

## Submittal Form

ARCHITECT

ENGINEER

## AHSC

(Project)

Submittal No. 001

### Description: Testing and Balancing

**Date:** 07/17/17 **Return By:** 07/31/17

Division: 23

Section: 23 05 90

Andersen

Subcontract/Supplier:

The review by O'Neill Walsh Community Builders ("OWCB") of the above Submittal shall not relieve Subcontractor/Supplier from any of its obligations under the agreement with OWCB nor give rise to any claim in favor of the Subcontractor/Supplier or third parties against OWCB or Owner.

By: Logan Bright

O'Neill Walsh Community Builders

Notes:

Notes:

Notes:

No Exception taken.

Checking is only for general conformance with the design concept of the project and general compliance with the information given in the contact documents. Any action shown is subject to the requirements of the plans and specifications. Contractor is responsible for: Dimensions, which shall be confirmed and correlated at the job site; fabrication processes and techniques of construction; coordination of his work with that of all other trades; and the satisfactory performance of his work.

MFIA, Inc. Consulting Engineers

By: Takako Baker, Date: 7/24/17

See attached for submittal letter.



**"Your Green Heating & Cooling Professionals  
Dedicated to Serving Your and Your Community"**

## **HVAC Submittals**

**Asian Health & Service Center  
9005 SE Foster Rd.  
Portland, OR 97266**

**General Contractor  
O'Neill / Walsh Community Builders  
2905 SW First Avenue  
Portland, OR 97201**

**Submitted By  
Andersen Mechanical  
16285 SW 85<sup>th</sup> Ave, Suite 410  
Tigard, OR 97224**



"Your Green Heating & Cooling Professionals  
Dedicated to Serving Your and Your Community"

## HVAC Submittal Index

<u>23 05 00</u>	<u>Common HVAC Materials and Methods</u>
<u>23 05 48</u>	<u>Mechanical Sound &amp; Vibration Control</u>
<u>23 05 90</u>	<u>Testing, Adjusting and Balancing</u>
<u>23 07 00</u>	<u>HVAC Insulation</u>
<u>23 23 00</u>	<u>Refrigerant Piping System</u>
<u>23 30 48</u>	<u>Air Distribution</u>
<u>23 34 90</u>	<u>HVAC Fans</u>
<u>23 74 00</u>	<u>Packaged HVAC Units</u>
<u>23 77 00</u>	<u>VRV Heat Recovery</u>
<u>23 80 00</u>	<u>Terminal HVAC Equipment</u>



23\_05\_90

## Testing, Adjusting, and Balancing for HVAC

# QUALIFICATION SUBMITTAL PACKAGE

Submittal Data For

HVAC Systems Testing, Adjusting & Balancing

On

Asian Health & Services Center

Architect

Holst Architecture

Mechanical Engineer

MFIA, Inc. Consulting Engineers

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## INTRODUCTION

Accurate Balancing Agency Inc. is a certified third party TAB firm which was incorporated in 1990. We have developed a reputation as a trusted team member on commercial, industrial, and institutional projects ranging from small tenant improvements to large industrial projects. Our technicians bring over 80 years of combined TAB experience to our clients.

At Accurate Balancing Agency our technicians perform TAB services in accordance with project plans and specifications as well as the National Environmental Balancing Bureau (NEBB) procedural standards. We also reference the Associated Air Balance Council (AABC) manuals as well as the Sheet Metal and Air Conditioning Contractors National Association (SMACNA) guidelines. Accurate Balancing Agency carries the following certifications:

- We are NEBB Certified in Air and Water Testing, Adjusting, and Balancing.
- We are NEBB Certified in Sound and Vibration Measurement.
- We participate in the ABC Safety Training and Evaluation Process Program.
- All Technicians carry OSHA 10 or OSHA 30 Accreditation and are Lift Certified.

We appreciate you taking the time to review our submittal package. Feel free to contact us with any questions you might have with regard to our services.

Sincerely,

E. Michael May, Jr.  
President/NEBB Certified TAB Professional  
Accurate Balancing Agency



### ABA VISION STATEMENT

ABA is a leading provider of HVAC testing, adjusting, and balancing services in the Pacific Northwest; optimizing the comfort and efficiency of commercial, industrial, and institutional buildings. We foster trusted partnerships within the construction industry by focusing on competency, communication, and honesty. Our team is highly trained, well equipped, and tenacious in meeting the expectations of our clients. Our employees are the strength of our organization; we value their input and provide a superior work environment with opportunities for advancement.

