
- EXISTING TO BE REMOVED
- EXISTING TO REMAIN



CONCENTRIC FLUE

SCALE: N.T.S.



FLASHING AND COUNTER-FLASHING OF PENETRATION IS BY ROOFING CONTRACTOR. PLUMBING CONTRACTOR SHALL COORDINATE REQUIREMENTS
REFRIGERANT PIPING TO GLYCOL BEER UNIT
STAINLESS STEEL CLAMP AND SCREW
PIPE SLEEVE IF REQUIRED
ANCHOR PIPE TO ROOF DECK/JOISTS

ROOF PENETRATION FOR BEER LINES

SCALE: N.T.S.

FIELDSTONE ARCHITECTURE & ENGINEERING

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TWIN PEAKS EATS • DRINKS • SCENIC VIEWS

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2151500.108

Project Title
RENOVATIONS TO EXISTING BUILDING FOR: TWIN PEAKS RESTAURANT

Sheet Title
ROOF MECHANICAL PLAN

Sheet No.
M1.2

STATE OF KENTUCKY
GREG H. KLEBANOFF
28933
LICENSED PROFESSIONAL ENGINEER

National TAB

Project: Twin Peaks (Louisville, KY)

System/Unit: AHU/RTU

Asset: RTU-1 AREA:DINING

Unit Data		
	Design	**Actual**
MFG	NA	TRANE
Serial Num	-	192913538L
Model Num	NA	YSC092H3RMA03A1C1C1
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	40”X15”
Num PreFilter 1	-	4
PreFilter Size 1	-	24”X20”X2”

Motor Data		
	Design	**Actual**
Motor MFG	-	MARATHON
Frame	-	56HZ
Horsepower	-	3
Motor Rpm	-	1725
Phase	-	3
Rated Voltage	-	208
Rated Amperage	-	9.4
Service Factor	-	1.15

Test Data		
	Design	**Actual**
SF CFM	2700	3868
RA CFM	1520	2739
OA CFM	1180	1129
RL Voltage	-	213/214.1/214.5
RL Amperage	-	5.73/6.16/6.18
OA Damper Position	-	SET MANUALLY
Brake Horse Power	-	1.92

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.38”
Fan Suction SP	-	-0.74”
Fan Discharge SP	-	0.37”
Total ESP	-	0.75”
Fan Total SP	-	1.11”

Completed By: Jordan Best on 11/01/2023

Notes:
Unit above design CFM despite motor pulley being fully minimized. 5 Turns out.

Written By: Nick Payne on 11/08/2023

National TAB

Project:Twin Peaks (Louisville, KY)

AHU/RTU

Diffuser Supply (GRD)

RTU-1/DINING

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
1-1	DINING	S3	10	300	400	410	136.7
1-2	DINING	S3	10	300	443	408	136.0
1-3	DINING	S3	10	300	246	418	139.3
1-4	DINING	S3	10	300	437	427	142.3
1-5	DINING	S3	10	300	526	433	144.3
1-6	DINING	S3	10	300	476	438	146.0
1-7	DINING	S3	10	300	491	448	149.3
1-8	DINING	S3	10	300	466	428	142.7
1-9	DINING	S3	10	300	486	458	152.7
Total				2700	3971	3868	143.26%

Completed By: Jordan Best on 11/01/2023

National TAB

Project: Twin Peaks (Louisville, KY)

System/Unit: AHU/RTU

Asset: RTU-2 AREA:DINING

Unit Data		
	Design	**Actual**
MFG	NA	TRANE
Serial Num	-	191513901L
Model Num	NA	YSC120H3RMA03
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	40”X15”
Num PreFilter 1	-	4
PreFilter Size 1	-	24”X20”X2”

Motor Data		
	Design	**Actual**
Motor MFG	-	NA
Frame	-	NA
Horsepower	-	2.75
Motor Rpm	-	NA
Phase	-	3
Rated Voltage	-	208
Rated Amperage	-	7.3
Service Factor	-	NA

Test Data		
	Design	**Actual**
SF CFM	3585	3384
RA CFM	1850	2182
OA CFM	1735	1202
RL Voltage	-	214.2/213.2/214.1
RL Amperage	-	2.26/2.21/2.22
OA Damper Position	-	SET MANUALLY
Brake Horse Power	-	0.84

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.18”
Fan Suction SP	-	-0.39”
Fan Discharge SP	-	0.13”
Total ESP	-	0.31”
Fan Total SP	-	0.52”

Completed By: Jordan Best on 11/01/2023

Notes:
Recommend cleaning OA filter. OA set to 100% open.

