



2008

**MAEBA  
Board of Directors**

Don Newell, P.E.  
President

Matthew Sano  
Technical Committee  
Chairman/Vice President

Timothy Brink  
Secretary

William F. Reardon  
Treasurer

D. Timothy Roaten  
Past President

Vincent Del Vacchio

Thomas C. DeMusis

Dietrich Rose, P.E.

Leo Foster

J. Patrick McDonnell

John McNeila

Patrick Pottichen

**NEBB**

**Annual Meeting**

**October 30, 2008 -  
November 1, 2008  
JW Marriott Starr  
Pass Resort & Spa,  
Tucson, AZ**



## At Look at Green & LEED Standards

By Don Newell  
MAEBA President

### What is "Green"?

"Green" is a general, all-encompassing term used to describe something that is environmentally friendly. For buildings, a "green" label would signify comfortable indoor environments using systems that consume less than their "standard" counterparts. This could even extend to other items, such as the use of construction materials with recycled content. Terms including "sustainable", "eco-friendly", etc., are synonymous and are often used interchangeably.

The generic "green" description is useful in that it can be widely used with little fear of misapplication, so long as the referenced item incorporates environmentally responsible design practices. Unfortunately, there is very little one can understand about a building if it is simply labeled "green". For example, how is the building's energy performance when compared to ASHRAE Standard 90.1-2004? Is it 10% less, 20%, 30% or even more? Was the landscape designed to reduce water usage? Does a large portion of the occupied space benefit from day lighting?

### What is LEED?

LEED (Leadership in Energy and Environmental Design) is a "green" certifi-

Continued on Page 3

## 2008 MAEBA Recertification and Educational Seminar

By Trish Casey

The Mid-Atlantic Environmental Balancing Association (MAEBA) will be conducting its annual Recertification and Education Seminar on September 21-22, 2008. This year the seminar will be held at the Caesar's Hotel and Casino in Atlantic City, New Jersey.

There will be golf on Sunday afternoon at 12:20 pm at the Seaview Marriott Resort & Spa, followed by a cocktail reception on Sunday evening in the casino from 6:30 pm -8:30 pm.

On Monday, September 22nd, breakfast will be available from 7:30 am – 8:30 am. At 8:30 am, safety professional, John Connolly will give a presentation. "You use them every

day. You may not be able to work without them. But, we often take for granted these major safety hazards. Ladders are often the culprit in many accidents. At the Recertification Seminar, learn simple techniques to protect yourself when using all types of ladders."



Don Newell, P.E., MAEBA President and LEED AP, Director of Energy Services for EMCOR Services, will be doing a presentation on "**What is Green**" and "**What is LEED**". How does a project that is "designed to

Continued on Page 2

## Will the Real Commissioning Authority Please Stand Up?

By Brian F. Matyola

Commissioning specialist, commissioning supervisor, commissioning professional, agent, authority, who are they and what do they do? The person commissioning could go by any one of numerous titles, and the act of commissioning can be interpreted differently by different firms. It seems every organization uses a different term and definition. What once was considered commissioning was an enhanced start-up of the mechanical system. Today commissioning has taken on a major role in the construction process, taking in plumbing, fire protection, security, electrical, building envelope and more. To confuse matters even more, now we have "Green Commissioning". What does one do? Certification is one way to address that. But which one? There is BCA, AEE, etc., and, of course, NEBB. NEBB refers to the process as Building Systems Commissioning (BSC) and qualifies supervisors to administer and manage the commissioning process.