## **SERVICES PROVIDED**

Accurate Balancing Agency provides the following services:

- Comprehensive third party testing, adjusting, and balancing of air and water systems. This service is provided to mechanical contractors, general contractors, as well as directly to building owners. All services are performed in accordance to project plans and specifications and to the NEBB procedural standards.
- Thorough surveys of existing building conditions including current air and water flows and fresh air introduction data.
- Rebalancing of existing installations to restore or improve building comfort.
- Certified Duct Leakage Testing in accordance with current SMACNA procedural standards.
- We are certified in the field of Sound and Vibration Testing and perform this service in accordance with NEBB procedural standards.
- Fume Hood Testing and Certification services are available for new as well as existing installations.
- Consultation services are available for specialized troubleshooting of all HVAC deficiencies.





### Certification

THIS IS TO CERTIFY THAT

*Accurate Balancing Agency, Inc.*

HAS MET ALL REQUIREMENTS FOR NEBB CERTIFICATION  
IN THE FOLLOWING DISCIPLINE

*Testing Adjusting and Balancing of Environmental Systems*

March 31, 2019

Expiration Date

3177

NEBB Certification Number

FOR THE NEBB BOARD OF DIRECTORS

*Sam P. Kunk*

NEBB President

*Donald E. Hill*

NEBB President-Elect



### Certification

THIS IS TO CERTIFY THAT

*Accurate Balancing Agency, Inc.*

HAS MET ALL REQUIREMENTS FOR NEBB CERTIFICATION  
IN THE FOLLOWING DISCIPLINE

*Sound Measurement*

March 31, 2019

Expiration Date

3177

NEBB Certification Number

FOR THE NEBB BOARD OF DIRECTORS

*Sam P. Kunk*

NEBB President

*Donald E. Hill*

NEBB President-Elect



### Certification

THIS IS TO CERTIFY THAT

*Accurate Balancing Agency, Inc.*

HAS MET ALL REQUIREMENTS FOR NEBB CERTIFICATION  
IN THE FOLLOWING DISCIPLINE

*Vibration Measurement*

March 31, 2019

Expiration Date

3177

NEBB Certification Number

FOR THE NEBB BOARD OF DIRECTORS

*Sam P. Kunk*

NEBB President

*Donald E. Hill*

NEBB President-Elect



## NEBB Certification Board

NEBB Certified Professional

*Edward M. May, Jr.*

HAS MET ALL THE NEBB REQUIREMENTS FOR  
NEBB CERTIFIED PROFESSIONAL STATUS IN

*Testing, Adjusting and Balancing of Environmental Systems*

This Certificate, as well as individual affiliation with a NEBB Certified Firm and associated NEBB Certification Stamp are REQUIRED to provide a NEBB Certified Report. Participation in the NEBB Quality Assurance Program requires the Certificate holder to be affiliated with a NEBB Certified Firm.

March 31, 2019

Expiration Date

23188

NEBB Certificate Number

*Stanley J. Fleischer*

NEBB Certification Board Chairman

*Gyonia Hueth*

NEBB Certification Director

The NEBB Certification Board retains sole ownership of all certificates. The NEBB Certification Board Policy Manual governs use of this certificate.



## NEBB Certification Board

NEBB Certified Professional

*Edward M. May, Jr.*

HAS MET ALL THE NEBB REQUIREMENTS FOR  
NEBB CERTIFIED PROFESSIONAL STATUS IN

*Sound Measurement*

This Certificate, as well as individual affiliation with a NEBB Certified Firm and associated NEBB Certification Stamp are REQUIRED to provide a NEBB Certified Report. Participation in the NEBB Quality Assurance Program requires that the holder of this certification also be affiliated with a NEBB Certified Firm.

March 31, 2019

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NEBB Certification Director

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## NEBB Certification Board

NEBB Certified Professional

*Edward M. May, Jr.*

HAS MET ALL THE NEBB REQUIREMENTS FOR  
NEBB CERTIFIED PROFESSIONAL STATUS IN

*Vibration Measurement*

This Certificate, as well as individual affiliation with a NEBB Certified Firm and associated NEBB Certification Stamp are REQUIRED to provide a NEBB Certified Report. Participation in the NEBB Quality Assurance Program requires that the holder of this certification also be affiliated with a NEBB Certified Firm.

