



**NATIONAL ENVIRONMENTAL BALANCING BUREAU  
CERTIFIED TEST, ADJUST, AND BALANCE REPORT**

by **pb**pro balance

**NEBB CERTIFICATION NUMBER 2851**

October 19, 2017

**John Knox Meadows Building**

Lee's Summit, Missouri

**ARCHITECT:** ng

**CITY/STATE:** ng

**ENGINEER:** ng

**CITY/STATE:** ng

**HVAC CONTRACTOR:** Greenfield Energy Group

**CITY/STATE:** Lee's summit, Missouri

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# Project Sheet

Project Name: John Knox Meadows Building

Date Started: Thursday, October 19, 2017

Date Finished: Thursday, October 19, 2017

Field Tech(s): David Yocum

Project Supervisor: Rick West

## NATIONAL ENVIRONMENTAL BALANCING BUREAU PROJECT CERTIFICATION

**PROJECT:** John Knox Meadows Building  
Lee's Summit, Missouri

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 NEBB Procedural Standard for Testing, Adjusting and Balancing of Environmental Systems.

The measurements shown and information given, in this report are certified to be accurate and complete, at the time and the date information was gathered.

Any variances from design quantities, which exceed NEBB tolerances, are noted in the TAB report Summary.

*Submitted by:*

PRO BALANCE, INC.  
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*NEBB Supervisor:*

Rick West



*Rick C. West*

*Date:*

October 19, 2017

**Equipment Calibration Log**

PROJECT: John Knox Meadows Building

<i>INSTRUMENT/SERIAL NUMBER</i>	<i>APPLICATION</i>	<i>CALIBRATION TEST DATE</i>	<i>RE CALIBRATION DUE DATE</i>
Shortridge ADM 860/M11838	Velocity, pressures, flow hood, temp.	October 18, 2016	October 18, 2017
Shortridge ADM 860/M92988	Velocity, pressures, flow hood, temp.	March 21, 2017	March 21, 2018
Check-Line PLT-5000/B1298510P	Digital RPM Measurement	December 20, 2016	December 20, 2017
Amprobe Swire 21030T AC TRMS/1311057224	Amperage/Voltage Measurement	April 21, 2017	April 21, 2018
Cooper SRH77A / 100412005	DB/WB Temperature Measurement	April 21, 2017	April 21, 2018
Alnor/HM670/71025017	Water Balance Differential Meter	August 1, 2016	August 1, 2017
Alnor/HM675/71651066	Water Balance Differential Meter	April 20, 2017	April 20, 2018
Alnor/HM675/71509014	Water Balance Differential Meter	March 9, 2017	March 9, 2018
Shortridge ADM 860/M96106	Velocity, pressures, flow hood, temp.	November 11, 2016	November 11, 2017
Shortridge ADM 860C/M12360	Velocity, pressures, flow hood, temp.	November 1, 2016	November 1, 2017
Shortridge ADM 860/M93042	Velocity, pressures, flow hood, temp.	March 21, 2017	March 21, 2018

## **Report Summary & Nomenclatures**

**PROJECT:** John Knox Meadows Building

Report Summary : Pro Balance tested kitchen exhaust fan at the grease filters on hood #1.  
Fan is operating at 95% of design.  
Grease filters face are within tolerance.

AMP= Amperes	MAT= Mixed Air Temperature (°F)
BTU= British Thermal Unit	NA= Not Applicable
MBH= 1000 BTUs Per Hour	NG= Not Given
CD= Ceiling Diffuser	OA= Outside Air
CFM= Cubic Feet Per Minute	OAT= Outside Air Temperature (°F)
DMP= Damper	PH= Phase
°F= Degrees Fahrenheit	PSI= Pounds Per Square Inch
DIA= Diameter	RLF= Relief
ΔP= Differential Pressure	RA= Return Air
DB= Dry Bulb (°F)	RAT= Return Air Temperature (°F)
EAT= Entering Air Temperature (°F)	RPM= Revolutions Per Minute
EXH= Exhaust	S.F.= Service Factor
EA= Exhaust Air	SCFM= Standard Cubic Feet Per Minute
ESP= External SP ("WG)	SP= Static Pressure ("WG)
EWT= Entering Water Temp (°F)	SA= Supply Air
FT= Feet	SAT= Supply Air Temperature (°F)
FPM= Feet Per Minute	SQFT= Square Feet
HZ= Hertz	ΔT= Temperature Difference
IN= Inches	TSP= Total SP ("WG)
kW= Kilowatt	VFD= Variable Frequency Drive
LAT= Leaving Air Temperature (°F)	WG= Water Gauge
LWT= Leaving Water Temp (°F)	WB= Wet Bulb (°F)

**Rectangular Duct Traverse/Surface Velocity Report**

PROJECT: John Knox Meadows Building  
SYSTEM: KEF-1

LOCATION OF TRAVERSE	MEASURING DEVICE	SP	AIR TEMP	ALTITUDE	CORRECTION FACTOR
grease filters	velgride	na	70.0	Standard	1.00

DUCT SIZE			DESIGN DATA		ACTUAL DATA	
W X H: 155.00	X	18.00	SCFM:	3440	SCFM:	3273
LINER: 0.00		SQFT: 19.38	FPM:	178	CFM:	3440
			FPM:	169	CFM:	3273

	1	2	3	4	5	6	7	8	9	10	11	12	13
1	158	163	175	186	169	178	155	158	166	188	171	157	172
2													
3													
4													
5													
6													
7													
8													
9													
10													
11													
12													
13													

<b>VELOCITIES TOTAL</b>		<b>NO. OF POINTS</b>		<b>AVG. FPM</b>
	2196	/	13	= 169

Remarks: