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Chapter Coordinator****Testing, Adjusting, Balancing and BIM**

By: Thomas DeMuisis

While the term “BIM” (Building Information Modeling) is often confused with three-dimensional structural, architectural, and mechanical coordination, a true BIM project will contain a wealth of information within the model that can benefit the Testing and Balancing contractor. A little time spent by the TAB Professional determining what data is available can save a great deal of time preparing the pre-field reports. So where do we start?

If, like many contractors, you’re

asked to bid the testing and balancing based on a printed (or “pdf”) set of plans and specifications, you’ll have to dig a little deeper to determine how the project was designed, and whether the MEP trades building the job are required to use a true Building Information Modeling process to develop not only their coordination and shop drawings, but also an “As-Built” model that contains information and data that truly represents the mechanical equipment you’ll be responsible for in your TAB scope of work. The best place to start is with your potential client.

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ASHRAE-110 UPDATE

By: Michael Kelly

The ASHRAE-110 Standard (Method of Testing Performance of Laboratory Fume Hoods) has been through its second public review and it has been approved and sent out to print. The public review was from November 13 to December 28, 2015. It is considered a “new” standard because ASHRAE 110-1995 has lost its ANSI approval due to the fact that it was not revised within ten years.

A **few** of the main changes are: Individual face velocity readings recorded from 5 seconds to 20 seconds; VAV speed of response procedure has been significantly changed; Flow visualization tests have been added; Fume hood could “fail” the flow visualization test per the 1995 standard and there in no pass / fail in the new standard; Tracer gas readings recorded from 10 seconds to 1 second; Breathing zone moved from 26 inches above the work surface to 22 inches; Sash movement effect sash opening time changed from 2

minutes to 1 minute; Sash movement effect performance rating is based on a rolling average of the results. Appendices have useful commentary and information on test conditions and diagnostics

And now for the most talked about issue; What about SF6? The standard states “Although sulfur hexafluoride has many ideal characteristics, it has a very high Global Warming Potential. Consequently, this standard’s project committee has searched for an alternative tracer gas. To this date, however, none of the gases investigated have proven to be satisfactory”. ASHRAE does have a committee formed that is still looking for an alternate gas.

When the NEBB FHT Procedural Standard was published in 2009, many of the new changes were already incorporated. The fume hood committee will start working on the 2nd edition of the FHT Standard.



NEBB ANSI Accredited Standards Developer

NEBB, a not-for-profit 501 (c)(6) organization, is an American National Standard Institute (ANSI) Accredited Standards Developer (ASD), and the premier international certification association for individuals and firms that deliver high performance building systems. In addition to standards development, NEBB establishes, promotes and maintains high quality programs for the certification of Firms, Professionals and Technicians.



As an ANSI ASD, NEBB is currently developing two standards and has submitted them for approval as American National Standards in compliance with ANSI's Essential Requirements:

- ⇒ Whole Building Technical Commissioning Standard
- ⇒ Technical Retro-Commissioning of Existing Buildings Standard

The "NEBB Standards Council" oversees the development of NEBB standards in conjunction with project subcommittees. NEBB's current project subcommittee is the NEBB Standards Committee. Members of the NEBB Standards Committee are classified by the NEBB Board of Directors as Provider, Users or General Interest representatives in accordance with the following definitions:

Provider	User	General Interest
An individual employed by or otherwise representing an organization that provides building systems testing and analysis services shall be classified as a Provider.	An individual employed by or otherwise representing an organization that purchase, uses or specifies building systems testing and analysis services shall be classified as a User. This category includes, but is not limited to, design engineers, architects, owners, builders, and mechanical contractors.	General interest members are neither Providers nor Users. This category includes, but is not limited to, educators, researchers, representatives of regulatory agencies, representatives of industry organizations, and manufactures of related products.

The NEBB Standards Committee is established by the NEBB Board of Directors, and is the ANSI consensus body responsible for developing and maintaining standards. In accordance with the NEBB Procedures for American National Standards, membership of the NEBB Standards Committees must be sufficiently diverse to ensure reasonable balance without dominance by any single interest group. Membership on NEBB standards committees is open to any person directly or indirectly affected by the standards.

★ NEBB Instrument Recertification Update ★

The MAEBA Technical Committee would like to remind our firms that it is the role of each firm's Certified Professional to know and follow the requirements outlined in the NEBB Procedural Standards applicable to their respective NEBB discipline. This includes obtaining the correct test instruments and ensuring they are calibrated as per NEBB requirements. In 2015 NEBB Updated the Procedural Standards for TAB which included changes to some instrumentation requirements. Make sure to review the updated Standards before submitting your Instrument Recertification paperwork to the Chapter. Please direct inquiries concerning instrument suitability to the NEBB National Technical Director.

BIM and TAB

Continued from Page 1

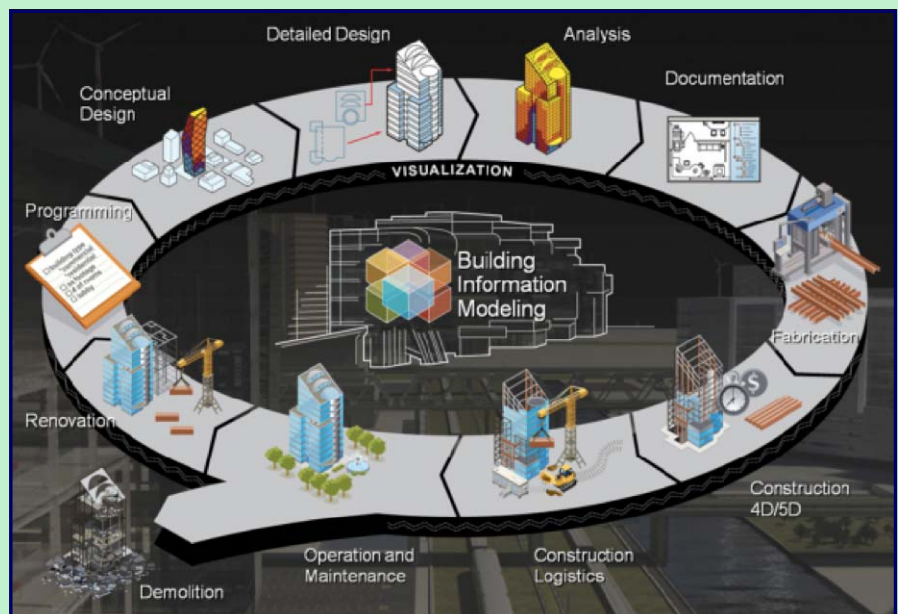
Chances are that by the time they request a price for the balancing, they have already dissected their bid package for the mechanical work, and understand the drawing, coordination, and modeling requirements. They should also be aware of what they will have to work with from the design team. If the answer is anything short of a requirement for a “Federated” model, containing accurate information for all equipment actually installed, you can stop right here and go back to your traditional methods of populating your reports. Even if the design was completed using modeling software, it’s unlikely that the “As-Built” systems will contain the exact equipment the designer specified (ever heard of Value Engineering?). You may still be able to get the basic schedule information from the designer’s model, but you’ll have to carefully review it, and update it as necessary to reflect the actual equipment installed.

But if the project is truly designed and modeled by the installing contractors, with links embedded in the model containing the information for all mechanical equipment, you may be able to extract most, if not

all of the information required to pre-fill your reports. The requirements for embedded information vary from project to project, so be sure you understand what’s available before spending too much time trying to extract data that’s of no use to you. Your best source for determining the value of the information stored in the model is the team that built it. The CAD coordinator for the mechanical systems should be able to tell you the specific information for each type of equipment, how it’s stored in and retrieved from the model, and whether schedules are

already available in a digital format that you can use to pre-fill your reports. It could be as basic as the make and model number of the equipment, or it may contain all of the equipment info, as well as system, room number, flow rates, etc. Typically more information is required when the client intends to use the model as a facility maintenance tool, which is a growing trend in institutional work. Information may include details as specific as the type and size of belts for fans, along with part numbers, enabling maintenance to quickly reorder parts. More information is better – you can always delete fields you don’t need, and manipulate the data to fit your report format.

If you have the opportunity to bid on and execute a true BIM project, invest the time to learn what’s available from the model. Talk to the designer and the coordination team, and find out everything you can about the process. BIM is here to stay, and firms that understand its value will have a distinct advantage as the process becomes more widely accepted.





By: John Connolly

OSHA's new Confined Spaces for Construction

The new standard for confined spaces in construction became effective August 3, 2015. Employers engaged in construction on job sites or facilities where confined spaces are located or will occur as a result of construction activity have obligations under this standard.

Confined spaces may include areas such as bins, boilers, tanks, pits (such as those for elevators, escalators, valves or pumps), sewers, storm drains, transformer vaults, heating, ventilation and air-condition ducts (HVAC), water mains, precast concrete, enclosed beams, pre-formed manhole units and more.

The new construction confined space regulation includes five key differences from the general industry standard: Impact of Multi-Employer Information Sharing; The need for a Competent Person for Evaluation of Spaces; Continuous Monitoring for Atmospheric Hazards; Continuous Monitoring for Engulfment Hazards; and Permit Considerations.

