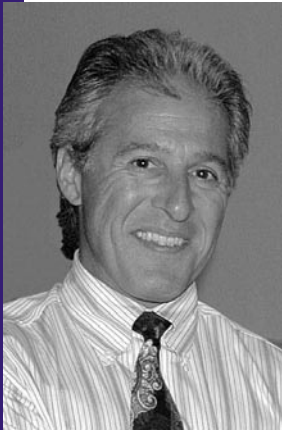


# The Whistle

# FHEA

VOLUME XXIII, NUMBER 1

SPRING 2007



I would like to begin my first “President’s Corner” by stating how honored I am to be the president of the Florida Healthcare Engineering Association for 2007. The FHEA, now in its 45th year, has certainly come a long way from when I first joined in the late ‘80’s. Back then I was in awe of our leaders; I felt or perceived that they had lofty goals for the future of the organization. Well thanks to our past leadership, those goals have been exceeded dramatically. Our trade shows are sold out, our vendor support unequalled, and our members, the strength of our organization, have been instrumental in allowing us to present educational programs for the betterment of all. We are also working from a strong financial

position that will enable me and our current board to be able to enhance our strategic plans for the future of our association.

The current board of directors is quite a dynamic team made up of past presidents of State, district presidents, and some new faces with exciting new ideas. Our first meeting in Orlando on February 2nd contained a full agenda and the board worked tirelessly to complete all items and define some directives which will be worked on during the year ahead.

I welcome you to visit our web site [www.fhea.org](http://www.fhea.org) — and click on “board of directors” to view the current board members’ names and positions. I would like to point out one new addition to the team: Alethea M. Vitray, our executive director. Alethea has worked for many years with Wilkes Management; she has great qualifications and great ideas — including the look of this expanded newsletter. We all realize she has a tough act to follow in “the team of Shelburn and Rita”

but then again so do I with taking over from two-time president Jim “Hutch” Hutchinson. I know Alethea is up to the challenge and I feel confident that I am as well. The committee chairs remain the same as last year, with the exception of the Certification committee which will be chaired by Mr. David Palmer.

In our immediate future is the 23rd Spring meeting which will be held at the Delray Beach Marriott. The facility is located directly across the street from the ocean, and a short walk from downtown Delray’s many shops, boutiques, and restaurants. Please make your reservations now to attend and if you are going to bring your loved ones, plan on staying the weekend — there is lots to do. The meeting includes an impressive lineup of presenters and table top displays. By now you have received a brochure on this meeting, but you may also check the web site where a click on “calendar of events” will get you information on making reservations, as well as the registration form. Please make every effort to attend. Oh, and I forgot to mention — for healthcare engineers and facility participants arriving early on Thursday night, there will be a hospitality suite

which is famed to be well-stocked with “beverages.”

Going forward, the annual ASHE meeting will be in New Orleans July 8 – 11. Again I refer you to our web site where “links” will get you to ASHE’s web site for further information. ASHE is certainly a powerful organization offering many benefits to its members. If you are not already a member please go to the web site to decide for yourself how beneficial an ASHE membership can be to you and your facility. I do plan on attending to take part in their educational programs and to see the new look of New Orleans.

In closing I would like to thank our Past President “Hutch” and his board for their accomplishments in 2006 and for raising the bar for future presidents to strive for. To all our board members, both new and us “re-runs”, thank you for your continued commitment and involvement. I know now after our first meeting, this challenging year will be met with enthusiasm and achievements!

## The President’s Corner

DINO GAVAZZA, CHE, PRESIDENT

# Codes and Standards

## UPDATE

### Stay Tuned - JCAHO and the 4 hour test

Healthcare facilities might feel caught between the proverbial rock and a hard place as they continue to wait for the NFPA 110 Technical Committee to issue a Formal Interpretation of the EPSS 2 hour and 4 hour tests — regarding whether the intent is to require two separate tests every three years for generators that are not loaded to at least 30% of nameplate, or whether the three year (4 hour) test meets the intent of both 8.4.2.3 and 8.4.9. Many facilities feel the latter is reasonable - that when the three year test is performed it meets the intent of both 8.4.2.3 and 8.4.9, and a separate (second) test for the 30% annual should not be required.

