

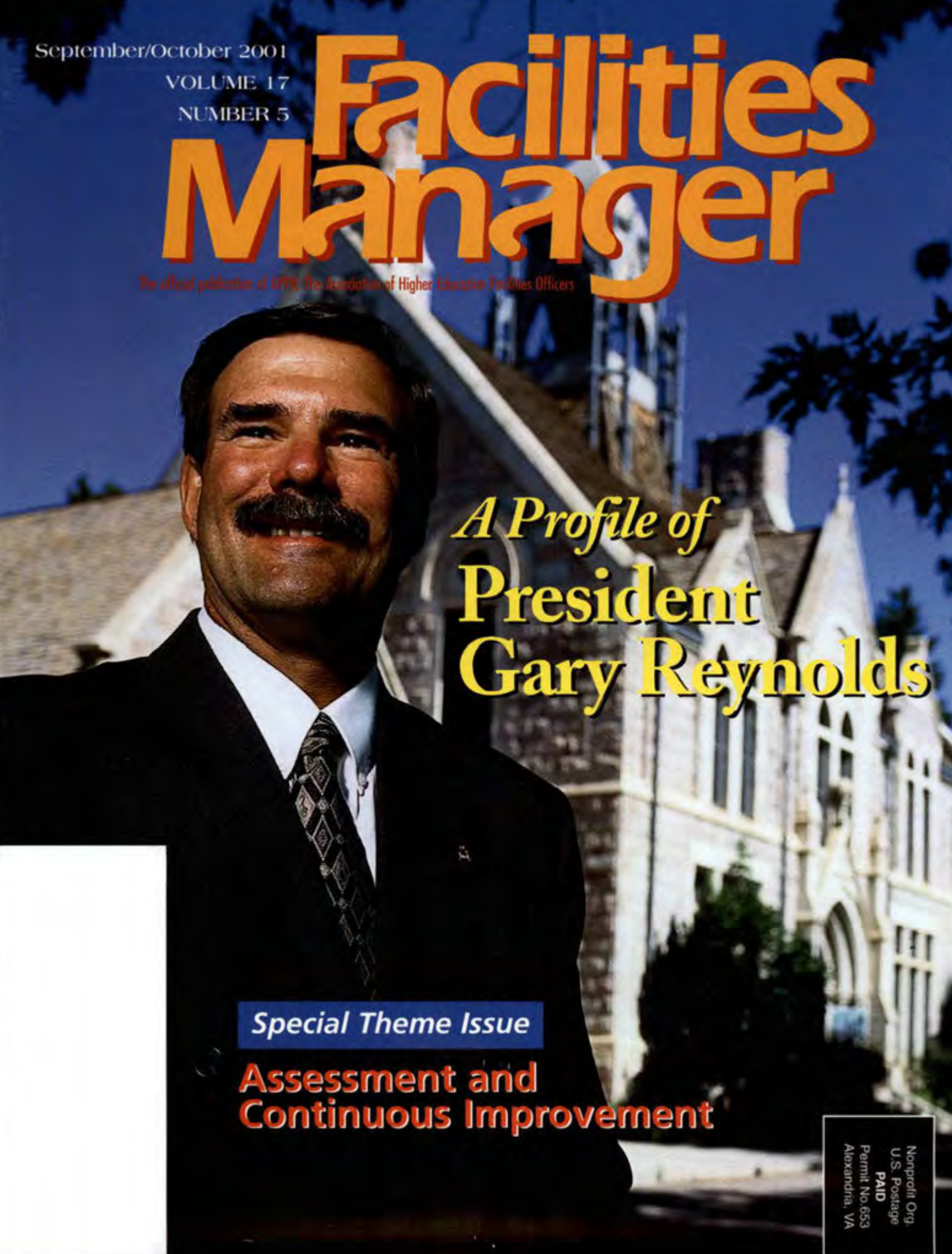
September/October 2001

VOLUME 17

NUMBER 5

Facilities Manager

The official publication of AFPE, The Association of Higher Education Facilities Officers



A Profile of **President Gary Reynolds**

Special Theme Issue

**Assessment and
Continuous Improvement**

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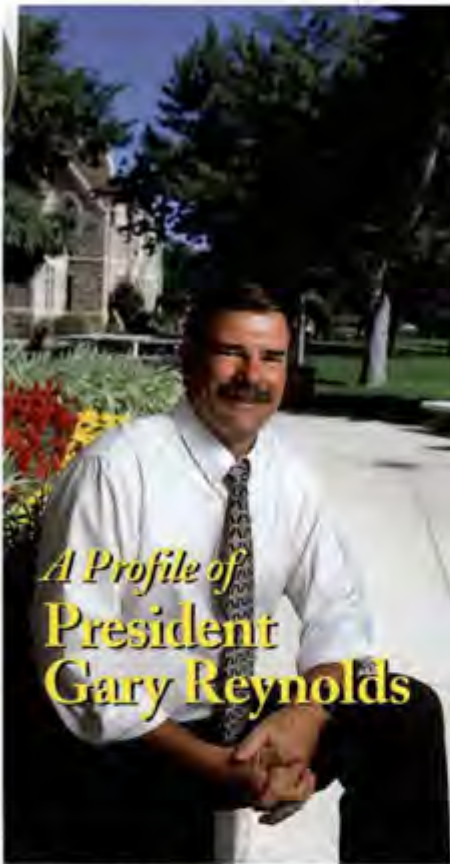
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Cover photo by Don Jones

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Global Partner in Learning

From the Editor

by Steve Glazner

APPA Publications has had a busy and successful year thus far; we have published five books and produced one CD-ROM since May. If you have not yet ordered these titles, we urge you to do so at our secure online bookstore at www.appa.org/resources/publications.

- ☐ 1999-00 Comparative Costs and Staffing Report for Educational Facilities [\$90 APPA members, \$130 others]
- ☐ 1999-00 CCAS-on-CD [\$130 APPA members, \$210 others]
- ☐ 1999-00 CCAS Book/CD Set [\$198 APPA members, \$306 others] (The most comprehensive data available for facilities management costs and staffing, including costs per square foot for key functional areas.)
- ☐ Changing Currents in Deregulation, ed. by Mohammad Qayoumi [\$55 APPA members, \$82 others] (State-of-the-industry report on electric deregulation, from California's difficult situation to Pennsylvania's successes, as well as discussions of energy policies, management concerns, and the role of natural gas.)



- ☐ Communication is the Key, by H. Val Peterson [\$37 APPA members, \$55 others] (A funny and insightful collection of 50 essays from Past APPA President and Facilities Manager columnist Val Peterson.)
- ☐ Operational Guidelines for Grounds Management [\$75 APPA members, \$125 others] (Following APPA's Custodial Staffing Guidelines book, this comprehensive guide discusses environmental stewardship, broadcast & zone maintenance, grounds staffing guidelines, contracted services, position descriptions, and more. Copublished with NRPA and PGMS.)
- ☐ The Strategic Assessment Model, second edition [\$90 APPA members, \$140 others] (APPA's self-assessment and continuous improvement tool is completely revised to include expanded discussion of the Balanced Scorecard and Baldrige Award criteria, as well as case studies from schools that have implemented SAM.)

APPA Announces Prize Winners from Montreal

Thank you to all who participated in APPA Jeopardy and the business card exchange at the Montreal conference! We are pleased to announce that Mary and Neal Swarnes (Cotter College) and Linda and L. Wayne White (Utah State University) are the winners of the APPA logo short sleeve polo shirt, awarded for playing the Jeopardy game. Al Bates (Princeton University) is the winner of the business card drawing for a two-night stay for two at a Marriott property. Please contact Dina Murray, director of member services at 703-684-1446, ext. 232 or send an e-mail to dina@appa.org to claim your prizes.

Energy Well Spent

Are you up to date on current energy issues? Are you aware of the problems that institutions face in light of last year's crisis in the western states, and the future problems that will occur in other parts of the country as well?

Join APPA and the National Association of College and University Business Officers (NACUBO) as we address these issues at the Energy Issues Conference on November 19-20, 2001, at the Harbor Court Hotel in Baltimore, Maryland.

Once again, facilities professionals, business officers, and those on the front line of this issue will share their experiences and engage participants

in a timely and necessary discussion. Don't miss this opportunity.

The cost of the conference is \$579 for APPA and NACUBO members, and \$729 for all others. To make hotel reservations contact the Harbor Court Hotel at 800-824-0076 or 410-234-0550. Hotel Rates are \$160 for a single or double.

Also, don't forget APPA's new publication that covers several energy issues, from deregulation in California and Pennsylvania to conservation. You can order *Changing Currents in Deregulation* on APPA's website at www.appa.org/resources/publications or call 703-684-1446 ext. 235. The publication is \$55 for APPA members and \$82 for all others.

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Upcoming 2002 Programs

Kee your eyes peeled for more information on the following programs:

The January **Institute For Facilities Management** will take place January 13-19, 2002 in Tampa, Florida. Registration and logistical information will be made available November 1st at www.appa.org/education.

The 2nd **Emergent Building Technologies Conference** will take place February 3-5, 2002 in Las Vegas, Nevada. More information will be available at www.emergentbuildingtech.com. Registration will begin online October 1.

Charter Association Creates History

On May 23, 2001, the Dallas-Fort Worth Educational Facilities Association (DFWAPPA) officially became the



newest metropolitan association to be affiliated with APPA.

John Harrod, 2000-2001 President of APPA, was in attendance to install the chapter's executive committee and charter members. Harrod also presented APPA's goals and strategic plan, and explained the role that the DFWAPPA membership plays as APPA associates.

Kevin Folsom, President of DFWAPPA and director of facilities and plant operations at Dallas Theological Seminary, gave a presentation on how the membership represents educational institutions and business partners working together to contribute to a better future for our children.

His message stated that all educational institutions have three things in common—students, faculty, and facilities—and that staff support is critical to each area. Facilities management is not only nuts and bolts, or bricks and mortar, but also customer service. The high visibility of the facilities staff at each institution enables them to set the tone on their campus by taking ownership of their work and exhibiting the professional attitude of someone well trained in their discipline.

Folsom has set a goal to develop a method for DFWAPPA to recognize facilities staff members—from management to entry-level—for their contributions to educational facilities management.

Art Sykes, Vice President of DFWAPPA and director of facilities at Eastfield College in Dallas, presented each charter member with a framed personalized certificate. Other officers installed were Tim Leitch, Secretary-Treasurer (director of physical plant at Southwestern Baptist Theological Seminary, Fort Worth) and Wesley Hayes, Ad Hoc Chair (director of facilities services at Richland College, Dallas).

DFWAPPA first met on May 27, 1999, with three people in attendance. Two years later the May 23rd charter meeting had 31 attendees. Membership consists of facilities staff from 19 educational institutions and 30 business partner companies. The association is financially stable and has initiated good strategic initiatives.

DFWAPPA will provide three primary opportunities to its members: a unique association to APPA, motivation for entry-level through management-level staff, and resources that are not easily attained by one institution and are unique to the Dallas-Fort Worth area.

From the conception of DFWAPPA, it was desired for the association to be a professional organization in every aspect. Chartering was just the next step to its bright future for a profes-

sional association that enthusiastically supports its membership and APPA.

New GSA Property Database

On July 18, 2001, American Community Network and the General Services Administration of the United States Government announced the launch of a GSA property database. The new database lists all GSA owned and leased properties including location, lease expiration, square footage, and contact information. The GSA selected ACN and created the website late last year to develop the best way to enhance their Web marketing efforts to reach site selection decision makers involved in the expansion/relocation process.

Brian Polly, GSA's acting assistant commissioner for portfolio management comments, "Listing properties and leases online enables us to provide instant information to GSA's customer agencies, Members of Congress, the general public, and real estate professionals. ... It is essential that we continue to bring private sector know-how in the Internet arena to support GSA's important landlord mission for the U.S. Government."

F. Joseph Moravec, GSA's commissioner of the public buildings service, stated, "Making our properties available electronically furthers the goal of the administration and Congress to use leading edge technology to improve government efficiency. In fact, Congress created GSA in 1949 to improve government efficiency."

The GSA database may be reached by accessing ACN (www.acn.net). It is also linked to www.gsa.gov and www.firstgov.com. For additional information, contact Bob Krieger at 901-251-7108 or b.krieger@acn.net.



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Montreal 2001 Highlights

The 2001 Educational Conference and 88th Annual Meeting in Montreal was a tremendous success thanks to your participation and support of the work that is continually done at APPA throughout the year. For those who were able to join us, we hope that your experiences were enjoyable and that you had the networking and educational opportunities you expect. If you were not able to be with us, please join us next year in Phoenix, Arizona, July 21-23.

We offer these snapshots into the heart and soul of the 88th Annual Meeting and Educational Conference. Our deepest gratitude goes to the APPA membership, business partners, welcome committee, speakers, spouses, and guests for a great time.



The APPA staff

Those Who Shared Their Expertise... The Speakers

Marshall Goldsmith kicked off the conference at the Welcome Breakfast, which was sponsored by Siemens Building Technology, Inc.



Long-time APPA member, William Daigneau, from University of Texas M.D. Anderson Center, spoke to us on the Role of Facilities Professionals, from the Boomers to the Xers.



Text by Suzanne Healy Photos by Rhonda Hole

Montreal 2001 Highlights



Dr. Janet Lapp showed us (and Ed Smith) how to plant our feet in midair and dance with tigers during the Town Meeting Breakfast, sponsored by ServiceMaster.



Craig Pace, of FranklinCovey Premier, brought the week to an end with Personal Leadership, sponsored by Sodexo.

Montreal 2001 Highlights

Those Who Have Raised The Bar...

APPA's highest institutional honor is the Award for Excellence in Facilities Management. The award is designed to recognize and advance excellence in the field of educational facilities. Originally established in 1988, the Award for Excellence provides educational institutions the opportunity for national and international recognition for their outstanding achievements in facilities management. This year APPA recognized achievements made at:



Texas Tech University



University of Cincinnati



University of Miami

Montreal 2001 Highlights

APPA's highest individual honor is the Meritorious Service Award. Each year APPA members bestow the Meritorious Service Award upon the individual member or members who have made significant, life-long contributions to the profession of educational facilities management. This year's proud recipients were:



Greg Fichter, Indiana University



Larry Quick, Art Institute of Chicago



Joseph Rubertone, Quinnipiac University

The Pacesetter Award is designed to encourage further participation in APPA among those who have already made significant contributions in their regions or chapters. The following individuals were recognized this year by the membership for their contributions:



*Terry Ruprecht, Jeff Buening,
Robert Bertram, President John
Harrod, Linda Carter, and
L. Wayne White*

Montreal 2001 Highlights

Recognition also extends to the contributions made to Facilities Manager magazine. The Rex Dillow Award is presented to the author of the best article published during the previous calendar year. This year we congratulate David Gonzales for his article in the July/August 2000 issue: "It Takes a Revolution – A Case Study of Facilities Service Improvement at UCSB."



The President's Award is given to individual APPA members who have demonstrated exceptional achievement in facilities management and who have made outstanding contributions to the association. President John Harrod bestowed the honor on:



Jack Dempsey



Maggie Kinnaman



Mohammad Qayoumi
[Accepted by Hildo Hernandez]



William Gardiner

Kevin Folsom-
absent from ceremony

Montreal 2001 Highlights

Those Who Exceeded Expectations... APPA's 2001 Business Partner Award Recipients

APPA's Business Partners are companies that provide products and services to the facilities management marketplace or have an interest in reaching facilities managers in the education environment. There was an enormous amount of support this year from Business Partners in sponsorship, educational support, and backing on various projects throughout the year. At the Global Business Partners Reception we collectively say thank you to those sponsors who have collaborated with APPA during the past year. Below is a list of awards and this year's recipients.

2001 Platinum Award Recipients



Siemens Building Technologies



Sodexo

Montreal 2001 Highlights

2001 Gold Award Recipients



Johnson Controls, Inc.



ONDEO Nalco



ServiceMaster

FranklinCovey Premier - absent from ceremony

2001 Silver Award Recipients



ATG (Advanced Technology Group)



Collins and Aikman



ISES Corporation



*Lerch Bates & Associates, Inc. –
Elevator Consulting Group*



Reliability Management Group



Smith, Seckman and Reid

Montreal 2001 Highlights

2001 Bronze Award Recipients



3D/International



CMS/Viron



Fanning/Howey and Associates



Maximus



Milliken Carpet Co.



Prism Computer Corporation



Sebesta Blomberg & Associates



TMA Systems, Inc.



VFA

University Business Magazine - absent from ceremony

Montreal 2001 Highlights

APPA bestows two individual Business Partner awards: the Global Partner Award and the Strategic Partner Award. The Global Partner Award is given to those individuals who, on behalf of their company, have actively sought ways to partner with APPA on projects, programs, and at various meetings. This award is given only when merited. This year the Global Partner Award went to Michelle Tanem of Johnson Controls.



The APPA Strategic Partner award is given to those individuals who facilitate APPA's progress in pursuing its strategic goals. This year we honored the following:



Jim Delbridge of Cutler Hammer



*Jim Sebesta of
Sebesta Blomberg & Associates*



Randy Ledbetter of ServiceMaster

Scott Miller of Franklin Covey - absent from ceremony

Montreal 2001 Highlights

What's a Party Without a Host?

There are many components that go into planning and orchestrating each and every Educational Conference. The APPA staff worked all year in conjunction with another group of individuals who worked almost as long as the staff ... the Welcome Committee.



Their dedication and assistance was invaluable throughout the entire meeting. And we extend a special thank you to Gilles Rousseau for his service and dedication as the 2001 Welcome Committee Chair.



APPA members enjoy the Welcome Party.

Montreal 2001 Highlights

Do You Know Your Regional Representatives?



A collective thank you to the following regional representatives for their work with the 2000-2001 Board.

From left, with President John Harrod:

L. Wayne White (RMA)

Johnny Torrez (PCAPPA)

Edward Rice (CAPPA)

Joseph Kish (MAPPA)

Earl Smith (ERAPPA)

Robert Kelly (AAPPA)

Michael Besspiata (SRAPPA) [Absent]

Networking and nurturing new relationships are an important part of the educational conference. As an association, APPA encourages this activity and hopes that attendees have a good time, too. The following scenes are taken from the Welcome Party, (sponsored by Johnson Controls, Inc.), the educational sessions, the Hall of Resources throughout the week, and the Banquet. Again, we hope that you enjoyed your week with us. We want all of our members to share in these memories and cherish them as much as we do.

A bit of local flavor ... during the Welcome Breakfast we were greeted by the Mayor of Montreal along with Gilles Rousseau and the Accueil Bonneau choir, representing this year's local charitable organization.



Montreal 2001 Highlights

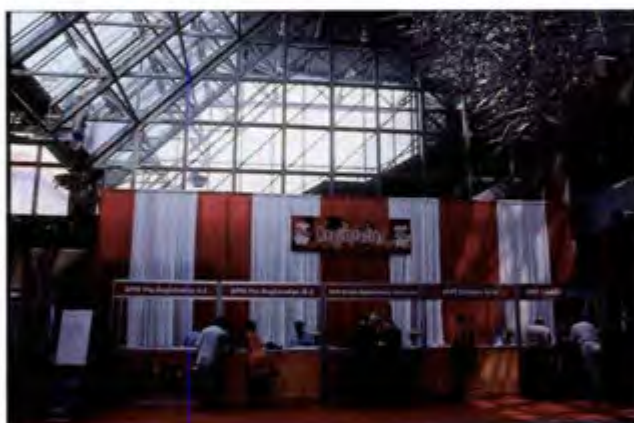
Dina Murray, Stephanie Legette, and Cotrenia Aytch of APPA check in the attendees during pre-registration hours.



APPA staff member Steve Glazner explains the components of the registration packets to members.



The quiet before the storm.



The TMA Fun Run.



"Ok everyone, John is getting ready to open the hall." All John Harrod needed was a town crier as he prepares to officially open the Hall of Resources.



Montreal 2001 Highlights

Welcome to the Hall of Resources 2001



A glimpse inside an educational session.



Quiet networking time during educational sessions.



The new APHA Café was a great place to relax, have a cup of coffee, and network with colleagues.



Gary Reynolds mingles with Maggie Kinnaman and Robert Kelly at the APHA Café.



Dick Williams, Chuck Sippial, and David Cain.

Montreal 2001 Highlights

And after a hard day's work, we need to have a little fun. Scenes from the Welcome Party.



Let's Celebrate! An Evening with APPA friends and Cirque du Soleil.



Montreal 2001 Highlights

And a friendly farewell and changing of the guard. Outgoing APPA President John Harrod and his wife Jane welcome Gary Reynolds as APPA's new president.



The evening winds down and we say good bye to Montreal.



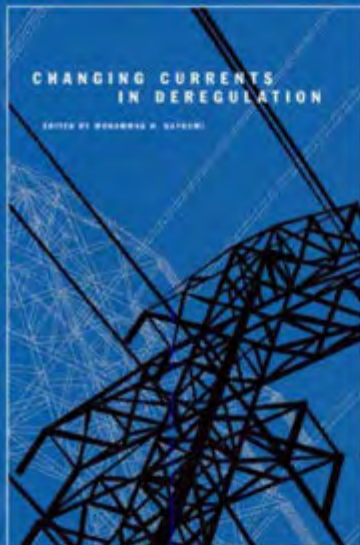
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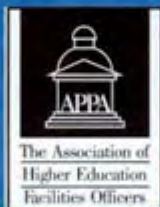
CHANGING CURRENTS IN DEREGULATION

This book provides a state-of-the-industry look at electric deregulation in the United States—from the rolling blackouts in California to Pennsylvania's success with electricity restructuring. Because many facilities professionals are unaware or unsure how deregulation will affect their institutions,



Changing Currents in Deregulation answers all the questions that you need to know. Included are a history of the industry, electricity pricing and availability, the role of natural gas, and predictions for

future efforts in restructuring. Included in the appendices are essays from individuals working in the field.



ORDER FORM

Please send me _____ copies of *Changing Currents in Deregulation*. Copies are available from APPA for \$55 members/\$82 all others, plus delivery. Delivery fees are 10% of total purchase, maximum \$15; for international orders, add 20% of total purchase; for rush/overnight delivery, add \$25 plus regular delivery fees. Please allow 2-3 weeks for delivery.

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Strategic Space Planning

by Mike MacDonald

Effective planning for organizational facilities expansion and use is usually considered desirable normal practice. However, the logical imperative of thorough planning often runs into practical and perceptual difficulties. A strategic space planning process that effectively links all the sub-processes involves:

- Definition of user and project requirements
- Design and construction
- Commissioning
- Post-occupancy evaluation
- Management, use, and maintenance
- Building/facility-in-use evaluation
- Comparison with peers

These processes develop knowledge of in-use performance and user satisfaction, lessons learned and best practices to feed forward, and performance enhancements. However, this is rarely seen in practice, even partially.

As a result, we often hear claims that building standards are declining, despite desires and requirements for "quality assurance" throughout the construction industry. Building performance evaluation experts have been heard to claim that the more experience they have with evaluating building planning, delivery practices,



and actual building performance achieved, the more they are convinced that what predominates today is a very irrational process.

There are many hindrances to attaining a strategic space planning environment that allows significant improvements to be made in how buildings and facilities are delivered and used. Fragmentation and isolation of the parties involved means there is limited participation in the learning moments of each sub-process, with resulting limits on communication of what could be learned and used to improve.

Difficulty in translating experience to lessons learned and best practices also reduces the potential information

available. Disincentives, combined with only limited incentives to improve, severely limit changes to "stuck in a rut" practices and processes. Since "no news is good news" in many instances, the ability to improve is crippled by both the weight of ingrained conformance to the status quo and the obscurity of not wanting to know any news that is not positive.

Without support for key activities that include some levels of monitoring, assessment, analysis and interpretation, continuous transfer of knowledge gained, and cementing the knowledge gained into organizational memory, transition from a typical space planning process to a truly strategic process is likely to be very slow.

Strategic space planning is a way to improve the rational basis for space planning, the overall quality of delivered facilities, and some level of continuous improvement in facilities already in use. Active assessment in all the sub-processes listed above, together with a commitment to transfer knowledge gained from assessment to practice, will lead to increases in the strategic nature of facility planning, delivery, and use.

Quality, knowledge, and performance improvement—"Go Strategic!" 🏠

Mike McDonald is a senior staff member at Oak Ridge National Laboratory, Oak Ridge, Tennessee. He can be reached at macdonaldjm@ornl.gov.

For any Occasion...

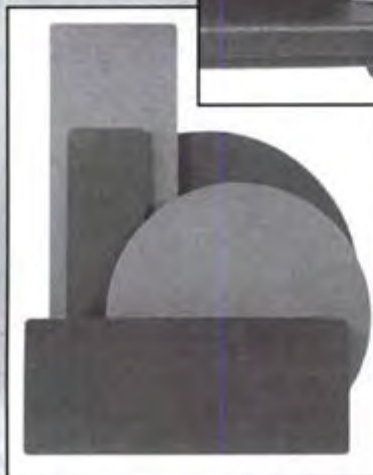
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Membership Matters

Presenting APPA's Global Image

by Dina Murray

Earlier this year I received a phone call from an anxious member in response to a particular e-mail that I sent regarding their membership status. The caller was concerned because I had written that their institution was an International APPA and Regional member. While this statement does not send out a red flag due to an overt error, it did cause the member to think that they were accidentally placed in the wrong membership category. I attempted to explain that a paid institutional member in good standing is an International APPA member, but they were still confused.

While most members refer to the organization as APPA, the term "International APPA" helps designate, clarify, and remind us that we are truly a global organization. There are many countries represented in APPA's international membership including Australia, Canada, Cyprus, England, Finland, Hong Kong, Jamaica, Korea, Lebanon, Mexico, New Zealand, Pakistan, Republic of South Africa, Trinidad, and the United Arab Emirates. APPA's strategic plan includes a vision statement, "become a global partner in learning." With representation from almost every continent in the world, APPA is on its way to establishing a foothold in the international educational facilities arena.

The need for associations and for-profit companies to become more globally aware and inclusive has sprouted a need for books that deal with these topics. Current titles offered by Amazon.com include: A

Dina Murray is APPA's director of member services. She can be reached at dina@appa.org.



Future Perfect: The Challenge and Hidden Promise of Globalization by John Micklethwait and Adrian Wooldridge; *Runaway World: How Globalization is Reshaping Our Lives* by Anthony Giddens; and the most touted *The Lexus and the Olive Tree: Understanding Globalization* by Thomas L. Friedman. The common link between all three books is the theme that globalization cannot be an option or goal for any organization without advancements in technology.

APPA is utilizing technology to provide services to international members in several ways. Our website, at www.appa.org, is one of the fastest and most cost-effective ways to communicate APPA news, trends, and member services to both U.S. and international members. Another way to

get the most out of your membership benefits is by reading APPA's biweekly electronic newsletter *Inside APPA*. Since its inception in October 2000, *Inside APPA* has been a valued addition to our various publications. The members who have subscribed to this service look forward to receiving it. It is surprising that only 56 percent of APPA's membership are taking advantage of this inclusive member benefit. In this age of ever-present e-mail, voice mail, and paging, it is hard to imagine that APPA's educational facilities community does not have a higher percentage of e-mail addresses represented in the database. If you aren't receiving *Inside APPA* yet please contact the member services department with your e-mail address to begin your subscription today: Maxine Mauldin, member

services manager at maxine@appa.org or Dina Murray, director of member services at dina@appa.org.

International members are also utilizing our website to register for APPA's educational programs. This year alone international members attended the Montreal annual meeting, the Leadership Academy, and the Institute for Facilities Management. Globalization is reinforcing the theory that it really is a small world after all.

Each year APPA's President-Elect visits the Australasian Region on behalf of APPA. This year Phil Cox will make the trip in October to network with our Australian and New Zealand colleagues who are instrumental in educational facilities management. This has always been an

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excellent opportunity to bridge the gap between two distant continents as well as having APPA leadership recognize the importance of the AAPP region in the overall APPA membership. Australia has the most international members than any country other than Canada.

Outside of the limitations of geography, and via technology, APPA also encourages participation in the APPAinfo discussion list, where 750 educational facilities professionals can electronically pose questions to their peers while broadening their resource base. There is a wide range of questions posed and there are several facilities topics covered such as budgets, utilities, technology, air quality, construction, and much more. To subscribe to the list visit www.appa.org/resources/internet/appainfo.html.

Unlike other organizations that have had to hire international communications experts to interna-

tionalize their websites, APPA's vision statement, "To become a global partner in learning," navigates the organization away from localization and identifies us as an international association. To maintain APPA's identity as the association of choice for educational facilities professionals throughout the world, we must continue to recognize, highlight, and encourage participation and involvement from our international constituency through the use of technology. We must also offer services, products, and educational opportunities that have appeal to all segments of the facilities market.

We can't grow globally without your help. To spread the word about APPA, tell, or better yet, e-mail a colleague, peer, or friend today about the benefits of membership in International APPA. We're as close as a click away (www.appa.org). 📧

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Executive Summary

Montreal Speakers Motivate for Personal and Professional Growth

by E. Lander Medlin

By all accounts, APPA's Educational Conference held in Montreal, Canada this past July was a resounding success. The quality of the educational programming far surpassed that of any previous educational conference held over the past several years, so much so that folks are clamoring for the conference proceedings, which can be accessed on APPA's website www.appa.org.

The trade show/exhibit hall truly transformed itself this year into a Hall of Resources (as we now call it). The Hall was packed with over 130 business partners displaying a vast array of products and services to assist educational facilities professionals in effectively handling their job responsibilities throughout the year. The variety of planned functions and activities ranged from a lively welcome party, active networking breakfast gatherings, motivating general session speakers, a unique and entertaining banquet, and, a dynamic and gracious welcome committee from the surrounding Montreal institutions.

The conference was a memorable one in innumerable ways. Business cards were exchanged by the dozens, new relationships were formed, and old acquaintances renewed. Of special note were both the number of international attendees and the number of countries represented at the meeting, 27 and 11 respectively. We are well on our way to becoming the international association of choice for educational facilities professionals worldwide.

Overall, the networking, exchange, and interaction were personally and

professionally rewarding for all participants. I want to thank each of you for the way you graciously and attentively treated both our business partners and our international guests. I also want to thank all who made donations to the Montreal-based Charity Choir, for whom we raised over \$3,000. You are simply the best!

For those not able to attend, I take this opportunity to share some of the thoughts, ideas, and motivational teachings of our general session speakers.

Marshall Goldsmith, lead editor of the Peter Drucker Foundation "future" series, and co-founder of the Financial Times Knowledge Dialogue, a network that connects corporate leaders with executive educators, is

widely recognized as one of the world's foremost authorities in helping leaders achieve positive, measurable change in behavior: in themselves, their people, and their teams. He spoke about the impact of direct report feedback and follow-up on leadership effectiveness. As Peter Drucker said, "The leader of the past was a person who knew how to tell. The leader of the future will be a person who knows how to ask."

Through an extensive study, Marshall Goldsmith validated the importance of "asking." He emphasized that by asking for feedback, analyzing the results, developing a focused action plan for change, and following-up (which is really asking again), leaders will almost invariably

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Lander Medlin is APPA's executive vice president. She can be reached at lander@appa.org.

be perceived as more effective. So, *follow-up* really works too. The major variable impacting change is not the *program* but the *process* that follows. Further, by developing processes that ensure ongoing feedback and follow-up, organizations can help leaders develop in a manner that requires fewer resources and produces greater positive, measurable change in effectiveness. Yet, it is essential that as you engage in the process you remain positive, keep your action plan simple, and focus on the future (not the past).

Goldsmith concluded with three pieces of advice: 1) be happy now; 2) friends and family are most important; and 3) go for it, whatever it is that inspires you.

Janet Lapp followed Monday morning's breakfast by dishing out an uplifting, fun, and exhilarating talk. Her presentation content was similar to that of Marshall Goldsmith, but with an interestingly different delivery style. Her focus was also three-fold: 1)

maintain a positive, optimistic outlook on life; 2) learn to let go of the things you can't change; and 3) give to others out of love. She quoted Mother Theresa as saying, "Don't focus on doing the great big things; do the little things daily with love."

As a clinical psychologist, she understands people, their behaviors, and their natural resistance to change. She effectively engaged the entire audience in short but meaningful activities and dialogue to illustrate how one can easily break old habits, old routines, and old ways of thinking. She emphasized that you either create your own future or someone else will create it for you. Although she insisted that her points are just reminders of things we already know, it is important to continuously be reminded of them. In this fast paced world, it is easy to lose sight of what is really important in life.

Bill Daigneau, associate vice president and chief facilities officer for the University of Texas, M.D. Anderson Cancer Center in Houston, Texas, talked with us about the rapidly changing face of higher education and the impact these changes will have on the facilities profession. He highlighted the present perceptions various members of our institutions have of us, and ours of them. Daigneau stressed that we must be prepared to take on new and different roles within the institutional community if we are to be successful in the future. We must focus on being flexible and adaptable, and gain the ability to build effective partnerships and collaborative relationships that are steeped in high levels of trust. We cannot shrink from the task at hand. We must be willing to move outside our present comfort zone into uncharted territory. The higher education industry and the facilities profession both require our best efforts as we quickly move through the Information Age.

Craig Pace was our general session speaker on Tuesday morning. Craig is a member of the Franklin-Covey Premier team of professionals and has spent much time in the higher education environment, teaching and facilitating leadership development and training. He effectively explained President Gary Reynolds' theme of "leadership is personal." In essence, the key to an organization's success resides in each individual's effectiveness. In the past you could attribute success (or the lack thereof) on how well a team functioned. Now the key is in how innovative, creative, adaptable, and flexible each individual is that defines an organization's success. Therefore, the organization's responsibility is to help its people become better leaders.

As you can surmise, much of the conference was, and will continue to be, focused on developing, defining, refining, and redefining the new leadership role of the facilities professional as we face the present and future challenges of the Information Age. 🏠

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Leadership is Personal:

A Profile of Gary Reynolds

by Alan Dessoiff

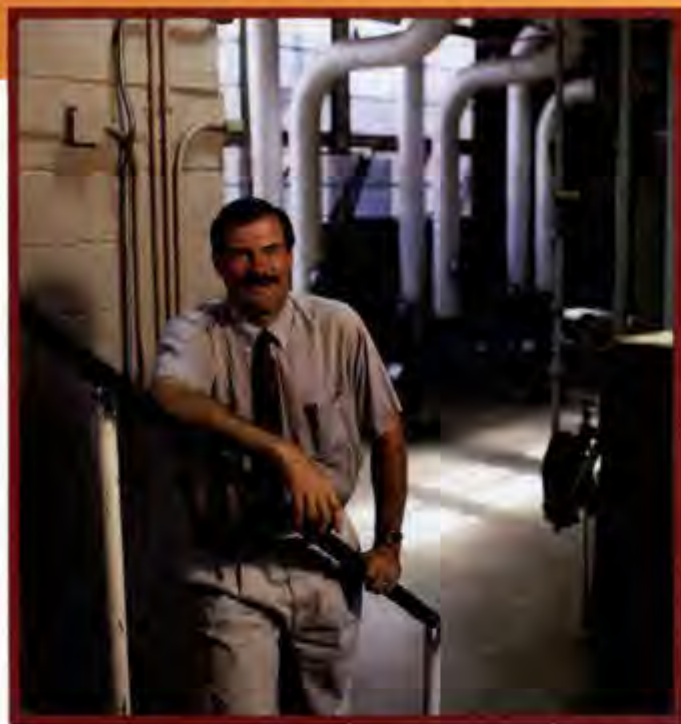


Photo by Dan Jones

Gary Reynolds knows how to stay on course to achieve his objectives. As director of facilities services at The Colorado College, his sharp focus on meeting the institution's needs helps him successfully manage a department that also is responsible for utilities as well as planning, design and construction of college facilities.

In his spare time, Reynolds is a flight instructor and ski instructor, and keeping his students on course in the skies and on the slopes around Colorado Springs, Colorado presents its own challenges.

Now, as APPA's President, Reynolds also aims to lead the association on a course that will help its members perform better in their jobs. While there are many challenges, Reynolds sees facilities managers facing challenges in three broad areas.

One challenge is to be "efficient and effective at the same time," says Reynolds. "During the late 1980s and early '90s we went through a lot of turmoil dealing with budget cuts with a focus on being cost-effective. Many of our institutions

are facing these same issues again in 2001. Our challenge is to ensure that we are cost-effective while at the same time providing, in the long term, an effective learning environment. I don't see that changing," Reynolds declares.

Second, educational facilities managers also need to "keep up with the changing pedagogy and societal expectations and their impact on the mission and cultures" of their institutions. That includes new uses of technology inside and outside the classroom, distance learning and constantly changing research agendas. "It's important for us to keep up with what's going on in higher education in general, not just facilities," Reynolds says.

Finally, managers must look to the future and the development of new leaders in the profession. "It's the concept of succession planning within facilities organizations to ensure that the managers of today can be the leaders of tomorrow in our organizations," Reynolds explains.

APPA is well-positioned to help its members meet those challenges, Reynolds believes. For one thing, the association is in sound financial condition. "Thanks to the excellent leadership that has gone before, we've been able to meet our target for reserves as set by the Board."

He cites the association's "very successful education programs," especially the Institute for Facilities Management, under the leadership of Jim Roberts and Emily Wren, and the Leadership Academy, under the leadership of Doug Christensen and Bill Daigneau. Jack Colby and the Professional Affairs Committee revised the Award for Excellence program and the Facilities Management Evaluation Program to incorporate the latest thinking in leadership, being centered on the customer and strong financial management processes. And Maggie Kinnaman has worked tirelessly with Vickie DeWitt and the Information Services Committee to get the Strategic Assessment Model (SAM) off the ground. "So in many areas in delivery of services to our members, we're doing very well," Reynolds says.

"I am particularly pleased to see the continued growth and strong leadership exhibited in APPA's regions and chapters," continued Reynolds. "They offer some of the greatest value to members because of opportunities they provide for networking and sharing of information—the fundamental reason for the association's existence. "Our members get their most valuable information from their peers who face similar regional or

Alan Dessoiff is a freelance writer, based in Bethesda, Maryland, who has written numerous profiles of APPA presidents. He can be reached at dessoiff@erols.com.



Colorado College's beautiful setting at the foot of Pike's Peak



Historic Palmer Hall, built in 1903

state issues. The regions and chapters are at the very core of APPA meeting its goals."

APPA's vision to become a Global Partner in Learning outlines Reynold's view of the association's future. "I truly believe in this. We really are becoming global and the association of choice," he says.

"The one area that we probably need to work on is the changing pedagogy, the changing institutional demands that we're facing," he asserts. He is excited that APPA's new Center for Facilities Research will play a prominent role in that regard, coordinating the association's

research efforts. Reynold's believes the Center will play a valuable role in helping APPA further develop and distribute information to its members. "It will tie everything together as the information it develops will feed into our educational programs and publications and add knowledge to our profession," Reynolds states.

Also, "to be a valued partner to the other CHEMA [Council of Higher Education Management Associations] organizations, we need to be able to bring good information to the other organizations that represent higher education management associations. I see the Center assuring that what we bring to the table is valued and important," Reynolds says.

Still another benefit of the Center, he suggests, is the new opportunities it will offer APPA members to become actively engaged in association endeavors.