Written By: Jordan Best on 11/01/2023

National TAB

Project:Twin Peaks (Louisville, KY)

AHU/RTU

Diffuser Supply (GRD)

RTU-2/DINING

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
2-1	DINING	S3	10	330	345	328	99.4
2-2	DINING	S3	10	330	347	302	91.5
2-3	DINING	S3	10	330	458	311	94.2
2-4	DINING	S3	10	330	371	321	97.3
2-5	DINING	S3	10	330	288	309	93.6
2-6	DINING	S3	10	330	341	311	94.2
2-7	DINING	S3	10	330	333	304	92.1
2-8	DINING	S3	10	330	23	299	90.6
2-9	DINING	S3	10	330	326	318	96.4
2-10	DINING	S3	10	330	307	309	93.6
2-11	CORRIDOR	S1	5	60	59	62	103.3
2-12	MENS RR	S1	5	60	60	58	96.7
2-13	WOMENS RR	S1	7	165	71	152	92.1
Total				3585	3329	3384	94.39%

Completed By: Jordan Best on 11/01/2023

National TAB

Project: Twin Peaks (Louisville, KY)

System/Unit: AHU/RTU

Asset: RTU-3 AREA:VESTIBULE

Unit Data		
	Design	**Actual**
MFG	NA	TRANE
Serial Num	-	192611638L
Model Num	NA	YSC102H3RMA
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	40”X15”
Num PreFilter 1	-	4
PreFilter Size 1	-	24”X20”X2”

Motor Data		
	Design	**Actual**
Motor MFG	-	MARATHON
Frame	-	56
Horsepower	-	2
Motor Rpm	-	1725
Phase	-	3
Rated Voltage	-	200-230
Rated Amperage	-	6.3
Service Factor	-	1.15

Test Data		
	Design	**Actual**
SF CFM	2855	3059
RA CFM	1630	2251
OA CFM	1225	808
RL Voltage	-	212.6/213.7/214
RL Amperage	-	4.59/5.12/4.71
OA Damper Position	-	SET MANUALLY
Brake Horse Power	-	1.52

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.29”
Fan Suction SP	-	-0.59”
Fan Discharge SP	-	0.25”
Total ESP	-	0.54”
Fan Total SP	-	0.84”

Completed By: Jordan Best on 11/01/2023

Notes:
Motor Sheave Set Pt 5 Turns out. Recommend cleaning OA filter, debris restricting airflow causing low OA. OA set 100% open.

Written By: Jordan Best on 11/01/2023

National TAB

Project:Twin Peaks (Louisville, KY)

AHU/RTU

Diffuser Supply (GRD)

RTU-3/VESTIBULE

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
3-1	BAR	S3	8	165	252	181	109.7
3-2	BAR	S3	8	165	177	174	105.5
3-3	BAR	S3	8	205	148	214	104.4
3-4	BAR	S3	8	230	262	243	105.7
3-5	BAR	S3	8	205	164	216	105.4
3-6	BAR	S3	8	205	186	209	102.0
3-7	BAR	S3	8	205	247	223	108.8
3-8	VESTIBULE	S3	10	335	186	352	105.1
3-9	BAR	S3	10	330	441	344	104.2
3-10	BAR	S3	8	205	191	211	102.9
3-11	BAR	S3	8	165	265	180	109.1
3-12	BAR	S3	8	235	473	249	106.0
3-13	BAR	S3	8	205	217	225	109.8
Total				2855	3209	3021	105.81%

Completed By: Jordan Best on 11/01/2023

National TAB

Project: Twin Peaks (Louisville, KY)

System/Unit: AHU/RTU

Asset: RTU-4 AREA:COOK LINE

Unit Data		
	Design	**Actual**
MFG	NA	TRANE
Serial Num	-	516100546D
Model Num	NA	YCD151C3HBBB
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	27”X21”
Num PreFilter 1	-	8
PreFilter Size 1	-	16”X20”X2”

Motor Data		
	Design	**Actual**
Motor MFG	-	MARATHON
Frame	-	56HZ
Horsepower	-	5
Motor Rpm	-	3450
Phase	-	3
Rated Voltage	-	208
Rated Amperage	-	13.4
Service Factor	-	1.15

Test Data		
	Design	**Actual**
SF CFM	4730	4444
RA CFM	4350	4444
OA CFM	380	0
RL Voltage	-	214.3/214.6/212.8
RL Amperage	-	9.09/8.53/8.72
OA Damper Position	-	NA
Brake Horse Power	-	3.27

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.61”
Fan Suction SP	-	-0.82”
Fan Discharge SP	-	NA
Total ESP	-	NA
Fan Total SP	-	NA

Completed By: Jordan Best on 11/01/2023

Notes:
Unit is not equipped with OA.