The JCAHO position has been that when the three year test is performed an organization must also have documentation that the annual load test was performed if the generator did not meet the 30% rule. In other words, two documented tests must be performed for that year—the annual and three year test.

While there are rumors of an apparent softening of the Joint Commission's stance, there has been no official word.

### OSHA Final Rule Updates Electrical Standard

The Occupational Safety and Health Administration (OSHA) is revising the general industry electrical installation standard found in Subpart S of 29 CFR Part 1910. The Agency has determined that electrical hazards in the workplace pose a significant risk of injury or death to employees. The requirements in the revised standard, which draw heavily

from the 2000 edition of the National Fire Protection Association's (NFPA) *Electrical Safety Requirements for Employee Workplaces* (NFPA 70E) and the 2002 edition of the *National Electrical Code (NEC®)*, are deemed necessary to provide protection from these hazards.

This final rule focuses on safety in the design and installation of electric equipment in the workplace. This revision will provide the first update of the installation requirements in the general industry electrical installation standard since 1981. OSHA is also replacing the reference to the 1971 *NEC* in the mandatory appendix to the general industry powered platform standard found in Subpart F of 29 CFR Part 1910 with a reference to OSHA's electrical installation standard. This final rule becomes effective on Aug. 13, 2007.

To read the complete text of OSHA's final rule, visit the Feb. 14 issue of the Federal Register <http://ct.pbinews.com/rd/cts?d=244-9350-134-28600-796990-451974-0-0-0-1>.

### Gas Storage

It might be a good idea to take a closer look at storage areas used to house nonflammable gases. NFPA 99, 9.4.2 refers to storage for nonflammable gases greater than 300 cubic feet but less than 3,000 cubic feet, listing eleven requirements (9.4.2.1 – 9.4.2.11). Compliance with item six (9.4.2.6) entails having electrical outlets and switches above 5 feet in such areas; however hospitals may be understandably confused by whether this requirement is actually enforced because 9.4.2 states that storage in these amounts shall comply with **9.4.2.1** through **9.4.2.3**,

i.e. only the first three of the eleven.

In hospitals, it is not uncommon to find up to 3,000 cubic feet of O<sub>2</sub> stored in clean utility rooms, separated from combustibles in a sprinklered building. Such arrangements are not in compliance with what we believe to be the intent of the standard, which is adherence to all the listed requirements, through 9.4.2.11.

Although some might argue that the room will only have "E" cylinders and thus there is no need to move the switches and outlets above 5 feet, there is no assurance this will be maintained; thus expect to be cited if your switches and outlets are not above 5 feet.

Opinions expressed above are those of Dan Chisholm, Sr., MGI Systems, who provided the material for this column. We are indebted to him for taking the time to cover these issues for us. Dan can be reached at [dan.chisholm@mgisys.com](mailto:dan.chisholm@mgisys.com)



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Toll-Free: (877) 235-3432  
Email: [aletheav@earthlink.net](mailto:aletheav@earthlink.net)

Web Site: [www.fhea.org](http://www.fhea.org)

**Alethea Vitray  
Executive Director**

A healthcare facility may achieve a reputation for innovation in patient care and medical procedures. But declining reimbursements, uncertainty of revenues and cash flows, limited access to capital, and skyrocketing energy costs can threaten a facility's ability to operate on the leading edge of technology – be it medical technology or comfort systems.

## Impacts & Challenges

When it comes to the development of a safe, comfortable, affordable and energy efficient healing environment, the healthcare industry is confronted with a myriad of challenges.

Heating, ventilation and air conditioning (HVAC) systems comprise approximately 45 percent of a typical healthcare facility's energy use, according to the Consortium for Energy Efficiency, Inc. This consumption pattern is often driven by

infrastructure improvements to meet the hospital's financial criteria, the full life cycle savings of the project must be expressed on a pro forma basis to financial officers.

## Updating Existing Facilities

The typical healthcare facility is designed for long term use – often more than 50 years. Updating aging infrastructure is critical to the long-term success of many facilities. Strategies include:

- **Retrofit and Renovate.** Be-

# Energy Efficiency— for Environmental Responsibility, Comfort, and Cost Savings

—Kevin Schilf

In addition to the demand for lighting, heating, ventilation and cooling 24 hours a day, healthcare facilities consume an enormous amount of energy to accommodate other applications — including clinical equipment, sterilization, laundry, and food preparation. The healthcare industry ranks second only to the food service industry with respect to intensity of energy usage (kBtus consumed per square foot per year), according to the Office of Building Technology, State and Community Programs, Office of Energy Efficiency and Renewable Energy, U.S. Department of Energy (DOE).