"Under our current structure there are opportunities for only 125 to 150 of our nearly 5,000 members to participate as Board members or on various commit-



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tees. I'm hoping that by creating the Center we can break down large projects or create many small projects to develop information and engage more members in doing that," Reynolds says. Involving more members that way also will help prepare them to hold other positions later as APPA's future leaders or at their institutions.

Getting the Center "on its feet and running" is one of Reynolds' priorities for his term as APPA's President. A November retreat will "help us finalize and refine the structure and processes and procedures that will allow us to carry out high-quality research on facilities management issues."

Reynolds' other priority for the year is promoting the theme he has chosen for his term: "Leadership is Personal." Reynolds wants APPA members to "make a personal commitment to step outside our normal routines and take on bigger challenges." The Center for Facilities Research will provide opportunities to do that in APPA but it's also important for managers to become more broadly engaged at their own institutions.

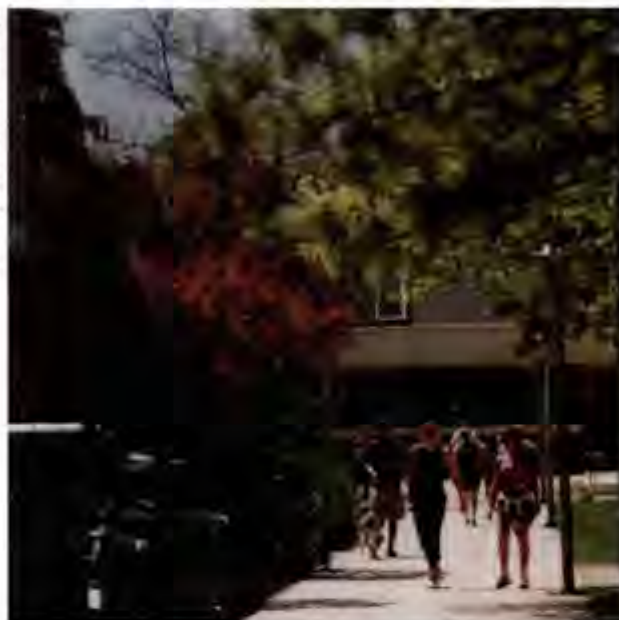
"It's very easy to stay at our comfort level, just doing our jobs as managers or supervisors of our areas. I'm suggesting that we go beyond our normal routine and step up and take a leadership role and expand our participation in our institutions and grow as institutional leaders," Reynolds says. That gets back to the changing pedagogy in higher education and the need for managers to comprehend "the whole academic and social learning environment that our students come to our institutions for."

"It's important that we understand and help ensure that the missions of our institutions can be met through the roles we play," he declares. "We wear many hats in trying to be experts in technology, facilities management, financial matters and human relations. It's my hope that through the Center for Facilities Research and our other programs, our members can get from APPA what they need to be experts in those areas and true leaders at their institutions. This institutional engagement also helps develop the facilities leaders we will need in the future."

Reynolds brings a long record of professional involvement and leadership to APPA's Presidency. As the association's Vice President for Educational Programs, he spearheaded a total redesign of the popular twice-yearly Institute for Facilities Management. He also edited and was primary author of APPA's book on Total Quality Management. In addition, Reynolds has been heavily involved with the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE); APPA's new Center for Facilities Research follows to some extent the ASHRAE model for conducting research and disseminating its results to members.

At The Colorado College, a four-year liberal arts school with about 1900 students, Reynolds is responsible for oversight of the operations, maintenance, capital construction and utility systems for the college, as well as transportation services, environmental health and safety, and campus security. He

Courtesy of The Colorado College



Colorado College's Student Center

manages a budget of \$7.3 million, including \$2 million for utilities, and oversees 55 employees in the facilities department, 20 more in security, and an additional 50 in custodial services under an outsourcing contract.

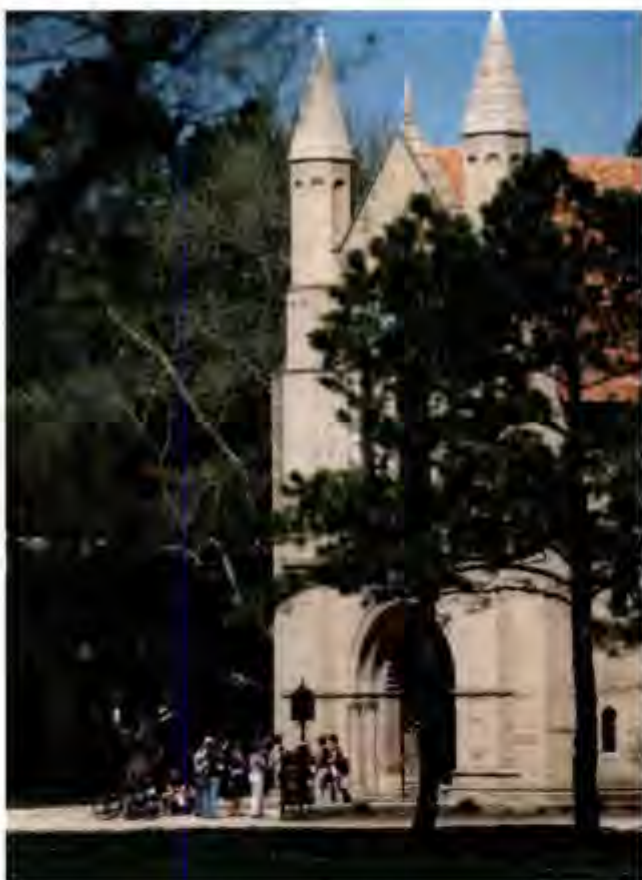
Under a unique Block Plan at the college, students take one course at a time and all classes meet from 9 a.m. to noon. That means if 120 courses are scheduled for that block, 120 classrooms must be available every day at the same time. "The reliability of our systems is very important. Any problems that develop during a school day are resolved quickly. We can't afford to have a building down for a day because of electrical outages or something else," Reynolds says.

Another implication of the Block Plan on facilities management is that "all the students get up at the same time every day, so the impact on our utilities in particular and infrastructure in general is much greater in those peak periods," Reynolds says. He participated in the design of new residence halls in which four students share an apartment. "For example, we set up the restroom and sink facilities so all four could get up and use them at the same time," he explains.

Reynolds is particularly proud of a new utility master plan that is being put into place at the college that includes new infrastructure for telecommunications, electrical service, a high temperature hot water distribution system, new chiller capacity and water supply improvements. The plan will enable the college to serve new facilities for "decades into the future," Reynolds says.

He also is working on new fire safety improvements including fire alarms and sprinkler systems in all residence halls and ultimately in the academic buildings.

"Gary has great management skills. He always has an answer when problems come up, as they do in construction, and when the going gets tough he tells everybody to hang in



Historic Shove Chapel, built in 1931

there. He amazes me with his skills," says Dave Lord, business manager of The Colorado College who is overseeing the institution's new housing project.

Like John Harrod, his predecessor as APPA President, Reynolds moves into the association's top leadership position from the Midwest, where APPA began in 1914 as a regionally-based organization with a Big Ten core. An engineering graduate of Iowa State University, Reynolds worked as an engineer in private industry before returning to Iowa State as head of energy management in 1981. He worked his way up to director of facilities management at the university before moving to his present position at The Colorado College in 1997.

Also like Harrod, Reynolds cites William (Bill) Whitman, an APPA member emeritus and past APPA President, as a key mentor in his professional development. "One thing he taught me, which I still carry with me today, is the importance of understanding what the needs are in facilities, creating a vision for those needs, and then having the patience to manifest that vision into reality," Reynolds says.

"He always liked to have a whole bunch of things on his plate and when he took on something, he got it done," says Whitman, who retired as assistant vice president for facilities at Iowa State. He recalls how Reynolds managed cleanup and repairs after a local creek flooded and devastated a number of university buildings in 1993. "He got them back in operation," Whitman says.

Reynolds and his wife, Paula, a nurse, and their daughter, Jessika, 16, live 8500 feet above sea level in Woodland Park, Colo., "a little town up in the mountains" about 18 miles from his campus office. It is a sharp departure from the flat corn and soybean country around Ames, Iowa, home of Iowa State, but living in the mountains was one of the attractions that brought him to The Colorado College, Reynolds says.

Airplanes have been a lifelong interest for Reynolds. "As a child, I built every model of airplane I could get," he says. He took flying lessons after college and "it grew from there." He once owned his own planes but sold them because "they're expensive to own." Now he enjoys instructing others how to fly both powered planes and gliders. In winters, he also is a ski instructor at the nearby Keystone resort and he likes to play golf.

In those activities, as in his professional activities, Reynolds establishes objectives and ways to reach them. It's a practice that should serve him well as APPA's President. 🏔️



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The University of Virginia is seeking a senior executive experienced in institutional facilities design and construction to supervise about 75 Facilities Management staff as a department head within the University Facilities Management organization in serving the University community and its satellite facilities.

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THE "CONTINUING SUCCESS" CYCLE

by Jeff Buenting

In this article, you will discover the one decision-making process that will guarantee continuing success for your facilities organization. Regardless of the problem or issue (or who is assigned to make the decision), it will work. And, it is simple to understand and implement.

Do you have budgetary or cost concerns? How about specific service or communication challenges? Are you searching for answers to improve individual and departmental performance, safety and labor relations? Perhaps, you just need a guide for issues and process management or continuous quality improvement? The "**Continuing Success**" Cycle is a one-size-fits-all tool for discovering effective solutions that are process-focused, data-driven and results-oriented.

Illinois Quality (IQ)

The Operation and Maintenance Division (O&M) at the University of Illinois is currently utilizing the "**Continuing Success**" Cycle for its Illinois Quality (IQ) continuous improvement strategy. The Cycle has also been presented conceptually and in case-study formats to facilities staff from universities throughout the Midwest.

The Foundation - TEAMS

At the University of Illinois, the foundation for quality is built around TEAMS. We utilize teams, composed of staff at

all levels of the organization and our customers, to study information about processes to achieve success.

Experts agree there are five inputs into a process that produce the output. We have organized these into a TEAMS acronym for simplicity and to emphasize their importance.

T -	Tools
E -	Environment
A -	A person(s)
M -	Methods
S -	Supplies

If we are to achieve continuing success, we cannot wait to study the output. We must analyze and adjust the inputs and the process itself to obtain desired results.

[Think of an issue or process to study at your organization. As you learn about each step in the "Continuing Success" Cycle, note how it applies.]

The Central Focus - "Our Client(s)"

Understanding that TEAMS will serve as the foundation for our IQ efforts, the "**Continuing Success**" Cycle will guide the implementation and operation of each process improvement initiative. The central focus is "Our Client(s)," which represents everyone, inside and outside the organization, who benefits from (or is affected by) our processes and services.

Everything we do revolves around our clients, just as the Earth revolves around the sun. The Earth needs the sun to survive. O&M needs our clients to survive and thrive.

Jeff Buenting works with the Illinois Quality initiative within the operation and maintenance division of the University of Illinois at Urbana-Champaign. He can be reached at jdbuenti@uiuc.edu. This is his first article for Facilities Manager.

Step 1. Involve "Process" Partners

Formalized partnerships between O&M and our clients are necessary to build trust and buy-in, ensure accountability, define responsibilities, and successfully achieve mutual objectives. We refer to the following acronym to emphasize the importance of partnerships.

P -	Partners
A -	Achieve
R -	Results
T -	Through
N -	Nurturing
E -	Effective
R -	Relationships

At O&M, our Guidance Team, consisting of executive leadership, partners with campus customer groups. Together they assess the environment and analyze appropriate data to determine which processes should be addressed, and who should be included in studying each process.

In some cases, an issue can best be addressed by an individual, rather than a team. However, if a decision regarding the process does not need to be made quickly, or if it is in the best interests of our clients, a team is selected.

Each team consists of one experienced facilitator, a trained leader, and four to eight members. Team members are selected from our staff and campus customers, based on their knowledge and/or experience with the process. The entire team then receives training on how to utilize the "Continuing Success" Cycle.

Step 2. Share the Vision

A Process Sponsor from the Guidance Team prepares an initial charter for the Process Improvement Team. This charter includes O&M's overall vision, and the vision for the specific process. (Note: The "process" vision includes information on team structure, boundaries, and timelines.)

The alignment between the organization's vision and the "process" vision is shared. This alignment is critical to show how each process or action impacts the big picture.

Step 3. Define Expectations/Opportunities

Once the Process Improvement Team is commissioned with a charter, their first order of business is to research and collect data from our clients regarding their expectations. This includes our staff and campus customers who benefit from (or are impacted by) the process.

Based on the data, our opportunities to meet and exceed those expectations are documented and shared with the Process Sponsor. A specific, measurable goal can then be drafted by the Process Improvement Team (with input from the Process Sponsor) to quantify how success will be defined.

Step 4. Study the Current Process

Armed with data regarding our clients' expectations and a specific, measurable goal, the team is ready to analyze how the process functions at this time. They research and utilize appropriate data, charts, graphs, and diagrams to document and share all the steps and details regarding the current process.

Typically, there is a gap between what is occurring now, and what we need to do to reach our goal. This gap is measured, documented, and shared with the Process Sponsor.

Step 5. Explore Causes & Effects

At Step 5, the team will thoroughly analyze all five process inputs—Tools, Environment, A person(s), Methods, Materials—to determine the causes of the gap, and the impact on our organization and our clients. Again, they utilize appropriate data, charts, graphs, and diagrams to document and share process barriers, constraints, problem areas, and "waste."

Step 6. Select & Recommend Solutions

The team has a specific, measurable goal. They also have detailed, accurate data on the gap between the current way a process is operating and our clients' expectations, the causes for the gap, and the effects on all parties. Now, they can document and share recommended solutions to achieve the goal...with available organizational resources.

Step 7. Test/Implement Solutions

The Process Sponsor and Guidance Team, in partnership with our clients' study the recommendation to determine if the Process Improvement Team should test the solutions on a small-scale or move to full-scale implementation. Regardless of the strategy, a documented, measurable, deadline-driven plan of action is required.

Step 8. Measure & Report Results

When the deadline date arrives, signaling the end of the test or implementation period, the Process Improvement Team measures and reports the outcomes. They utilize appropriate data, charts, graphs, and diagrams to determine if the goal has been achieved, or what progress has been made.

Back to Step 1. Involve "Process" Partners

We recognize, celebrate, and publish the efforts of our Process Improvement Teams at O&M. If the goal is achieved, we document and employ appropriate strategies (such as, providing change management, work redesigns, job aids, environmental engineering, training, or education) to standardize the new process. We also determine who will own and monitor the new process to ensure continuing success. If the goal is not achieved, progress is documented, and the Process Improvement Team continues the cycle by moving to Step 2 again.

"Continuing Success" Benefits

As stated earlier, the "Continuing Success" Cycle can be utilized to effectively address any facilities-related problem or issue. Here are the additional benefits...

1. The "Continuing Success" Cycle ensures a consistent, systematic approach to decision-making.
2. The "Continuing Success" Cycle is client-driven.
3. The "Continuing Success" Cycle emphasizes the importance of partnerships between leadership, staff, and customers to build trust, ensure accountability, define responsibilities, and successfully achieve mutual objectives.
4. The "Continuing Success" Cycle requires decisions be made according to concrete data, rather than speculation.
5. The "Continuing Success" Cycle acknowledges that facilities organizations and staff have had past successes. The focus is not on blaming or "fixing" people, but instead improving processes to allow people to be continually successful.
6. The "Continuing Success" Cycle gets results and allows everybody to win—leadership, staff, and especially customers.
7. The Tale of the Tape—Just as our facilities staff use tape measures to ensure accuracy, the "Continuing Success" Cycle emphasizes the use of statistical tools to accurately identify, analyze, and measure processes and services.
8. The "Continuing Success" Cycle is easy to implement. A simple guide is printed on page 38.

Start Your Engines!

We have many auto racing fans at O&M. This provides us with an excellent analogy to describe how the "Continuing Success" Cycle works.

Central Focus - In auto racing, the car driver is the client. Everyone works to help the driver be successful ... just as O&M works to help our campus customers be successful.

Step 1 - When a driver wins a race, he or she praises the outstanding efforts of the team—owners, sponsors, mechanics, pit crew, etc. When a campus unit is successful due to the support and work of O&M, we would like to praise the outstanding efforts of our team. We partner with our campus customers and form our own version of PIT

crews (Process Improvement Teams) to ensure continuing success.

- Step 2** - In auto racing the vision is to be the series point champion at the end of the season. At O&M, our vision is to be the provider of choice for all facilities-related services. At each race, the team strives to get closer to that vision, and with each process or project, O&M works toward our vision.
- Step 3** - By partnering with the right people and through ongoing communications, the car driver can identify specific expectations for the performance of the car and opportunities to move past other drivers on the track. Ongoing communications and partnerships between staff at O&M and customers help us identify specific expectations and opportunities to excel.
- Step 4** - The driver uses data from the car's instrument panel and from the pit crew to determine current performance on the track. O&M uses data from statistical tools and from their partners to study the current process.
- Step 5** - Worn tires, alignment problems, body damage, low fuel, and engine troubles are just a few examples of

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the causes of a race car's poor performance at a particular time in the race. Inefficiencies relating to the tools, work environment, methodologies, or supplies at a facilities organization could negatively impact the performance of individual processes.

Step 6 - Expert decision-making and data determine when a driver should pull in for a pit stop to improve the car's performance. The same is true at O&M when a process needs to be improved to achieve our goals.

Step 7 - When a driver returns to the track, the solutions implemented by the pit crew are put to the test. Similarly, O&M Process Improvement Teams test their solutions to determine effectiveness.

Step 8 - A driver and the pit crew measure their solutions based on new data. Is the car completing each lap faster? Is the driver able to move up closer to the lead? Ultimately, did the car win the race? At O&M, we measure the results via data to determine if our goal is achieved.

Back to Step 1 - If the driver wins the race, the whole team celebrates and learns what adjustments were neces-



sary to make them successful. If the driver doesn't win, the team documents their progress and moves to the next race with a strategy for improvement. At O&M, we celebrate our successes and standardize process changes that led to achieving our goal. When the goal is not achieved, we document our progress and continuously improve until the goal is achieved. We then monitor our processes to ensure continuing success.

Further details about the "Continuing Success" Cycle can be obtained by contacting Jeff Buenting at 217-333-1364 or jdbuenti@uiuc.edu. Inspiration and support for the Cycle came from colleagues affiliated with APPA, the Big 10+ Friends Trainers Consortium, the amazing leadership and staff at the University of Illinois' Operation and Maintenance Division, and the works of Dr. W. Edwards Deming, William Conway, Walter Shewhart, and Ira Goldratt. 🏆

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UVA's Reflections on Twenty Years at the APPA Institute

by Jay Klingel and Betty Wooding

Over the last 20 years, the face of the facilities management profession, especially in higher education, has changed to reflect the progressive and sophisticated arena it serves. Facilities management is no longer the basic "physical plant" operation of the 1980s. Our staffs have become much more diverse, more competitive, and more educated. This increased emphasis on education has come in several forms.

Brigham Young University was one of the first higher education institutions to offer a degree in facilities management. Both an associate's and bachelor's degree are offered by Utah Valley State College, and the University of Canberra in Australia offers a Master of Facilities Management. Several other institutions offer degree and non-degree programs.

Graduate degrees and professional certification are now the norm for senior management positions in today's complex facilities organizations. Key positions in the design and construction departments are typically filled by professional engineers or licensed architects. Among our facilities planning and construction staff at the University of Virginia (UVA), 11 are licensed Professional Architects, 12 are licensed Professional Engineers, and five are licensed Virginia Contracting Officers.

The credential bar is being raised for the trades and crafts as well. Certification and licensing, or both, are required for

Jay Klingel (jwk8w@virginia.edu) manages business services at University of Virginia Facilities Management and is an Institute dean and faculty member. He is also a member of the Trades Staffing Guidelines Task Force. **Betty Wooding** (ebw2s@virginia.edu) is University of Virginia Facilities Management's publications manager.



many building and maintenance tradespeople working on our campuses. At UVA, we have a certification program that requires journeyman mechanics to be certified in their trade. Emphasis on professional development doesn't stop there either. In recent years, UVA Facilities Management developed and is offering all classified employees in-house computer training and six new in-house employee health and safety-training programs. Two levels of supervisory training are encouraged for front-line supervisors. To address basic adult education needs, we developed a pilot training program entitled Work Skills for the New Millennium.

Dialogues with our peers in other facilities management organizations indicate that this emphasis on training and education is occurring throughout the country. As our work culture changes, APPA is responding by offering many avenues of training and education for facilities professionals. One such resource, the Institute for Facilities Management, illustrates APPA's pledge to provide training and educational programs tailored to the emerging needs of its members. For the past 20 years, the Institute has been an integral part of the training portfolio for the University of Virginia's Facilities Management organization. UVA has sent at least one participant, usually several, to each Institute held since 1980.

Continued on page 42

2002 Nomination Form



Meritorious Service Award & Pacesetter Award

APPA's volunteers shape and strengthen both the association and the profession through their contributions of time, energy, and ideas. Each year, APPA recognizes the contributions and achievements of a few of these talented and hardworking individuals through the APPA awards program. But identifying the most deserving from among a large group of active individuals requires input from those who know best: other APPA members like yourself. Help us ensure that APPA volunteers get the credit and appreciation they deserve. Nominate an outstanding APPA member for the Meritorious Service Award or the Pacesetter Award. Purpose and criteria for each award are described below.

To submit your nomination, complete the following nomination form and fax it to your regional Awards & Recognition committee member. The Committee will review jointly all nominations and select the recipients. Awards will be presented July 23, 2002 at APPA's 89th Annual Meeting in Phoenix, Arizona.

Meritorious Service Award

Each year APPA members bestow the Meritorious Service Award upon the individual member or members who have made significant, life-long contributions to the profession of higher education facilities management. APPA's highest individual honor, the Meritorious Service Award is given to no more than three individuals each year. To be eligible for the Meritorious Service award, nominees must meet all of the following criteria:

1. Active member of APPA for a minimum of five years.
2. Attended and participated in meetings and other functions at the international level, and
3. Demonstrated continued and distinguished service to the association through one or more of the following:
 - ☐ Service as an officer of the Board
 - ☐ Chair or member of an official APPA education program, special project, or committee
 - ☐ Service to an associated professional organization whose principle purpose is related to the betterment of facilities management.

Pacesetter Award

The Pacesetter Award is designed to encourage further participation in APPA among those who have already made significant contributions at their regions or chapters. Up to seven Pacesetter Awards will be given each year. To be eligible for the Pacesetter Award, nominees must meet the following criteria:

1. Active member of APPA for a minimum of three years.
2. Service/contributions/accomplishments to the association through one or more of the following:
 - ☐ At the international, regional, or chapter level.
 - ☐ As a member of an APPA committee, program, task force, etc.
 - ☐ Through participation in an APPA educational program or special APPA project.
 - ☐ Authorship of a publication, article, or chapter for APPA or presentation at an APPA annual meeting or educational program.
3. Other voluntary contributions of time, effort, resources, and leadership abilities to promote and enhance APPA and the educational facilities management profession.

2002 Nomination Form

Please complete the information below as thoroughly as possible and submit this form to your regional APPA Awards & Recognition Committee representative listed below. Use additional sheets as needed. Attach supporting documentation when available (e.g., letters of commendation, recommendation, newsclips, etc.) All nominations must be received by **January 31, 2002**, in order to be considered for the 2002 awards. This form may be copied for multiple award nominations.

I nominate the individual named below for the following award:

☐ 2002 Meritorious Service Award

☐ 2002 Pacesetter Award

Name of Nominee _____ No. of years in APPA: _____

Title _____

Name of Institution _____

List any positions and/or offices the nominee has held at the international, regional, or chapter level of APPA:

Office

Level (Int'l, Regional, Chapter)

List committee, task forces, or other special projects upon which candidate has served at the international, regional, or chapter level of APPA:

List and describe other ways your candidate has served APPA (e.g., presenting at the annual meeting, writing for an APPA publication, teaching at the Institute):

What other facilities-related organizations has candidate served?

Briefly state how this candidate has contributed to the growth and professionalization of the facilities management profession.

Submitted by _____

Institution _____

FAX THIS FORM AND ANY SUPPORTING DOCUMENTATION BY JANUARY 31, 2002, TO YOUR REGIONAL A&R COMMITTEE MEMBER LISTED BELOW.

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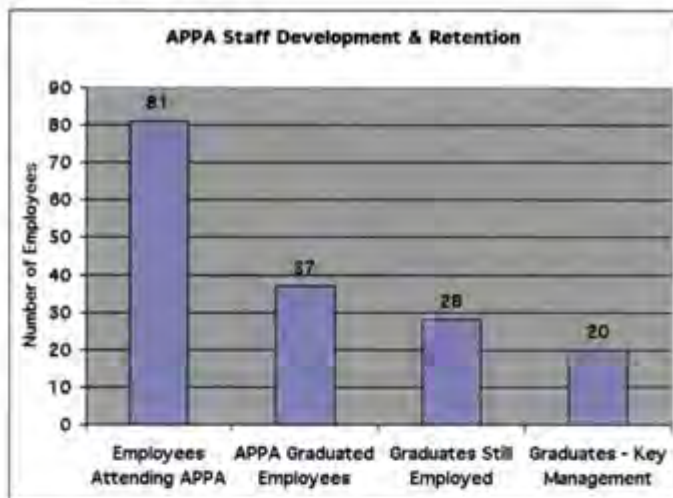
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Pacific Tony Ichsan, Pomona College
Fax: 909-612-8656; Ph: 909-621-8136

Australasia Robert Kelly, MacQuarie University
Fax: 61-2-850-7181 Ph: 61-2-850-7160



How is the Institute Changing?

"Most obvious is today's audience," according to Jay Klingel, dean of the Institute's Operations and Maintenance Track. "When I attended my first Institute in 1980, I was probably the youngest of the 40 or so people there, and one of the few who wasn't head of a physical plant. Now we have a large, diverse audience that is more representative of our workplace." This past January at the Institute in Newport Beach, the 550 participants included grounds foremen, electricians, engineers, custodial supervisors, and accountants, in addition to facilities management directors. It is a challenge to tailor presentations to such a diverse group—sessions such as Utilities Distribution Systems have to keep the interest of an engineer with technical training while presented in terms understood by the horticulturist without that technical background—but it is a challenge the Institute faculty welcomes. "I believe the strength of the program is the diversity of experience and knowledge of the participants. The Institute instructors present information based on their own experience and knowledge, but I've found the dialogues in the sessions are often a source of the most valuable information. I'm fortunate as an instructor to be able to learn from participants and bring back many of their good ideas to the university," Klingel summarized.

"Equally important is the applied value of the training content," he continued. "Participants tell us repeatedly that they see immediate uses for this training. They go back to their jobs and put the new information into action."

The broad range of information is evident to participants, too. "I was glad to learn the overall operation of facilities management by attending sessions in all four areas," said Ralph Himelrick, electrical maintenance supervisor. "I've done electrical work for 50 years so my experience was fairly restricted to the shop perspective. Talking to people at the Institute, I quickly realized that UVa is very progressive in our facilities operation and I'm proud to be part of that. I learned

new supervisory skills, techniques on managing people, good basic advice."

University of Virginia's APPA Institute Participation

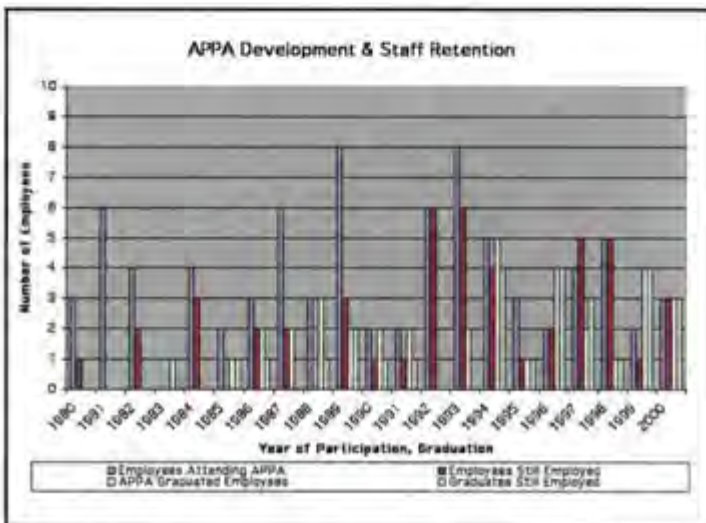
As an active participant in the Institute over the last 20 years, we've speculated that our attendance statistics must reveal some interesting and important trends in staff retention and upward mobility. Since 1980, the University of Virginia has sent 81 different people to the twice-yearly Institutes. Of those 81 people UVa has sent, 47—more than half—still work at UVa Facilities Management. Even more impressive, of the 37 who have graduated from the Institute, 28—that's more than 75 percent—still work with us. In addition, 20 of our APPA Institute graduates now hold key management positions. We think we've gotten a good return on our investment.

Our managers appreciate the applied training they get at the Institute. Retention, we believe, is related to the investment, which is actually a double investment; the sponsoring institution has a financial investment, and the Institute student commits time and effort. The weeklong session of classes, running 8 a.m.-5 p.m., is probably more demanding than a normal week at work, yet people do this because they know the investment pays off.

What's the Correlation Between Professional Development and Retention?

James O. Roberts, director of plant operations at Campbell University in Buies Creek, North Carolina and APPA Vice President for Educational Programs, responded to this development: "Studies do seem to indicate that employers who show interest in their employees have a better retention rate."

"I know of no data to indicate any tendency of Institute attendees to stay with their sponsoring institutions," commented Emily C. Wren, assistant vice chancellor for facilities at Indiana University/Purdue at Indianapolis and APPA Institute subcommittee chair. "One would assume, however,



that the peer connections and the connection with professionalization in our field through the coursework offered at the Institute would 'connect' folks with the profession and with their institution."

This value of 'professionalization' is evident among UVA attendees. "Two facilities planning and construction colleagues attended housekeeping guru Ed Feldman's seminar with me," Robert H. Carman, building services superintendent, recalled, "and when it was over, they said, 'Wow! I had no idea there was so much to housekeeping!' and 'Yeah, it isn't just mopping floors and cleaning toilets!'"

What Do Institute Graduates Find in the Program that Influences Their Decision to Stay with their Sponsoring Organization?

Discussions with UVA Facilities Management employees attending or completing the Institute revealed a solid and uniform response. Most people sincerely appreciated being selected to attend, and they recognized the investment the organization wanted to make in them, and the investment they could return to the organization. Some comments from UVA's delegation:

"I was fairly committed to finishing out my career at the university before I completed the Institute, but the opportunity to rub elbows with colleagues from other institutions provided me with a broader insight into what facilities management is all about," said Kenneth G. Smith, P.E., director of facilities planning and construction. "One discovers in these types of exchanges that others have and do solve the same kinds of issues with which we deal."

"When I first attended an APPA Institute, I'd already worked at UVA for over 20 years," David Miller, elevator maintenance supervisor, said. "I considered it a great opportunity to attend, plus it was a pleasure to meet people from many universities who were just as eager as I to learn and work together to try to solve similar problems in a trade."

"The experience was valuable to me professionally because I didn't want to be pigeon-holed as useful only to building services," Carman added. "I wanted the broader understand-

ing of other areas within facilities management and how the pieces fit together."

Other likely reasons are the satisfaction of participating in the track for five days with colleagues from across the country, and the wish to apply what they learned for the benefit of the organization sending the attendees to the Institute.

"In general, I think directors are careful about those they recommend for the Institute, concentrating on staff that have demonstrated dedication to the organization," Mark Webb, associate director of work management. "The high retention rate reflects that long term dedication and is Facilities Management's sign of an ongoing commitment to the individual."

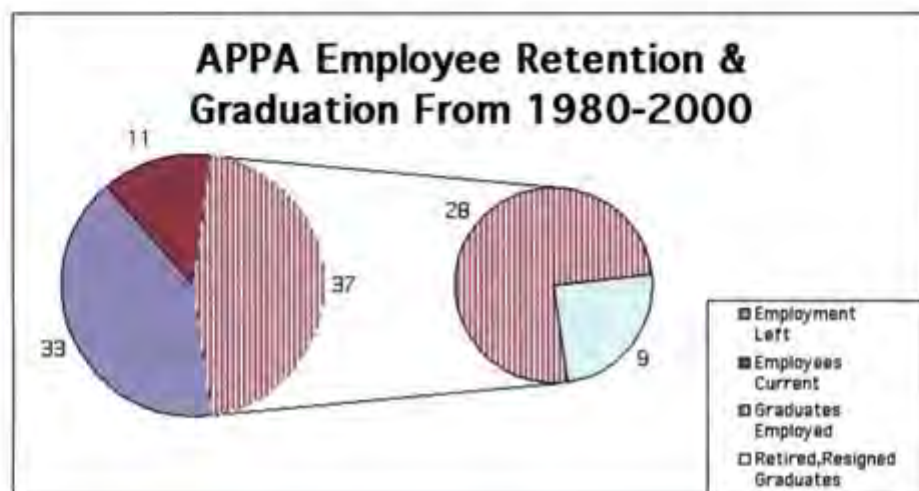
"From my personal perspective," Webb added, "I love to learn, so attending the Institute provided well thought-out exposure to a lot of topics in a concentrated format.... The class notes are very good and I still use them today."

"It was also great to be with hundreds of other people who are fighting the same battles.... It's easy to feel we are alone in this business, but we are not. There are others working in parallel environments across the country and the world... it's a wealth of information," Webb concluded. "A chance to spend a few days with them is well worth the effort."

Who Needs Statistics?

We appreciate what the Institute offers us, both for our individual employees, and as an organization. It offers us an opportunity to reward folks in our organization for their efforts and dedication, and at the same time, to develop their potential. While we realize we have not developed a valid statistical model to support our theory about the Institute and a relationship to staff retention, we don't believe we need statistics to realize how valuable the Institute has been to us. Talking to our staff and reflecting on their Institute experiences has sufficiently validated our original thoughts. We've decided we will be sending participants for the next 20 years. 📌

Ed. Note: Registration for the January 2002 Institute in Tampa, Florida will be available online at www.appa.org, beginning November 1.



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Commissioning New Construction at Emory University

by Robin Smith

The driving interest of plant operations as it relates to the construction and maintenance of buildings is more nearly that of the "owner" than that of any other entity on campus.

As "owners" of our buildings, and as good managers, we as facilities management professionals constantly evaluate and assess our positions. We desire to know how we compare with others on any number of issues and how we are progressing toward our goals. This assessment is part of our daily task and represents the "cause," while the process of continuous improvement itself is the "effect."

This intertwined relationship is the essence of the Strategic Assessment Model (SAM), APPA's strongest tool for the professionalism of facilities managers. This relationship goes to the heart of our building commissioning process, a practice wherein we must constantly evaluate the needs of our customers and initiate physical elements that produce a con-

tinuing improvement of our structures. We learn from each and every step and add this knowledge to our next effort. Our buildings keep getting better and better. This ongoing discipline is certainly continuous improvement of the assemblage of our campus buildings.

As we develop and mature in the commissioning process, we branch out into related areas of improvement as discovered and dictated by our constant reassessment. The latest side benefit is the venture into LEED certification (Leadership in Energy and Environmental Design) for new construction and soon for the operation of existing buildings. All LEED efforts have commissioning as a basic requirement.

As management professionals, we are required to look at and indeed be responsible for long-term cost (big picture outlook) of all building and infrastructure issues. Everything that we do costs money and our budgets are limited. Usually emergencies or any unplanned or unexpected costs take from our planned resources, and this adds to that growing problem called deferred maintenance—deferred until such time that we can get to it, or until it becomes an emergency itself. This method of "putting out fires" is not a very desirable or comfortable way to operate.

Changing this culture is slow and difficult and will probably take years, if we are able to fix it at all. Unless we cause the buildings to function better, operate more efficiently, produce less surprises, and be easier to maintain—this will not

Robin Smith is building commissioning coordinator, at Emory University, Atlanta, Georgia, and can be reached at rsmith@fmd.emory.edu. This article, Smith's first for Facilities Manager, was first presented at the 2000 SRAPPA meeting and was selected by the region to be presented at APPA's 2001 Educational Conference in Montreal.

Now, this is not rocket science—just simple basic common sense. Then why is it so hard? The current basic practice of building and maintaining a campus such as ours is flawed; we do not do a good enough job of involving all the players—occupants, users, maintainers, and bill payers—into the various decision processes.

change. Changes such as these are very expensive to accomplish in our existing buildings, and we are usually not budgeted for this level of retrofit.

The most practical way for us to make these changes is to start these better practices on our new buildings. If we continually improve these new structures, then gradually our whole campus improves. If we really learn to do a better job on our new buildings then it is only a logical next step to fold this

skill back into the treatment of our inventory of existing buildings. Admittedly, improving older buildings is harder to accomplish, harder to make a change, harder to get funding, and very hard to vacate occupants when they really become entrenched.

Our product (new buildings/old buildings) must become less demanding on our maintenance, utility and cleaning resources if our world is to improve. We simply are not budgeted to correct or even to maintain dysfunctional buildings. The entities that create these issues should be required to correct them before they take their money and leave.

Now, this is not rocket science—just simple basic common sense. Then why is it so hard? The current basic practice of building and maintaining a campus such as ours is flawed; we do not do a good enough job of involving all the players—occupants, users, maintainers, and bill payers—into the various decision processes.

There is something that can help in this situation—a process called *commissioning*.

You may not have heard of building commissioning; most people haven't and usually think of the navy and warships when they hear the term. Actually, that's where the commissioning process started that we have now adapted to our construction projects. In both these efforts, the magic ingredient is really nothing more than careful repeated testing of nearly everything that affects the final performance of either product.

This is not very glamorous but it is effective—it works! This is not to say that the commissioning tests are not carefully developed and written out—they are. This quality assurance process for construction is just beginning to take hold in our field and is moving rather slowly, probably due to the complexity and fragmentation of all entities involved. Commissioning a project assures the construction of a facility that meets the needs of the building occupants and verifies functional performance prior to move in.

This verification of performance goes to the heart of the commissioning process. It is accomplished by the writing of specific functional performance tests and the controlled, monitored execution of these tests. These project-specific tests are the very essence of commissioning, and must be written specifically for components, systems, and the interaction of one system to another. This is all really simple and straightforward. So, why is it so hard?

Commissioning is a relatively new thing and is a different way of thinking and requires new mixes of people to work together. Building commissioning is a meticulous detailed

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process involving a great deal of repetition, much unexciting checking, testing, recording and retesting. The primary reason commissioning produces better buildings is that this process physically checks and verifies nearly everything. Nothing is left to luck or chance—it is checked!

One really good way to start the process of commissioning construction projects is with the use of a document called "design intent," or as ASHRAE is starting to call it, "Owner's Project Requirements." Have you ever heard of this document? Have you seen one? Most have not. At the very first of the planning process or the programming stage this simple, plain-English document is developed. It is constructed with input from the future occupants, the construction specialists, as well as the people that will care for and clean the structure. All operational issues are spelled out, such as HVAC requirements, loading dock needs, maintenance and custodial storage spaces, etc. These rules become the goal of all the participants in the project. Stated simply—this document lists the owner/occupant's expectations for the building or project.