Written By: Jordan Best on 11/01/2023

National TAB

Project:Twin Peaks (Louisville, KY)

AHU/RTU

Diffuser Supply (GRD)

RTU-4/COOK LINE

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
4-1	COOK LINE	S4	12	550	502	541	98.4
4-2	DISHWASH	EXISTING		350	330	320	91.4
4-3	DISHWASH	EXISTING		350	357	317	90.6
4-4	KITCHEN	EXISTING		100	195	91	91.0
4-5	KITCHEN	EXISTING		450	327	408	90.7
4-6	KITCHEN	S2	12X12	265	439	267	100.8
4-7	COOK LINE	S4	12	550	346	507	92.2
4-8	COOK LINE	S4	12	550	322	518	94.2
4-9	STORAGE	S2	6	80	50	77	96.3
4-10	OFFICE	S2	6	80	55	73	91.3
4-11	OFFICE	S2	5	60	75	62	103.3
4-12	KITCHEN	S2	12X12	265	433	252	95.1
4-13	COOK LINE	S4	12	550	360	496	90.2
4-14	PREP	S2	9	265	307	242	91.3
4-15	PREP	S2	9	265	306	273	103.0
Total				4730	4404	4444	93.95%

Completed By: Jordan Best on 11/01/2023

National TAB

Project: Twin Peaks (Louisville, KY)

System/Unit: FAN - Supply

Asset: MUA-1 AREA:RTU-3

Unit Data		
	Design	**Actual**
MFG	NA	TRANE
Model Num	NA	FADA0516FB04002
Serial Num	-	T05C14943
Type	GAS FIRED	GAS FIRED
Configuration	-	VERTICAL
Num Filters Size 1	-	6
Filter Size 1	-	16”X22”X2”

Test Data		
	Design	**Actual**
CFM	4140	3426
SF RPM	-	758
RL Voltage	-	NA
RL Amperage	-	NA
Suction ESP	-	-1.0”
Discharge ESP	-	NA
Total ESP	-	NA
Brake Horse Power	-	NA

Motor Data		
	Design	**Actual**
Motor MFG	-	BALDOR
Frame	-	184T
Horsepower	-	5
Motor Rpm	-	1750
Phase	-	3
Voltage (rated)	-	200
Amperage (rated)	-	14.9
Service Factor	-	1.15

Drive Data		
	Design	**Actual**
Motor Sheave Size	-	BK47-1 1/8
Motor Bore Size	-	1 -1/8
Motor Sheave SetPt	-	FIXED SHEAVE PULLEY
Fan Sheave Size	-	AK94H
Fan Sheave Bore	-	AK94H
Belt CL Distance	-	21.25”
Num of Belts	-	1
Belt Size	-	A61

Completed By: Jordan Best on 11/01/2023

Notes:
Unable to adjust motor sheave set point due to fixed pulley. No VFD to adjust fan speed. Unable to access motor wiring to read volts and amps. Unable to access supply duct to measure discharge pressure.

Written By: Jordan Best on 11/01/2023

National TAB

Project: Twin Peaks (Louisville, KY)

System/Unit: FAN - Supply

Asset: MUA-2 AREA:KITCHEN HOOD

Unit Data		
	Design	**Actual**
MFG	NA	CAPTIVEAIRE
Model Num	NA	A2-D.500-G15
Serial Num	-	1540075
Type	GAS FIRED	GAS FIRED
Configuration	-	VERTICAL
Num Filters Size 1	-	3
Filter Size 1	-	25”X20”X2”

Test Data		
	Design	**Actual**
CFM	5230	4084
SF RPM	-	1063
RL Voltage	-	208.5/207.7/207.6
RL Amperage	-	10.27/10.18/10.32
Suction ESP	-	-1.0”
Discharge ESP	-	NA
Total ESP	-	NA
Brake Horse Power	-	3.62

Motor Data		
	Design	**Actual**
Motor MFG	-	NEMA
Frame	-	184T
Horsepower	-	5
Motor Rpm	-	1755
Phase	-	3
Voltage (rated)	-	208
Amperage (rated)	-	14.18
Service Factor	-	1.15

Drive Data		
	Design	**Actual**
Motor Sheave Size	-	2VP42X1 1/8
Motor Bore Size	-	2VP42X1
Motor Sheave SetPt	-	1 TURN OUT
Fan Sheave Size	-	7”
Fan Sheave Bore	-	1”
Belt CL Distance	-	19”
Num of Belts	-	2
Belt Size	-	BX51

Completed By: Jordan Best on 11/01/2023

Notes:
Unit below design CFM despite fan running at highest capacity. Unable to access supply duct to read discharge pressure.