Healthcare organizations spend over \$6.5 billion on energy each year, according to the DOE, Energy Information Administration. Saving money on energy costs enables healthcare organizations to redirect those dollars elsewhere – to focus on improving patient care, pursuing medical advancements, or helping make the difference between a year-end profit or loss.

24-hour operating schedules, aging infrastructure, increased technology use and stringent air circulation requirements with rates that often double or triple those of other commercial buildings.

Investing in facility infrastructure and building systems is often postponed due to clinical or IT capital related expenditures. Facility managers are forced to use a “band-aid” approach to make their systems operate. Facility managers are aware of the amount of energy that is lost due to inefficient buildings and equipment but are unable to correct this problem due to limited capital.

Alternative programs are available that can help overcome these challenges with capital. Unless financing alternatives such as energy saving performance contracts are secured, incorporating energy efficient technologies may require an upfront capital commitment. Additionally, operational investments often compete for capital with critically important medical equipment. In order for

fore doing a complete system overhaul, work with a reputable facility solutions firm to assess, upgrade and enhance facility infrastructure and building systems. Consider the benefits of new systems technology like automated, web-based building controls that help regulate energy consumption. System efficiency is best achieved when better design theory is complemented by modern technology.

- **Performance Contracting.** Performance contracting is often the best route to address specific facility infrastructure and operating problems in existing buildings. Under such agreements, healthcare organizations can partner with suppliers to implement self-funding solutions, manage the project, monitor results and guarantee savings with no up-front capital expenditures. Compensation is tied to performance results including long-term energy reductions and

operating savings. A self-funded facility renewal program such as this enables facilities to reduce energy consumption, lower operating costs, and implement system upgrades and improvements while allowing facility owners to reallocate capital resources to other core business needs.

- **Preventive Maintenance.** Facility managers should benchmark facility performance and make routine comparisons to identify challenges that need to be addressed. Understanding system performance before something goes wrong will help protect a facility's investment and ensure that its system is as energy efficient as possible. Consider maintenance contracts with seasonal tune-ups for all major HVAC systems to ensure high levels of reliability, longer service life and improved efficiency.

tenance of building systems significantly improve operating efficiency. According to the Consortium on Energy Efficiency, Inc., this can save up to 50 percent of energy consumption. The American Institute of Architects (AIA) Guidelines for Design and Construction of Healthcare Facilities (2001) formalize this thinking in their requirements for commissioning of new healthcare facilities.

- **Control.** Controls have evolved. Rather than relying on the pneumatic controls of 40 years ago,

to cut costs without eliminating services or staff. By incorporating energy efficient measures, facilities can improve their bottom line.

Consider the following industry metric extracted from the ENERGY STAR For Healthcare website: "Every dollar a nonprofit healthcare organization saves on energy is equivalent to generating new revenues of \$20 for hospitals or \$10 for medical offices. For-profit hospitals, medical offices, and nursing homes can boost earnings per share by a penny by reducing energy costs just 5 percent."

***Every dollar a nonprofit healthcare organization saves on energy is equivalent to generating new revenues of \$20 for hospitals or \$10 for medical offices.***

## Planning for New Construction

The DOE's Commercial Building Energy Consumption Survey concluded that the energy intensity of U.S. buildings varies by 200 to 400 percent despite the year of construction. Thus, a new building won't automatically be more energy efficient than one constructed 30 years ago.

But buying efficient HVAC equipment is only part of the equation for saving energy. Facility managers need to address such additional considerations as system:

- **Design.** Consulting engineers should utilize design tools for energy efficiency to counter increasing energy costs. Rather than defaulting to a lowest common denominator specification, facility managers must understand the impact of total system integration and optimization.
- **Installation.** Proper installation, integration, sizing and main-

tenance of building systems significantly reduce energy consumption.

- **Maintenance.** Preventive maintenance equals savings. Maintenance programs targeting energy performance can save five percent to 20 percent on energy bills without a significant capital investment.

## Solutions Yield Benefits

To achieve optimal efficiency and reap the overall business benefits of the investment, facility managers should incorporate the appropriate blend of facility solutions.