The Design Intent document is the basis for the commissioning of the building. Commissioning is a quality assurance process, applied to the construction project that verifies the performance of the building before the occupants move in—before we get two years of phone calls about problems we never caused and may not be able to correct, at least not now.

At Emory we found that we must involve all aspects of the construction process in order to be successful. Since commissioning gives the owner what the owner wants, it is necessary for the owner to write down just exactly what the owner does want. It is not sufficient to hope the consultants will be able to remember the specifics of our preferences, although they will try to do so. Designers really do prefer to have well defined goals and not be forced to hit a moving target.

As we all know, designers are supposed to, according to their contract, design the projects to meet the owner's needs and expectations. If this were really happening there would be less need for something like commissioning. However, the reality of it is that this is not happening very well. It has been said that if a particular designer and contractor produces a building that actually works that it is largely a matter of luck and that their next building will probably not work. This article is not intended to bash architects or contrac-

As we all know, designers are supposed to, according to their contract, design the projects to meet the owner's needs and expectations. If this were really happening there would be less need for something like commissioning.

tors or any particular aspect of the construction process. This is meant to point out some basic flaws in the process, primarily that of our not all working well together, not communicating and having the same goals. It is understandable that we each have different motivations, but herein lies the challenge—we must combine our separate interests into one common thread.

I do not like to sound negative, but we all have watched the whole construction process grow more difficult in our quest for tighter and more energy efficient buildings. These buildings are more and more dependent on computer controls and complicated sequences of operation. As ever-increasing budget pressures vie with ever increasing budgets demands, the

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The cost of commissioning depends on many factors, such as the size of the project, the scope of work required, your skills or efforts in bidding and how much work you do in-house.

whole process gets harder and harder to manage. On the other hand, many of the problems discovered in our new buildings are very simple and basic, such as specified components missing or not even being installed, or units upside down or running backwards. There often seems to be a lack of even rudimentary inspections on many project—and if a project starts to go bad, it certainly seems to continue down that path.

What does commissioning cost? Probably the best reply to this question is, "less than the cost of *not* commissioning." Given the inherent discipline this process provides, you will probably save more in reduced change orders than the com-

missioning costs. Another reason for this economy is that a large portion of the benefit of commissioning buildings is reduced energy cost. These operational reductions carry forward into long-term permanent savings. Many other benefits are not apparent until some time later when the normal operations and maintenance of the building start to show improved cost and reduced effort required to keep everything right.

Any monies spent on this quality process will benefit the operations of the building. If these funds are not channeled in this direction, as is the normal practice, then cost will be higher, problems will be more difficult to solve and corrections will be funded out of your budget rather than out of project funds as they should be. Remember that we are NOT budgeted to care for dysfunctional buildings. I'm repeating myself, but let the people who create the problems solve them and pay for the solution.

The cost of commissioning depends on many factors, such as the size of the project, the scope of work required, your skills or efforts in bidding and how much work you do in-house. Our actual experience on commissioning work at Emory shows an approximate average cost of one-half of 1 percent of total construction cost. This is contracted directly with a professional commissioning agent.



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We do all we can to reduce cost. The main way we have found to do this is to furnish the commissioning agent with helpers to perform the testing and documenting—a primary part of the commissioning process. The benefits of this maintenance staff involvement are more than just saving money—this “helping” gives our mechanics a tremendous amount of experience in the new building—something we never had before. Training is one of the most important aspects of commissioning and this is really good training. The benefits of this early involvement are readily apparent. We do not stand and wait until the project is completed and then be shown through like some visitor.

When do we need to start this commissioning process?

The answer is, as early as possible. The commissioning agent needs to be involved in the initial interviews with the customers to advise as to the feasibility of the planned construction being commissioned or the possibility of verifying the performance of the systems to meet the needs of the building occupants. This all goes back to the “Design Intent” document—the expectations of the customers. This document is the basis for the commissioning effort and should be the goal of the entire team involved in the project.

We spent over a year writing our standards for construction and are now in the first revision effort. Our commissioning requirements are part of our standards and all are published on our website for your access.

**[www.emory.edu/
FMD/
web/emory-std/
design.htm](http://www.emory.edu/FMD/web/emory-std/design.htm)**

These standards were written by a broad cross-section of our whole department. Almost all aspects of our planning, construction, maintenance and custodial groups contributed. Closeout documents and training requirements are fully covered in the standards and are outlined by standard CSI format. Ancillary services such as recycling, pest control, waste removal, landscaping and

grounds are fully covered. Specific floor finishes, paints, and other items of importance in the care of the building are spelled out. This allows us to do a much better job in the long-term care of our campus.

A large part of the day-to-day practical application of all of these interests going into the construction projects occurs at what we call the “Project Information Exchange” meetings, otherwise referred to as “PIE.” This monthly PIE meeting has evolved into a successful collaboration of all parts of Facilities Management as well as several other entities all across the Emory campus. The main reason for the success of the PIE meetings is that people are actually able to receive and exchange facts and ideas that they need and want. This infor-

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mation covers all the construction on our campus that impacts each and every one of us. The goal of this monthly gathering is to discuss current issues of the construction efforts at Emory University and inform all interested parties as to the possible ramifications for all aspects of campus life. These are bits of information that we need to help us do our job, to keep safe and to help others to properly utilize our services and facilities.

The format of these PIE meetings is not that of a lecture or a discussion group, but a rather fast-moving synopsis of ongoing events. It is an *information exchange medium*. We do not read to people but rather pass out reports and summaries to be digested after the meeting. The gathering represents a considerable resource and the time allotted is held to a maximum of one hour.

It is my distinct privilege to co-chair these PIE meetings with a senior member of our construction group. We find that this shared input is one of the reasons for the balanced character of the function. The PIE meetings always have written, planned agendas and are very well attended. A recent and pleasant problem with these meetings is not a lack of interest or attendance, but having enough chairs and room to seat those who do attend. Currently about 50 people from across

Emory attend each monthly meeting. Each meeting has one or more presentations from the various attendees.

The PIE meetings have become, in little more than a year, the meeting of choice for construction information exchange at Emory. Regular attendees, other than the four branches of Facilities Management (Plant Operations, Resource Planning, Campus Planning, and Campus Construction), are Residential Housing, Communications, Campus Security, Parking, Environmental Health, Fire Safety, as well as other guests from time to time. In order for any meeting of this nature to prosper where attendance is voluntary, attendees must get some definite value from going. It seems that the assemblage of these individuals allows meaningful interaction and produces results that are of value.

So, how do you start something like this? It is imperative that you gather up the political support to the level necessary to see this through. In my case, I have the support and encouragement of our administration who, from the onset, strongly encouraged all those involved to work together in the commissioning effort. This is a long-term issue and requires commitment and follow-through. Remember, standards must be written so that the preferences of the owner can be delivered. As with any application of discipline there will be those who will resist the process.

When we examine the particulars of a process such as Emory's commissioning, the relationships we have all created stand out boldly. Everything other than these relationships can be categorized as details, and as such, changes from day to day—from project to project. These working relationships are the key to our success in the entire construction commissioning effort, and is the only thing that will assure our success and, if lacking, will surely guarantee our failure.

Remember, failure and lack of success is the default position. Success is accomplished only with determined, conscious, collaborative effort.

There is, of course, a standing invitation to those of you who are interested, to visit us and see just how we do our version of commissioning at Emory. 🏢

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EXPENDITURES

ON O&M AT AMERICA'S MOST BEAUTIFUL CAMPUSES

by Shari L. Ellertson

Chances are pretty good that America's most beautiful campuses have provided an ideal setting for many students, faculty, and guests to take a leisurely stroll at some time or other. Is the appearance of a college or university campus important? If so, how does one judge aesthetic success or beauty?

In fact, the beauty and appearance of the campus may be more important than is realized. A Carnegie Foundation survey published in 1986 found that 60 percent of college-bound students indicated "visual environment was the most important factor in choosing a college." In addition to marketing, facilities play an important part in retaining students (Lenington, 1996). If true, the aesthetic appeal of a campus is particularly important in the current times where enrollment issues are critical and institutions look for ways to set themselves apart from the competition.

Gaines (1991) identified spatial planning, architecture, landscaping, and overall appeal as criteria for determining America's best campuses. He suggested that most of America's colleges and universities are "condemned to visual medioc-

rity" for lacking the ability to create and sustain aesthetic traditions. Gaines, however, identified the "top 50" campuses that when evaluated on the four aforementioned criteria stand above the rest. He cited these campuses as "works of art."

The American Society of Landscape Architects (ASLA) has also rewarded campuses for outstanding aesthetic achievement. Their Medallion Program (ASLA, 1999) recognized 362 outstanding landscapes in 1999, 16 of which were college or university campuses (R. Leighton, personal communication, October 10, 2000). Medallions were awarded to landscapes that "improve the quality of life in communities around the nation" (ASLA, 1999).

Eight campuses received distinctions of both "top 50" as identified by Gaines (1991) and Medallion Award Winner as bestowed by ASLA (1999). Iowa State University is one of those campuses. ISU publicizes these awards in marketing and promotional materials and calls attention to the awards as "Points of Pride" (ISU, 2000). Certainly, Iowa State is not alone in trying to extend the benefits of being award winners. Prospective and current students, alumni and major donors, the Board of Regents, and the state of Iowa can all take pride in these accomplishments, which hopefully will translate into higher enrollment and retention rates, increased private gifts, sustained support from the state, and elevated status and prestige for the university.

Well-planned, operated, and maintained facilities and grounds, however, do not come without a price. Nonetheless, the funding pattern would suggest otherwise. Funding for operation and maintenance of plant has declined steadily over

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time, from 12 percent of the total education and general expenditures in 1929-30 to 7 percent in 1989-90 (NCES, 1998).

Furthermore, budget reductions and deferred maintenance strategies have put additional stress on physical plants (Gardiner, 1984; Lenington, 1996). Although deferred maintenance may serve as temporary relief for budget shortfalls, Gardiner called this "select neglect." In other words, every time an institution chooses deferred maintenance, it is, in effect, postponing crucial work that will lead to more problems and greater costs later on.

So, how is it that some campuses are able to maintain functional, aesthetically pleasing, and even award-winning spaces given that overall funding of operation and maintenance of plant has decreased over time? Is the amount spent on operation and maintenance of plant somehow reflected in the recognition or awards that are bestowed upon the colleges and universities? This study was initiated to explore four general questions:

1. Do institutions whose campuses are identified as "works of art" (Gaines, 1991) spend a different percentage of Education and General (E&G) Expenditures on Operation and Maintenance of Plant than other institutions of higher education?
2. Among the campuses identified as "works of art" (Gaines, 1991), is there a noticeable difference in percent of E&G spent on Operation and Maintenance of Plant between those highest ranked (top tier) and the others?
3. Among the campuses identified as "works of art" (Gaines, 1991), are there noticeable differences by institutional type or institutional control in the percent of E&G spent on Operation and Maintenance of Plant?
4. Is there a noticeable difference in percent of E&G spent on Operation and Maintenance of Plant between institutions who were awarded by the American Society of Landscape Architects (ASLA) for outstanding landscape architecture (1999) and those who were identified as "works of art" (Gaines, 1991) but who were not awarded by ASLA?

METHOD

The Integrated Postsecondary Education Data System (IPEDS) and the National Center for Education Statistics (NCES) were used to gather data for this study. Following are the detailed descriptions of how data were collected and analyzed.

Instrumentation

Data were collected from the IPEDS Finance Surveys for the years 1990, 1995, 1996, 1997, 1998, and 1999. IPEDS pooled and calculated data on the selected institutions. Ratios of Operation and Maintenance of Plant to Total Education and General Expenditures and Transfers were calculated.

Definitions

The IPEDS Finance Survey defines operation and maintenance of plant as follows:



Report all expenditures for operations established to provide service and maintenance related to grounds and facilities used for educational and general purposes. Also include expenditures for utilities, fire protection, property insurance, and similar items. Do not include expenditures made from the institutional plant funds account.

The IPEDS Finance Survey identifies Total Educational and General Expenditures (E&G) and Transfers as the sum of the following categories: instruction, research, public service, academic support, student services, institutional support, operation and maintenance of plant, scholarships and fellowships, mandatory transfers, and nonmandatory transfers.

Sampling

The "top 50" colleges and universities identified as "works of art" by Gaines (1991) and the 16 selected by ASLA (1999) for the Medallion Award were used in this study (see Table 1). Among the "top 50," 13 institutions received the highest ratings, thus placing them in the "top tier." Twenty institutions received the next highest ratings, making them the "second tier," leaving 17 institutions to occupy the "third tier." Two institutions from the "top 50" could not be identified and were eliminated from this study. Of the ASLA Medallion Award recipients, eight of them were also in Gaines' "top 50," making the number of different institutions in this study total 56.

Data Collection

All data were collected using the IPEDS Peer Analysis System that is accessible via the World Wide Web. The data can be accessed online at: www.nces.ed.gov/ipeds.