March 31, 2019

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NEBB Certification Director

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## NEBB Certification Board

NEBB Certified Technician

*Mathew Spingler*



HAS MET ALL THE NEBB REQUIREMENTS FOR  
NEBB CERTIFIED TECHNICIAN STATUS IN

*Testing, Adjusting and Balancing of Environmental Systems*

This Certificate, as well as individual affiliation with a NEBB Certified Firm and associated NEBB Certification Stamp are REQUIRED to provide a NEBB Certified Report. Participation in the NEBB Quality Assurance Program requires the Certificate holder be affiliated with a NEBB Certified Firm.

March 31, 2019

Expiration Date

21099

NEBB Certificate Number

*Stanley J. Blawie*  
NEBB Certification Board Chairman

*Lynne A. Smith*  
NEBB Certification Director

The NEBB Certification Board retains sole ownership of all certificates. The NEBB Certification Board Policy Manual governs use of this certificate.



## NEBB Certification Board

NEBB Certified Technician

*Thomas Takemoto*



HAS MET ALL THE NEBB REQUIREMENTS FOR  
NEBB CERTIFIED TECHNICIAN STATUS IN

*Testing, Adjusting and Balancing of Environmental Systems*

This Certificate, as well as individual affiliation with a NEBB Certified Firm and associated NEBB Certification Stamp are REQUIRED to provide a NEBB Certified Report. Participation in the NEBB Quality Assurance Program requires the Certificate holder be affiliated with a NEBB Certified Firm.

March 31, 2019

Expiration Date

21163

NEBB Certificate Number

*Stanley J. Blawie*  
NEBB Certification Board Chairman

*Lynne A. Smith*  
NEBB Certification Director

The NEBB Certification Board retains sole ownership of all certificates. The NEBB Certification Board Policy Manual governs use of this certificate.

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## **STAFF QUALIFICATIONS – Field Personnel**

Accurate Balancing Agency's technicians have developed a reputation for honesty, communication, and tenacity. They are skilled in all areas of TAB including constant volume and variable volume systems. Our technicians have extensive training and experience with all control systems; from older pneumatic systems to the latest direct digital control systems. They are well versed in dealing with a wide variety of air handling and mechanical water systems from remodel retrofits to the latest in chilled beam installations. Our technicians are also proficient testing and balancing various types of mechanical water systems including heating, chilled, process water, geo-thermal, domestic, and radiant water applications. Our technicians bring over 80 years of combined TAB experience to our clients.

### **Tommy Takemoto**

Tommy is a NEBB Certified TAB technician who has been with Accurate Balancing Agency since 2003. Steady and reliable, Tommy is skilled in all areas of TAB including air and water balancing as well as commercial kitchen work. Tommy has a team attitude and has received multiple letters of commendation for his attention to detail. Tommy is an avid sports fan and dedicated family man.

### **Mathew Spingler**

Mathew is a NEBB Certified TAB Technician who has been with Accurate Balancing Agency since 2009. Mathew has developed a reputation for his outstanding communication. He likes the challenges involved with larger, more technically complex projects. In Mat's off time he enjoys hiking, biking, and exploring the northwest with his fiancé. He is also an impressive amateur photographer.

### **Stuart Smith**

Stuart has been with ABA since 2014 and has over 25 years of TAB experience. As such he has evolved alongside the industry and embraced the many changes in HVAC technology. He is a versatile technician and team player who has a talent for problem solving and troubleshooting. When Stu is not working he enjoys home improvement projects and relaxing with his wife.

### **Callahan Maxwell**

Callahan has been with ABA since 2014 and is currently a Technician in Training spending significant time working with all of our field technicians developing his balancing skills. He has already proven his desire for knowledge as well as an aptitude for this industry. Cal and his fiancé have their hands full with a young son at home. He also enjoys playing disc golf when he can find the time.

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## **STAFF QUALIFICATIONS – Office Personnel**

### **E. Michael May, Jr.**

Michael is the President of Accurate Balancing Agency. He is also the firms National Environmental Balancing Bureau (NEBB) Certified Professional and has been with Accurate Balancing Agency since its inception in 1990. He is NEBB certified in the fields of Air and Water Balancing as well as Sound and Vibration Measurement. Splitting time between the office and the field; Michael is proficient in all areas of TAB work including duct leakage testing and fume hood certification, but particularly enjoys troubleshooting HVAC deficiencies. When Michael is not working he enjoys adventuring with his wife and two boys, volunteering for Scouting programs, and tinkering with his first car; a '65 Mustang.

### **Jason Pitzer**

Jason is our Operations Manager / Estimator and has been with Accurate Balancing Agency since 2003. He has developed and maintained longstanding relationships with our partner contractors. He handles many of our administrative needs and has been instrumental in helping to develop the company culture we enjoy. Jason has a special knack for scheduling and logistics and goes the extra mile to meet demanding timelines. In Jason's off-time he is a very involved husband and father as well as an avid disc golfer.