An integrated comfort system combines HVAC equipment, controls, service, and comprehensive turnkey solutions commissioned with applications expertise to comprise the most comfortable, reliable, energy efficient solution.

Energy savings are a great way

Because facility systems comprise a large part of building operating costs, increased energy efficiency may deliver significant advantages including:

- A new source of capital to fund additional facility expansion, improve aging infrastructure and purchase clinical equipment
- Improved operating margin to provide better access to capital
- Reduced environmental impact

These benefits not only affect the profitability of a healthcare organization, but ultimately enhance its reputation as a responsible, progressive part of the community that strives to improve the health and recovery rate of patients at any cost.

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*For more information, contact Kevin Schilf at TRANE in Orlando by email: [krschilf@trane.com](mailto:krschilf@trane.com) or phone: 407-660-1111.*

Visit our tabletop at the Spring Meeting in Delray Beach!



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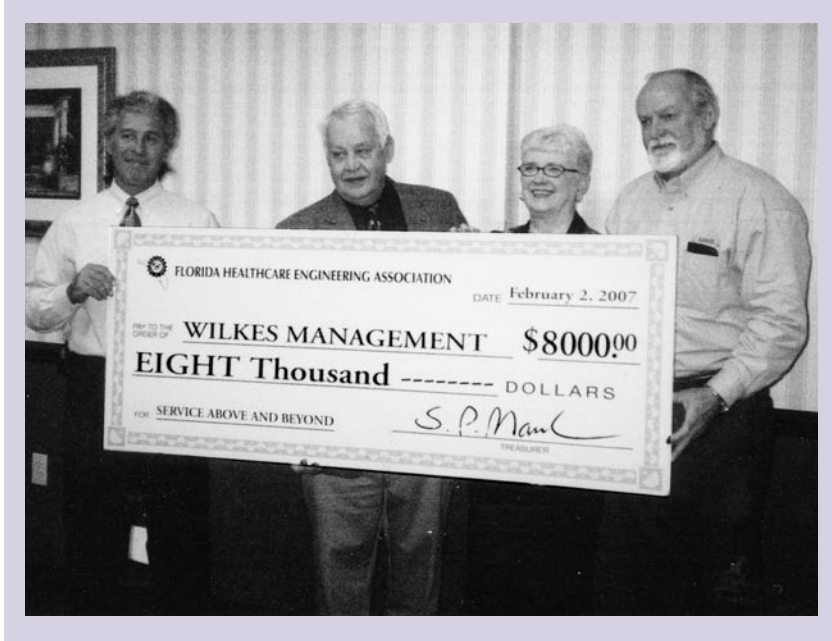


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## FHEA Board thanks Wilkes' for all the memories

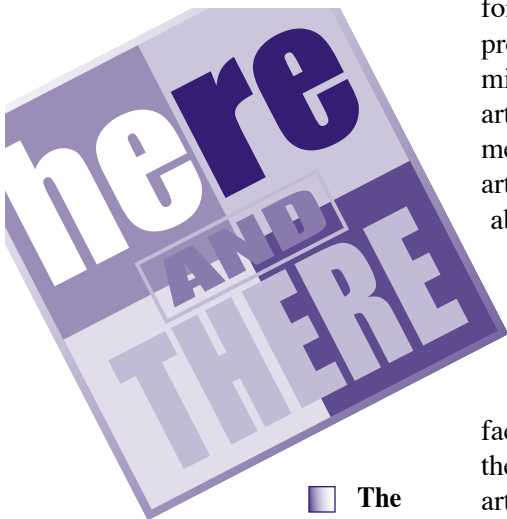


President Dino Gavazza and Immediate Past President Jim "Hutch" Hutchinson present a check to Shelburn and Rita Wilkes.

With some emotional moments, the board of directors said farewell to Shelburn and Rita Wilkes at the winter board meeting held February 2, 2007 in Orlando.

Immediate past president, Jim "Hutch" Hutchinson provided his own version of Shelburn Wilkes' well-known "Parade of Presidents." Memories of FHEA's modest beginnings, followed by years of burgeoning growth, many of them coinciding with Wilkes' tenure with the association, were recalled. At the end, the board presented them with a check for \$8,000 along with thanks for their 16 tireless years of service.