Written By: Jordan Best on 11/01/2023

National TAB

Project: Twin Peaks (Louisville, KY)

System/Unit: FAN - Exhaust

Asset: EF-1 AREA:WOMENS RR

Unit Data		
	Design	**Actual**
MFG	NA	CAPTIVE AIRE
Model Num	NA	DU33HFA
Serial Num	-	327016
Type	-	UPBLAST

Motor Data		
	Design	**Actual**
Motor MFG	-	US MOTORS
Frame	-	48Y
Horsepower	-	0.33
Motor Rpm	-	1650
Phase	-	1
Voltage (rated)	-	115
Amperage (rated)	-	4
Service Factor	-	NL

Test Data		
	Design	**Actual**
CFM	500	596
Fan RPM	-	NA
RL Voltage	-	NA
RL Amperage	-	3.78/3.92
Suction ESP	-	-0.30”
Discharge ESP	-	ATM
Total ESP	-	0.30”
Brake Horse Power	-	0.31

Completed By: Jordan Best on 11/01/2023

Notes:
Speed controller turned to lowest setting. Unable to read volts and amps safely.

Written By: Jordan Best on 11/01/2023

National TAB

Project:Twin Peaks (Louisville, KY)

FAN - Exhaust

Diffuser Ret/Exh (GRD)

EF-1/WOMENS RR

Asset								
Asset Name	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
E1-1	E1	12X12	300	1	282	282	282	94.0
E1-2	E1	12X12	200	1	314	314	314	157.0
Total			500		596	596	596	119.2%

Completed By: Jordan Best on 11/01/2023

National TAB

Project: Twin Peaks (Louisville, KY)

System/Unit: FAN - Exhaust

Asset: EF-2 AREA:EXISTING HOOD

Unit Data		
	Design	**Actual**
MFG	NA	CAPTIVE AIRE
Model Num	NA	DU33HFA
Serial Num	-	327016
Type	-	UPBLAST

Motor Data		
	Design	**Actual**
Motor MFG	-	A.O SMITH
Frame	-	56
Horsepower	-	0.5
Motor Rpm	-	1725
Phase	-	3
Voltage (rated)	-	200-230
Amperage (rated)	-	2.6
Service Factor	-	1.25

Drive Data		
	Design	**Actual**
Motor Sheave Size	-	3.25”
Motor Bore Size	-	0.625”
Motor Sheave SetPt	-	0 TURNS OUT
Fan Sheave Size	-	4.5”
Fan Sheave Bore	-	0.75”
Belt CL Distance	-	6.25”
Num of Belts	-	1
Belt Size	-	4L240

Test Data		
	Design	**Actual**
CFM	1900	1811
Fan RPM	-	1160
RL Voltage	-	NA
RL Amperage	-	NA
Suction ESP	-	-0.57”
Discharge ESP	-	ATM
Total ESP	-	-0.57”
Brake Horse Power	-	NA

Completed By: Jordan Best on 11/01/2023

Notes:
Unable to read volts and amps safely.

Written By: Jordan Best on 11/01/2023

National TAB

Project: Twin Peaks (Louisville, KY)

System/Unit: FAN - Exhaust

Asset: EF-3 AREA:EXISTING HOOD

Unit Data		
	Design	**Actual**
MFG	NA	CAPTIVE AIRE
Model Num	NA	NCA14FA
Serial Num	-	327016
Type	-	UPBLAST

Motor Data		
	Design	**Actual**
Motor MFG	-	A.O SMITH
Frame	-	56
Horsepower	-	0.5
Motor Rpm	-	1725
Phase	-	3
Voltage (rated)	-	200-230
Amperage (rated)	-	2.6
Service Factor	-	1.25

Drive Data		
	Design	**Actual**
Motor Sheave Size	-	3.25”
Motor Bore Size	-	0.625”
Motor Sheave SetPt	-	0 TURNS OUT
Fan Sheave Size	-	4.5”
Fan Sheave Bore	-	0.75”
Belt CL Distance	-	5.75”
Num of Belts	-	1
Belt Size	-	4L240

Test Data		
	Design	**Actual**
CFM	2200	1469
Fan RPM	-	859
RL Voltage	-	NA
RL Amperage	-	NA
Suction ESP	-	0.30”
Discharge ESP	-	ATM
Total ESP	-	0.30”
Brake Horse Power	-	NA

Completed By: Jordan Best on 11/01/2023

Notes:
Unable to read volts and amps safely.