### **Christy May**

Christy handles all financial duties for Accurate Balancing Agency from bookkeeping to cash flow management. She also serves as our Corporate Secretary. When not working on ABA matters, or running the kids to and from Scouting and sporting events, Christy coaches club volleyball and competes in adventure races.

### **Matthew Westfall**

Matthew is our Operations Assistant and has been with ABA since 2013. He helps with many aspects within the office while exhibiting a can-do attitude. Outside of work Matt and his wife have two young children to keep them busy. He is a dedicated sports fan and enjoys outdoor activities in his off hours.

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## **COMPANY SUSTAINABLE PRACTICES**

Accurate Balancing Agency takes sustainability seriously. From the services we provide, to employment practices and environmental issues; we are mindful of our impact in the Northwest:

- During the process of Testing, Adjusting, and Balancing; a large part of what we do involves optimizing the efficiency of the buildings we work on.
- Our Duct Leakage Testing service verifies the integrity of the HVAC systems installed which increases the efficiencies of these systems.
- We offer our employees competitive wages, benefits, vacation, and sick time.
- We offer our employees 100% company paid family health insurance.
- We print all applicable documents double sided to reduce paper usage.
- Most in-house documents are shared via email and electronic files.
- We recycle all paper, cardboard, glass, styrofoam, metal, and batteries. Jason makes sure we are up to date on the latest recycling options available.
- We encourage employees to participate in our quarterly non-standard item and hazardous material recycling program.
- All office cleaning supplies used are biodegradable.
- Our office uses high efficiency long life bulbs.
- We use local vendors and suppliers whenever possible to support the local economy and reduce shipping waste.
- We volunteer our time to work on forest restoration projects in our area.

## **INSTRUMENTATION LIST**

Accurate Balancing Agency complies with all NEBB calibration requirements. The following instruments are available for each employee or crew to be used during the performance of HVAC Systems Testing and Balancing:

### **Instruments**

TAB Tool Kit – Evergreen Telemetry – Various Instruments

15” Capture-Hood – Evergreen Telemetry - CH-15D

8” Low Flow Capture-Hood – Evergreen Telemetry – CH-8D

Digital Hydrometer – Alnor - Model HM680

4” Digital Rotovane Anemometer – Exttek - Model DAFM2

Digital Electrical RMS Amprobe/Multimeter – Universal Enterprises - Model DL389

Digital Thermometer – Universal Enterprises - Model DTK2

Digital Humidity Probe – Evergreen Telemetry – S-H-3-5”

Digital Tachometer – APGtech – Model 6234766

Stainless Steel Pilot Tubes – Dwyer – Various Sizes

Stainless Steel Airfoil Probes – Shortridge Instruments – Various Sizes

Velocity Grid – Shortridge Instruments – Various Sizes

### **Publications**

National Environmental Balancing Bureau (NEBB):  
Procedural Standards For Testing Adjusting and Balancing 8<sup>th</sup> Edition, 2015

Sheet Metal and Air Conditioning Contractors’ National Association (ASHRAE):  
ASHRAE Handbook, HVAC Applications 2015 Edition

## COMPLETED PROJECTS

The following projects were completed by Accurate Balancing Agency, Inc. in accordance with plans and specifications and to NEBB procedural standards.

**Project:** **CSL Plasma New Center**  
**Address:** 2055 SE Tualatin Valley – Hillsboro, OR. 97123  
**Engineer:** Henderson Engineers **Contact:** Phillip G. Miller **Phone:** (972) 386-6688  
**General:** Barker Morrissey Contracting **Contact:** Jay Kendall **Phone:** (520) 323-3831  
**Mechanical:** Arrow Mechanical **Contact:** Kevin Kruszewski **Phone:** (503) 793-2854

**Project:** **iFly Indoor Skydiving**  
**Address:** 10655 SW Greenburg Road – Tigard, OR. 97223  
**Engineer:** Bay & Associates Inc. **Contact:** RaDonna Belk **Phone:** (512) 407-9011  
**General:** Parkway Construction **Contact:** Ethan Mabe **Phone:** (469) 243-7603  
**Mechanical:** Jacobs Heating **Contact:** Sal Castello **Phone:** (503) 234-7331

**Project:** **Starbucks Coffee**  
**Address:** 2830 Willamette St. – Eugene, OR. 97405  
**Engineer:** Rensch Engineering **Contact:** Chris C. Resch **Phone:** (360) 863-6677  
**General:** Ordell Construction **Contact:** Rich Smith **Phone:** (541) 514-5198  
**Mechanical:** Innovative Air **Contact:** Dave Bragg **Phone:** (541) 746-1040