The best commissioning firms will be comprised of professionals, engineers and technicians, offering various skill sets, and points of view. Assembling a commissioning team utilizing that approach will separate you from other commissioning firms providing the client the type of value that can only be achieved through a balance of engineering and years of experience in the field. For all the lessons learned in the class room nothing can substitute the value of experiencing troubles in the field. HVAC technicians and balancers who have lived through these project start-ups can many times see problems before they happen, mostly because they

have lived through these problems once already. And who better to review a TAB report than a balancer? Technicians, who possess a strong technical ability, represent themselves in a professional manner, and exhibit a desire to excel at their craft, could and do make excellent BSC supervisors. It depends on the individual, and their willingness to learn and devote the time and effort necessary. Certification establishes professional qualifications that an individual has met a certain criteria. NEBB BSC supervisors must meet strict standards aside from extensive experience requirements and they must first pass the NEBB TAB written exam. Only then would one qualify as an applicant for the BSC certification, were they will be tested on their experience and knowledge required to perform the disciplines of the commissioning process. It could take several years to achieve this certification. And the continued education requirements are NEBB's way of ensuring the quality of personnel and the standard that is expected when a NEBB firm is hired.

Today, companies interviewing for commissioning services are looking for a body of work and may have experience requirements in their proposals, mostly due to the fact that anyone attending an 8 hour commissioning seminar has labeled themselves as a commissioning authority. But there is another way of ensuring that the company they are contracting is highly qualified without requesting resumes, and that would be to specify a NEBB Certified Building System Commissioning firm, why take a chance?

## 2008 Educational Seminar—Caesar's

Continued from Page 1

LEED" differ from one that is certified? And finally, how does "green", or LEED, impact balancing and/or commissioning?



The final presentation of the day will be on "**Fan Wall Technology**", the presenter has been arranged through General Aire Systems, Inc.

There will also be a vendor display during the lunch break where participating vendors will be given a chance to show off their latest products. For more information on vendor displays, contact the MAEBA office.



Bring the family and spend some time on Atlantic City's beaches. Try your luck in the casino or walk right out onto "The Pier" for world class restaurants and shopping. Walk across the street and visit "The Atlantic City Outlets--The Walk" with over 100 outlet stores.



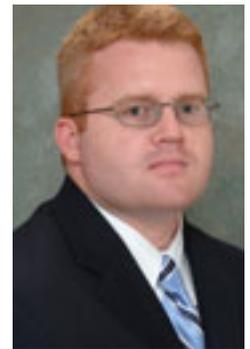
## MAEBA President Examines Green & LEED Standards

Continued from Page 1

by which the U.S. Green Building Council (USGBC) provides an independent review of a project during engineering and construction. This paid service assesses whether a building or project actually yields the “green” performance that it planned for. Achieving certification through the LEED program imbues projects with the equivalent of the Good Housekeeping seal of approval or a favorable review in Consumer Reports.

In order to attain certification through the LEED program, a project must include various MUST-HAVEs, called pre-requisites, and then must also incorporate enough additional measures, called “credits”- each worth a point, or a multiple of points- to achieve a certification level. At a minimum point level, a project attains a “Certified” status. With more points, a project can achieve even higher status. As an example, for “New Construction”, the certification structure is as follows:

- LEED-Certified (26 out of 69 available points- 38%)
- LEED-Silver (33 out of 69 available points- 48%)
- LEED-Gold (39 out of 69 available points- 56%)
- LEED-Platinum (52 out of 69 available points- 75%)



Don Newell, PE

### How does a project that is “designed to LEED” differ from one that is certified?

A project that is “designed to LEED”, in theory, can lead to building with the same features and overall performance as one that is formally certified, without the additional LEED-related fees, which can grow above \$10,000, depending on the size of the project.

However, in practice, without 3<sup>rd</sup> party “green” review and enforcement, a “designed to LEED” project will likely fall short of LEED certifying requirements. Whether from unrealistic assumptions during conceptual engineering (e.g. building predicted with 20% energy performance below ASHRAE 90.1-2004 without an energy model), or from “value engineering” during procurement or construction, removal of the 3<sup>rd</sup> party oversight takes away the accountability required for a project to end up as high-performance. Using a parallel from the balancing industry, how many construction managers, general or mechanical contractors would ensure a proper balancing effort if they knew that neither the engineer nor the owner would ever review it?

### How does “green” or LEED impact balancing and/ or commissioning?

In regards to testing, adjusting and balancing, it really shouldn't. Systems balanced in accordance with NEBB procedural standards will be adequate for any high-performance building, including those striving for certification through LEED.