The Wilkes said they're looking forward to the extra time they'll be able to devote to their passions, genealogy for Shelburn and opera for Rita, with some travel thrown in for both. The board voiced a hope that both will return to help celebrate FHEA's 50th year coming up in just a few years.



### ■ The Whistle's New

**Look** - We're in the process of expanding the format of the newsletter with more articles, more opportunities to advertise, and more news. Published quarterly for active members in healthcare facilities throughout Florida, supporting members providing products and services to healthcare facilities, and exhibitors who participate in our meetings and trade shows, this publication is a great

forum for communication about our professions. Space will be committed to educational/informational articles from active and supporting members. This issue features an article by **Kevin Shilf** from Trane about the possibilities for increasing energy efficiency in today's tight financial climate.

We are looking for more articles on a wide range of topics of interest to healthcare facility professionals. Please contact the FHEA office for details about article submissions and for opportunities to advertise in The Whistle.

■ Registrations have been brisk for the **Spring Meeting** in Delray Beach—we're anticipating a great turnout. Unfortunately no more tabletops are available (and we have a substantial waiting list); however there are other opportunities for companies wishing to participate in this meeting.

■ **FHEA Website** - if you haven't checked out [fhea.org](http://fhea.org) recently, make it a regular bookmark.

Meeting schedules for each district are posted. Plus every form we use in the association, from application and renewal forms, to the Certified Healthcare Engineer requirements, is available for downloading.

■ The FHEA family has lost two members recently. Long time supporting member and friend **Dick Parham**, of Belimo Controls, was a familiar face at trade shows and meetings. We were saddened to learn of Dick's passing in mid-March, and our thoughts go out to his family. We also recently learned that **Jack Joines** who had served as regional ASHE rep passed on March 25.

■ It's not too early to mark your calendars for FHEA's **Annual Meeting and Trade Show** - October 22-24, 2007 at the Renaissance Orlando Resort at SeaWorld. Companies wishing to exhibit should look for a packet regarding this show around Memorial Day towards the end of May. In it will be details on how to register.

# Welcome New Supporting Members

We are especially excited by the large number of new supporting members who have joined our ranks this quarter! A couple of them will be exhibiting at the upcoming Spring Meeting in Delray Beach, and several more have registered to attend.

## THOMAS B. BAMBACE

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*End User Specialist - Healthcare*  
Assa Abloy Door Security Solutions  
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Facilities Technology Group  
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McVeigh & Mangum Engineering  
Jacksonville, FL 904/483-5200

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*Vice President, Operations*  
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## JOHN FONTAINE

*Project Manager*  
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## HORACIO FONTANA

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ABC Biomedical Equipment Service  
Hialeah Garden, FL 305/885-6000

## IGNACIO GALANO

*Superintendent*  
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Fort Lauderdale, FL 954/327-9212

## MICHAEL GREGORY, P.E.

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## TED HANSEN

*Vice President*  
KPI Engineering  
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## DON HUDSON

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## DENNIS R. LAUGHLIN

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Modern Ceiling & Aluminum Products, Corp.  
Hollywood, FL 954/987-5556

## BRIAN LUCIUS

*Plumbing Designer*  
McVeigh & Mangum Engineering  
Jacksonville, FL 904/483-5200

## TED W. MALLIN, AIA

*Managing Principal*  
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## JIM MCKINEY

*Regional Sales Manager*  
Valcourt Building Services  
Bradenton, FL 800/222-9533

## VINNIE MORESCHI

*Project Manager*  
Charles Perry Construction, Inc.  
Gainesville, FL 352/331-4088

## JASON MORGAN

*Project Manager*  
Charles Perry Construction, Inc.  
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## DON NETINHO, P.E.

*Vice President*  
Smith Seckman Reid, Inc.  
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Harvest Data Systems, Inc.  
New Port Richey, FL 727/843-8932

## ERIC PATTERSON

*Assoc. Vice President Mechanical*  
McVeigh & Mangum Engineering  
Jacksonville, FL 904/483-5200

## JAKE PLEIN

*Project Manager*  
Charles Perry Construction, Inc.  
Gainesville, FL 352/331-4088

## JOE SAMILLANO

*Vice President*  
LWP Construction  
Longwood, FL 407/339-8453

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Valcourt Building Services  
Bradenton, FL 800/222-9533

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