**Project:** **World of Speed**  
**Address:** 27490 SW 95<sup>th</sup> Ave. – Wilsonville, OR. 97070  
**Engineer:** Grummel Engineering, LLC. **Contact:** Robert Grummel **Phone:** (503) 244-7014  
**General:** Siteworks Design/Build **Contact:** Brad Sick **Phone:** (503) 230-2337  
**Mechanical:** HVAC, Inc. **Contact:** Diane Gardner **Phone:** (503) 462-4822

**Project:** **Portland Community College – SE Learning Commons**  
**Address:** 2035 SE 82<sup>nd</sup> Ave. – Portland OR. 97216  
**Engineer:** PAE Consulting Engineers **Contact:** Steven J. Reidy **Phone:** (503) 226-2921  
**General:** Inline Construction **Contact:** David Brookhart **Phone:** (503) 642-5117  
**Mechanical:** A-Absolute Comfort **Contact:** Jim Sheppard **Phone:** (503) 513-4795

**Project:** **Whole Foods Market Fremont**  
**Address:** 3535 NE 15<sup>th</sup> Ave. – Portland, OR. 97212  
**Engineer:** Cushing Terrell Engineers **Contact:** Michael Nitschke **Phone:** (406) 248-3779  
**General:** SEER 2 **Contact:** Brad Person **Phone:** (602) 919-3414  
**Mechanical:** Protemp Associates **Contact:** Rich Wilcox **Phone:** (503) 233-6911



## COMPLETED PROJECTS

The following projects were completed by Accurate Balancing Agency, Inc. in accordance with plans and specifications and to NEBB procedural standards:

**Project:** **Nike Greystone II**  
**Address:** 15725 SW Greystone Court – Beaverton, OR.  
**Engineer:** American Heating **Contact:** Eric Montoya **Phone:** (503) 239-4600  
**General:** Swinerton Builders **Contact:** Ryan Wasell **Phone:** (503) 224-6888  
**Mechanical:** American Heating **Contact:** Eric Montoya **Phone:** (503) 239-4600

**Project:** **Entek Manufacturing Inc. Lines 11 & 12**  
**Address:** 250 Hansard Avenue – Lebanon, OR.  
**Engineer:** GHD Inc. **Contact:** Josh Dawkins **Phone:** (971) 245-1607  
**Mechanical:** Comfort Flow Heating & Cooling **Contact:** Dan Agee **Phone:** (541) 726-0100

**Project:** **Pandora**  
**Address:** 520 SW Yamhill St. Ste.510 – Portland, OR. 97204  
**Engineer:** Henderson Engineers, Inc. **Contact:** John Passantino **Phone:** (913) 742-5000  
**General:** Shrader & Martinez Const. Inc. **Contact:** Carol Bertinck **Phone:** (928) 282-7554  
**Mechanical:** Arrow Mechanical **Contact:** Kevin Kruszewski **Phone:** (503) 793-2854

**Project:** **Portland VA-Ward 9D Remodel**  
**Address:** 3710 SW US Veterans Hospital Rd. – Portland, OR. 97239  
**Engineer:** Corbin Consulting Engineers, Inc. **Contact:** Mike Machinski **Phone:** (503) 645-0176  
**General:** Glenmar Construction **Contact:** Dana Allen **Phone:** (503) 650-1720  
**Mechanical:** JRT Mechanical Inc. **Contact:** Richard Sarkkinen **Phone:** (360) 666-0330

**Project:** **COCC – Redmond Technology Education Center**  
**Address:** 2324 SE College Loop – Redmond, OR. 97756  
**Engineer:** MFIA, Inc. **Contact:** Takako Baker **Phone:** (503) 234-0548  
**General:** Kirby Nagelhout Construction **Contact:** Mike Carter **Phone:** (541) 389-7119  
**Mechanical:** Cascade Heating & Specialties **Contact:** Joe Morse **Phone:** (541) 382-8483

**Project:** **Portland Police Training Complex**  
**Address:** 14912 NE Airport Way  
**Engineer:** Hood-McNess, Inc. **Contact:** Clifford M. Hood **Phone:** (503) 231-7825  
**General:** 2KG Contractors **Contact:** Doug Sesney **Phone:** (503) 489-2020  
**Mechanical:** Jacobs Heating **Contact:** Marcy Huxtable **Phone:** (503) 234-7331