Hazards in confined spaces may include: atmospheric, health or physical hazards and other concerns like: fall exposures, noise, vibration, illumination, temperature extremes, hazardous energy, slips, trips or biological concerns.

A written program encompassing the elements of the standard is required for all employers. The intent of this standard is to protect employees from confined space hazards on construction sites where there may be a lack of history to such spaces, dynamic job-site conditions that change frequently or transient workers. Information on: location of spaces, hazards or potential hazards, previous precautions taken are examples of what has to be communicated up and down stream to and from various employers on site.

Emergency procedures must be appropriately planned. Rescue personnel must be able to respond in a timely manner, ensure the capability to reach a victim, be proficient in rescue, and be able to notify the employer if they are not able to respond.

Source: Med-Tex Services, Inc.



NEBB Certified Technician Update

Are all of your eligible Technicians NEBB Certified? Remember, there is a requirement to have at least one Certified Professional or Certified Technician on every job site.

Applicants for NEBB's Testing, Adjusting and Balancing of Environmental Systems Certified Technician (TAB-CT) program must meet one of the following minimum education and experience requirements: Four years (1,000 hours min per year) or more of TAB fieldwork.

Two years (1,000 hours min per year) or more TAB Fieldwork AND successfully complete the NEBB TAB Technician Course.

Two years (1,000 hours min per year) or more TAB Fieldwork AND successfully complete a program similar to the NEBB TAB Technician Certification Testing Program. Demonstrate knowledge of TAB by passing the NEBB TAB Technician Online exam.

Applicants for NEBB Personnel Certification should contact Sheila Simms at 301-977-3698.

Also don't forget starting this year, NEBB Certified Technicians are required to receive 6 hours of Continuing Education in a 2 year period. MAEBA will be offering two opportunities a year to obtain this continuing education. The Semi-Annual Meeting will be on May 5th and the MAEBA Recertification Seminar is September 25-26, 2016.

MAEBA Educational Seminars

MAEBA Semi-Annual Meeting

May 5, 2016

Spring Mill Ballroom
Conshohocken, PA

NEBB Technical Director, Don Fedyk will be presenting a NEBB Procedural Standard Review, New Instrumentation Requirements and NEBB Forms Review. This seminar will be three hours long and will fulfill the new Recertification Requirement for NEBB Certified Technicians beginning in 2016.

MAEBA Thanks Outgoing Board Members



From left, Vincent Del Vacchio, Patrick McDonnell, William Reardon, Timothy Brink, John McNeila and Patrick Pottichen (not pictured).

MAEBA Recertification Seminar

September 25 – 26, 2016

Sands Casino Resort, Bethlehem, PA

The Recertification Seminar will begin with a Dinner Reception on Sunday evening, September 25th. The seminar will begin on Monday, September 26th with the Annual Meeting, followed by an update from a NEBB National Representative. This year the MAEBA Technical Committee is working on a somewhat different format for attendees. All attendees will have the opportunity to move among breakout rooms. Each breakout room will have a different topic. Some of the topics will be Sound & Vibration, Building Systems Commissioning, Fume Hoods, Cleanrooms and Hydronics. A town hall style panel will roundup the afternoon.

Certified Professionals, please remember you are required to obtain six hours a year of continuing educational credits (CEC's). Any MAEBA-run seminars, the NEBB Annual Meeting and NEBB Educational Seminars all meet the CEC qualification. If you are not able to attend any chapter or NEBB-run seminars you must contact Shelia Simms at NEBB for prior approval on any other educational seminars.

According to the NEBB Operating Procedures, Section 2.4.5, "From each Certified Firm at least one (1) employee in a management position, preferably the Designated Certification Professional, shall attend a NEBB Chapter recertification seminar annually."





Mid-Atlantic Environmental Balancing Association

1100 E. Hector Street Suite 185
Conshohocken, PA 19428

Calendar of Events

May 5, 2016

MAEBA Semi-Annual Meeting
Spring Mill Ballroom
Conshohocken, PA

September 25 - 26, 2016

MAEBA Recertification Seminar
Sands Casino Resort
Bethlehem, PA

May 10 - 12, 2016

NEBB Cleanroom Performance Testing
Certified Technician Seminar
and Optional Exam
Gaithersburg, MD

June 6 - 9, 2016

NEBB TAB Certified Professional
Review Seminar & Optional Exam
Chicago, IL

June 6 - 10, 2016

NEBB Sound and Vibration Certified
Professional Seminar & Optional Exam
Deerfield Beach, FL

MID-ATLANTIC ENVIRONMENTAL BALANCING ASSOCIATION

A Chapter of the
National Environmental Balancing Bureau

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