Written By: Jordan Best on 11/01/2023

National TAB

Project: Twin Peaks (Louisville, KY)

System/Unit: FAN - Exhaust

Asset: EF-4 AREA:EXISTING HOOD

Unit Data		
	Design	**Actual**
MFG	NA	CAPTIVE AIRE
Model Num	NA	NCA14FA
Serial Num	-	327016
Type	-	UPBLAST

Motor Data		
	Design	**Actual**
Motor MFG	-	A.O SMITH
Frame	-	56
Horsepower	-	0.5
Motor Rpm	-	1725
Phase	-	3
Voltage (rated)	-	200-230
Amperage (rated)	-	2.6
Service Factor	-	1.25

Drive Data		
	Design	**Actual**
Motor Sheave Size	-	3.75”
Motor Bore Size	-	0.625”
Motor Sheave SetPt	-	0 TURNS OUT
Fan Sheave Size	-	4.25”
Fan Sheave Bore	-	0.625”
Belt CL Distance	-	5.5”
Num of Belts	-	1
Belt Size	-	4L240

Test Data		
	Design	**Actual**
CFM	2200	1560
Fan RPM	-	871
RL Voltage	-	NA
RL Amperage	-	NA
Suction ESP	-	0.32”
Discharge ESP	-	ATM
Total ESP	-	0.32”
Brake Horse Power	-	NA

Completed By: Jordan Best on 11/01/2023

Notes:
Unable to read volts and amps safely.

Written By: Jordan Best on 11/01/2023

National TAB

Project: Twin Peaks (Louisville, KY)

System/Unit: FAN - Exhaust

Asset: EF-5 AREA:EXISTING DISHWASH

Unit Data		
	Design	**Actual**
MFG	NA	NL
Model Num	NA	NL
Serial Num	-	NL
Type	-	UPBLAST

Motor Data		
	Design	**Actual**
Motor MFG	-	WEG
Frame	-	NL
Horsepower	-	0.25
Motor Rpm	-	1735
Phase	-	1
Voltage (rated)	-	115
Amperage (rated)	-	5.4
Service Factor	-	1.34

Drive Data		
	Design	**Actual**
Motor Sheave Size	-	3”
Motor Bore Size	-	0.5”
Motor Sheave SetPt	-	0 TURNS OUT
Fan Sheave Size	-	5”
Fan Sheave Bore	-	0.75”
Belt CL Distance	-	5.5”
Num of Belts	-	1
Belt Size	-	4L240

Test Data		
	Design	**Actual**
CFM	900	915
Fan RPM	-	1051
RL Voltage	-	NA
RL Amperage	-	5.1/5.38
Suction ESP	-	-0.40”
Discharge ESP	-	ATM
Total ESP	-	-0.40”
Brake Horse Power	-	0.24

Completed By: Jordan Best on 11/01/2023

Notes:
Unable to read voltage safely.

Written By: Jordan Best on 11/01/2023

National TAB

Project: Twin Peaks (Louisville, KY)

System/Unit: Kitchen Hood Type I

Asset: HOOD1 AREA:COOKLINE

Unit Data		
	Design	**Actual**
MFG	NA	CAPTIVE AIRE
Model Num	NA	NL
Job / Serial Num	-	NL
Type	-	TYPE I CANOPY
Hood length	-	306”
Hood Width	-	54”

Test Data Supply		
	Design	**Actual**
CFM	5230	4084

Test Data Exhaust		
	Design	**Actual**
Filter Type	-	CAPTRATE SOLO
Filter Size 1	-	16”X16”
Filter Qty 1	-	19
Filter AK factor size 1	-	1.62
Filter Total AK Area	-	30.78
Filter1 FPM	-	139
Filter2 FPM	-	157
Filter3 FPM	-	198
Filter4 FPM	-	178
Filter5 FPM	-	146
Filter6 FPM	-	145
Filter7 FPM	-	151
Filter8 FPM	-	146
Filter9 FPM	-	167
Filter10 FPM	-	169
Filter11 FPM	-	149
Filter12 FPM	-	125
Filter Ave FPM(corr)	-	157
CFM	6300	4832

Cooking Equipment		
	Design	**Actual**
Item 1	-	FRYER
Item 2	-	FRYER
Item 3	-	GRILL
Item 4	-	STOVE TOP

Completed By: Jordan Best on 11/01/2023

Notes:
Hood underserved by corresponding EF's. Fans are running at highest capacity. Inspected grease duct for obstructions and found none. MUA also below design CFM despite running at highest capacity.

Written By: Jordan Best on 11/01/2023