In regards to commissioning, the benefit of a LEED project is that fundamental commissioning- including standard requirements such as development of an owner's project requirements (OPR), commissioning plan, field verification, etc.- is a pre-requisite, and therefore it is a MUST-HAVE. Among other benefits is the requirement for direct communication between the commissioning team and the owner.

Finally, the benefit of proper commissioning is so clear in the LEED process that “Enhanced Commissioning” will result in an additional credit/ point. Some of the additional requirements of enhanced commissioning include design-phase reviews, submittal reviews, and enhanced operator training, to name a few.

How would a TAB or commissioning professional become more knowledgeable concerning “green” projects and LEED?

For those who wish to learn more about “green” and/ or LEED, the best place to start is the USGBC website at [www.usgbc.org](http://www.usgbc.org), where one can find links to other green-related sites, and information concerning their 1-day seminars (I recommend the New Construction seminar) or the LEED Accredited Professional (LEED AP) program.

# TAB Firm Can Play a Part In Green Building Projects

By Ted Salkin, P.E., LEED

To jump onto the Green Building bandwagon, NEBB firms offer unique skills that can be very helpful to the sustainability objectives of a project. This is a great opportunity to expand your business.

TAB firms can be part of the LEED team on a project to collect data, verify credits and provide consulting to the design and construction team. Firms should closely read the bid specifications to understand their responsibilities and tasks on a LEED or commissioned project, as additional time may be imposed.

NEBB members can be involved with the following USGBC LEED certification credits:

Energy and Atmosphere (EA) – Prerequisite Credit: Commissioning – Commissioning is a required element of all LEED projects. NEBB firms can perform or assist with the installation checks and functional performance tests of HVAC and electrical systems. The commissioning agent may observe the TAB firm’s work and review their reports, and even do a back-check of readings.

Additionally, the TAB personnel may be asked to support the commissioning agent with seasonal testing and warranty reviews; support

the CxA with follow-up surveys; system analysis; O/A measurements; VFD sequencing and adjustments; sample air and water flow readings; and resolve outstanding issues.

EA Credit 5: Measurement and Verification: this is a more difficult and costly LEED credit using permanent instrumentation (tied into BAS) to trend and analyze energy usage and comfort levels. TAB professionals can assist with the calibration and provide continuous commissioning to watch for inefficient operation.

Participate with other Energy-related credits: Measure and calculate electrical consumption. Analyze fan and pump efficiencies. Consult with engineer and owner on fan/pump operating strategies (VFDs; VAV; resizing drives; piping and ductwork layouts). Environmental Quality (EQ) Prerequisite 1 – verify the design minimum ventilation rates (ASHRAE Std. 62) in TAB report. Outside air measurements: verify accuracy of O/A airflow monitoring instruments;

EQ Credit 2 - exceed the ASHRAE Std. 62 minimum O/A rates by 30% (increased ventilation) Note that to achieve these credits, only the design documents need to show an increased ventilation rate,

Continued on Page 5

## 2007 MAEBA Recertification and Educational Seminar



Pictured above, Matt Sano, MAEBA Vice President and Technical Committee Chairman and Don Newell, P.E., MAEBA President.



Leo Foster, MAEBA Board of Director, receives the 2007 William G. Eads, P.E. Award. From left, Leo Foster, Ann Eads and MAEBA President Don Newell, PE.



MAEBA supervisors and guest enjoying the cocktail reception.



Don Newell, P.E. presents Vincent Del Vacchio, MAEBA Board of Director, with a NEBB 25 Year Pin.



MAEBA supervisors from left, Fred Scafidi, Ray Burger, Ed Lopez and Mike Orlowski visiting Andy Stadheim, PE of AiRNAB, one of the vendors.

## Green & LEED

Continued from Page 4

not necessarily field verified. In future, this will likely be required via TAB report to get the credit. For densely occupied spaces, CO2 concentrations need to be actively measured with permanent sensors. TAB personnel can verify the CO2 sensor accuracy using a handheld instrument such as the TSI Q-Trak.

EQ Credit 3.2: Building flush-out: TAB firms can help calculate the quantity and duration of airflow needed to achieve 14,000 cubic feet of O/A per s.f. of floor space.

EQ Credit 6.2 Individual comfort control: relates to number of thermostats or zones per person; TAB firms can verify or provide design support on feasibility and impact on balancing.

EQ Credit 7.2: Measure temperatures in rooms along with airflows. Help verify this credit by performing survey of actual temperatures and humidity in spaces during normal balancing activities.

EQ Credit 3.1: Construction IAQ Management Plan: This follows SMACNA guidelines on indoor air quality during construction. NEBB firms can help enforce that ductwork ends are sealed; duct and VAV boxes are covered while on floor; proper efficiency air filters are installed in AHU's during construction and replaced at occupancy.

"LEED for Schools" requires specific acoustical design criteria for classrooms. TAB firms can comment on ductwork and diffuser design, review sheet metal shop drawings, and take sound measurements.

NEBB firms can network with architects, LEED consultants, owners and contractors to market these LEED-related services and offer more than just balancing. Firms are encouraged to get involved very early on in the design process of a project. The other participants rarely have hands-on or HVAC testing experience to provide these services and they are often seeking help with these needs.

## MAEBA Sends Their Thanks!

By Trish Casey



As the U.S. Army is "*The Strongest Force in the World*", NEBB is "*The Strongest Balancing Certification Program in the World*". The U.S. Army is made up of the best-trained and most dedicated and respected men and women in the world. The similarities to our MAEBA balancers are clear. Which would explain why two of our MAEBA balancers are currently deployed in Iraq, protecting America's freedoms abroad, securing our homeland and defending democracy worldwide.

Formerly a NEBB Qualified Technician, Angel Rivera of Technical Airflow, Inc. in New Jersey, passed all examinations to become a NEBB Qualified Supervisor. As MAEBA received Angel's NEBB stamp and certificate, Angel was deployed to Iraq. This is Angel's third deployment, he was sent to Kosovo in 2000 and was sent to Iraq in 2003 for the initial invasion.

Also deployed to Iraq, is a balancer from the MAEBA firm, Independent Balancing Co., in Philadelphia, PA. Curtis Kaufmann was deployed last September and hopes to be home in a few months. Curtis has worked for Independent Balancing Co. for 30 years.

***MAEBA extends our gratitude for the dedication these men have in protecting and defending America.***

***May you both come home safely!***



Pictured above, Angel Rivera hard at work in his newest company vehicle.

# MAEBA

Mid-Atlantic Environmental Balancing Association  
1100 E. Hector Street Suite 185  
Conshohocken, PA 19428

## Calendar of Events

September 20, 2008

NEBB Supervisors Written Exam

September 20, 2008

NEBB Supervisors Practical Exam

MAEBA Chapter - local deadline August 29, 2008

September 20, 2008

NEBB Technicians Written and Practical Exam

MAEBA Chapter - local deadline August 29, 2008

September 21-22, 2008

MAEBA Recertification and Educational Seminar

Caesar's Hotel and Casino, Atlantic City, NJ

September 24-25, 2008 - Vibration Seminar

September 26-27, 2008 - Sound Seminar

Vibration & Sound Technicians Seminar

NEBB TEC—contact NEBB national for information

October 30 - November 1, 2008

NEBB Annual Meeting and Educational Conference

JW Marriott Star Pass Resort & Spa - Tucson, AZ

## MID-ATLANTIC ENVIRONMENTAL BALANCING ASSOCIATION

Chapter of the  
National Environmental Balancing Bureau

DONALD NEWELL, P.E. - PRESIDENT  
MATTHEW SANO - T.C.C./VICE PRESIDENT  
TRISH CASEY - CHAPTER COORDINATOR

1100 E. Hector Street, Suite 185  
Conshohocken, PA 19428  
(610) 828-5738 Fax (610) 828-4625