Data Analysis

The IPEDS Peer Analysis System provides a variety of data calculation options online. In order to obtain the percentage of E&G expenditures spent on operation and maintenance of plant, this study employed the use of the ratio function. IPEDS divided the amount of money spent by each institution on operation and maintenance of plant by the total education-

al and general (E&G) expenditures and transfers for those institutions in the same survey year. Ratios were calculated for 1990, 1995, 1996, 1997, 1998, and 1999. Data was transferred to a Microsoft Excel 2000 spreadsheet where means and medians were calculated. For this study, medians are reported as they account for outlying data, that is, data that are extremely large or small and present the possibility of skewing the set. Complete (or very nearly complete) data sets were obtained for the years 1990, 1995, and 1996. Data for private institutions are not complete for the years 1997, 1998, and 1999; thus, although those data were collected, they are not reported in this study. Lastly, where differences are discussed in this study, statistical analyses were not conducted; therefore, the differences noted are practical in nature.

RESULTS

Patterns of decline (as previously noted) in the percentage of E&G spent on operation and maintenance of plant continued into the 1990s. For campuses that have been identified as

"works of art," the situation is no different. With few exceptions, nearly all campuses in the "top 50" experienced some decrease in the percentage of E&G spent on operation and maintenance of plant. The same is true for campuses that received ASLA's Medallion Awards. Following is a presentation of the results that address the four guiding questions of this study.

By Rank

The first two questions of this study explored whether a difference exists in the percentage of E&G spent on operation and maintenance of plant among "top 50" campuses and between them and other institutions of higher education. Table 2 reports data by rank as obtained through IPEDS and also presents data for all institutions as reported by NCES (1998). There is little difference in the amount spent on operation and maintenance of plant between the top, second, and third tiers of rankings nor is there much difference between them and all institutions. In fact, it appears that institutions ranked as "top

Table 1

Institutions Identified as "Top 50" (1991) or ASLA Medallion Award Recipients (1999)

Top Tier (in ranked order)

Stanford*
Princeton
Wellesley
U. of Colorado
Indiana U. (Bloomington)
Evergreen
Columbia
Mount Holyoke
Rochester Institute of
Technology(RIT)
SUNY Albany
Louisiana State
U. of Kansas
U. of Wisconsin-Madison

2nd Tier (in alpha order)

Air Force Academy
U. Cal. - San Diego
U. of Chicago
Duke
U. of Illinois, Chicago
U. of Illinois, Urbana
Iowa State*

Johns Hopkins
Michigan State*
U. of North Carolina (Chapel Hill)*
U. of Pennsylvania
Smith
U. of South Carolina
Swarthmore
Sweet Briar
Vassar
U. of Virginia*
U. of Washington, Seattle
U. of West Florida

3rd Tier (in alpha order)

Arizona State
U. Cal. - Berkeley*
U. Cal. - Los Angeles
U. Cal. - Santa Cruz, Stevenson*
Connecticut College
Emory
Grinnell
Harvard
Kenyon
U. of Massachusetts, Boston

Oberlin
SUNY Purchase
Union*
Wake Forest
Washington University
William and Mary

Medallion Award Winners (in alpha order)

Bowling Green State
U. Cal. - Berkeley
U. Cal. - Santa Cruz, Stevenson
College of Charleston
U. of Dayton
Furman
Iowa State
Michigan State
U. of Michigan
U. of North Carolina (Chapel Hill)
Stanford
U. of Toledo
Union
Utah State
U. of Virginia
Weber State

Note: One campus could not be identified and was eliminated.

* Indicates 1999 Medallion Award Recipient, American Society of Landscape Architects

Table 2

Percentage of Education and General Expenditures Spent on Operation and Maintenance of Plant by Rank, 1990, 1995, and 1996

Rank	1990	1995	1996
Top Tier (N=13)	7.0%	6.0%	6.0%
2nd Tier (N=19)	7.0%	7.0%	6.5%
3rd Tier (N=16)	7.0%	7.0%	6.0%
All Institutions	7.0%	6.4%	6.5%

tier" may spend slightly less than second and third tier institutions and all institutions, suggesting that they are not outspending their competition. Thus, they are not receiving awards because they spend more money. Between 1990 and 1996, there was an overall decrease in the percentage of E&G spent on operation and maintenance of plant in each of these rankings, ranging from 0.5 – 1.0 percent.

Table 3

Percentage of Education and General Expenditures Spent on Operation and Maintenance of Plant by Institutional Type, 1990, 1995, and 1996

Institutional Type	1990	1995	1996
R I (N=26)	6.5%	6.0%	5.0%
R II (N=3)	8.0%	6.0%	6.0%
D I (N=1)	6.0%	5.0%	5.0%
D II (N=1)	4.0%	4.0%	4.0%
M I (N=3)	9.0%	8.0%	8.0%
B I (N=11)	9.0%	8.0%	7.5%
B II (N=2)	14.5%	11.5%	11.5%
O/S (N=1)	17.0%	22.0%	25.0%

Institutional Characteristics

The third question of this study was to look at institutional type (Carnegie classification) and institutional control in the "top 50" campuses to see if there were noticeable differences in the percent of E&G spent on operation and maintenance of plant. Tables 3 and 4 present these data.

By Carnegie Classification

When broken down by Carnegie classification, the majority of the "top 50" campuses were Research I institutions (N=26), followed by Baccalaureate I (N=11), with other categories being represented in single digit numbers. The Research and Doctoral institutions showed the most modest spending on operation and maintenance of plant compared to the Baccalaureate, Masters, and Other Specialized. It is important to note that research dollars are included in Education and General Expenditures. Research I and II institutions would presumably have greater total research dollars which are figured into their E&G. This creates the possibility that their data are skewed due the large amount of research money in their budgets.

The one institution identified as "Other Specialized" consistently had a much higher percentage of E&G spent on operation and maintenance of plant than other institutions. Its percentage of E&G spent on plant was up to five times more than some of the other categories. Furthermore, it was one of five institutions in the "top 50" whose percentage increased from 1990 to 1996. Its increase, however, was "8 percent", whereas the other institutions that increased did so on a more modest level, from 1 to 4 percent. Aside from "Other Specialized," most categories saw a 1 to 3 percent decrease in percentage spent on operation and maintenance of plant from 1990-1996.

Table 4

Percentage of Education and General Expenditures Spent on Operation and Maintenance of Plant by Institutional Control, 1990, 1995, and 1996

Institutional Control	1990	1995	1996
Private (N=22)	7.0%	7.0%	6.7%
Public (N=26)	7.0%	6.5%	6.0%
All Privates	6.4%	6.0%	6.1%
All Publics	7.4%	6.6%	6.7%

By Institutional Control

Twenty-two of the "top 50" institutions were identified as under private control and 26 were identified as public. There were similar funding patterns in both types from 1990 to 1996 with the publics declining slightly more over this time period, 1 percent. The private institutions in the "top 50" seem to hold their own and only declined by 0.3 percent.

Data on percentages of E&G spent on operation and maintenance of plant for all public and private institutions of higher education (NCES, 1998) are presented for comparison purposes in Table 4. Public institutions in the "top 50" spend slightly less than all public institutions, whereas privates in the top 50 spend slightly more (nearly 1 percent) than all privates.

Award Status

The final question that guided this study was whether or not a difference existed in percent of E&G spent on operation and maintenance of plant between institutions who were given the Medallion Award by ASLA (1999) and those who were identified as "works of art" (Gaines, 1991) but who were not recognized by ASLA.

Eight of the institutions that were characterized as "works of art" in 1991 also were awarded by ASLA in 1999. Therefore, 40 institutions were awarded as works of art, but not given the ASLA Medallion Award. Overall, no big difference in percentage spent on operation and maintenance of plant was noted. Both categories were at 7 percent in 1990 and 6 percent in 1996. The only difference was that non-ASLA winners stayed at 7 percent until 1995 before declining, whereas ASLA winners declined in 1995 and then remained steady until 1996. Table 5 presents this data.

CONCLUSIONS

The data from this study showed that operation and maintenance of plant as a percent of education and general expenditures continued its decline into the 1990s. Award status or recognition did not seem to affect the amount of decline as "top 50" and Medallion Award winners appeared to decrease at about the same rate as (if not more than) all others. Therefore, what makes a campus a "work of art" or award winner does not appear to be reflected in what they spend on operation and maintenance of plant.

Gaines (1991) suggested that sustaining visual achievement and maintaining a clear direction in spatial planning, architecture, and landscaping were the largest obstacles to campuses becoming "works of art." Perhaps the campuses that have been lauded and awarded for their achievements have been able to change and grow physically and adapt with the times without losing their plan or sense of direction.

LIMITATIONS AND RECOMMENDATION FOR FURTHER STUDY

As previously mentioned, data for private institutions were only complete through 1996. This was a major limitation of this study because nearly half of the institutions in the sample

Table 5

Percentage of Education and General Expenditures Spent on Operation and Maintenance of Plant by ASLA Award Status, 1990, 1995, and 1996

Award Status	1990	1995	1996
ASLA winners (N=16)	7.0%	6.0%	6.0%
Non-ASLA winners (N=40)	7.0%	7.0%	6.0%

were private. More data on private institutions would allow for a more detailed look at funding patterns for operation and maintenance of physical plant. Furthermore, data for the latter part of the nineties could be used to see if there were different funding patterns in the years leading up the ASLA Medallion Award that seem to set ASLA winners apart from others.

A second limitation lies with the comparison of data on institutions in this sample separated by Carnegie classification. Very small data sets make it difficult to truly compare funding levels across all institutional types. Furthermore, data from Research I and II institutions may be skewed due to their research budgets being included in education and general expenditures.

Other variables could be examined to compare rankings, institutional type, institutional control, and award status. Such variables might include physical plant assets or indebtedness. In other words, is the percentage of E&G spent on physical plant reflected by how much the institution has in assets or in debt? Another variable that could be examined is the amount spent on salaries/wages toward the operation and maintenance of plant. One could wonder whether or not more staff or more highly paid staff do a better job of operation and maintenance that contribute to the overall quality of the facilities and grounds. Finally, campuses could be looked at by region to determine if some institutions have an advantage simply because of where they are located. Or, is it possible that campuses surrounded by natural beauty have more or less of a need to spend money on the operation and maintenance of their plant?

Perhaps it will never really be known why some campuses are considered to be more beautiful than others. As much as campuses can be rated by objective criteria, there will always be the subjective influence of the rater. Personal preferences.

taste, fond memories, time-honored traditions, pride, and even competition can all influence how we view beauty and aesthetic success of a space. Ultimately, creating an environment conducive to educational pursuits and one that instills pride in the members of its community may be all that really matters. ▲

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Situation Assessment and What To Do Next

by James E. Christenson

"If I really want to improve my situation, I can work on the one thing over which I have control—myself."

- Stephen Covey

“What's going on?" is a general question that has many subsets. It is, of course, more specific to ask, "Are 99 percent of the widgets within tolerances?" Or, "What is the mean score on last week's customer survey?" Or, "How many days of backlog does each shop have?" But the real question always is, "What's going on?" That is the basic assessment question.

Asking the question is one thing. Finding satisfactory and factual answers is quite another. Making some measurements is easy. But usually the things most easily measured are least important and the things most difficult to measure are the most important.

Really quantifying what our customers think of our facilities services would be very helpful. But crafting a survey that paints an accurate picture is not easily done. Interviewing customers to determine their feelings about our service response usually yields a better picture of that customer's satisfaction, but it is neither quantifiable nor representative of the campus community. And taking the pulse of the campus community by interviews takes time. On the other



hand, we can easily measure how many requisitions are sent to purchasing in an average day. But who cares?

Why should we ask the question in the first place? In an earlier column, I suggested that one of the jobs of a leader is to deliberately initiate change. But not just any change. There are a variety of logical reasons for change and a variety of guidelines available to help ensure that the change adds value. But in the context of assessment, change should take place if the actual situation does not match the desired situation. That is, if "what is" does not equal "what should be," a deviation exists. A deviation is quite likely to be a problem. And a problem usually requires a change in a process. So we return almost to the starting point: "What's going on?"

More than half a century ago, Dr. W. Edwards Deming, ignored by his fellow Americans, taught the Japanese how to ask the right questions. He convinced Japan's industry leaders that they could shed their image of being the manufacturer of shoddy

merchandise. He told them that "the customer is the most important part of the production line" and that they should listen to their customers. And, of course, he taught them statistical quality control.

Most importantly, he taught them that quality begins in the production process, not in the quality control department. Making it right in the first place causes less rework and that results in fewer delays and lower costs. Further, he suggested that the person

actually doing the work might have an idea or two about how to improve quality. It took Americans more than 30 years to recognize what the Japanese had learned in four years.

Assessment of the situation and improving the processes that affect the situation go together. The theme of this issue is Assessment and Continuous Improvement. These terms are purposely linked. It does no good to determine that "what is" does not equal "what should be" if nothing is done about it. The failure of the equation to balance calls for action.

Unfortunately, in the real life of the facilities manager, the number of deviations often greatly exceeds the manager's available time. Situation assessment or clarification is an evaluative technique. An experienced manager or leader makes this assessment quickly and subconsciously to determine which deviations are worth spending time on. The thought process probably includes the following:

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- ☐ What threats are attached to this situation? What opportunities?
- ☐ How serious is this one (amount of risk or opportunity)?
- ☐ How urgent (amount of time left before "meltdown")?
- ☐ Will the situation expand, grow?

If answers to these questions cause enough unease, the situation is given the valuable time needed to resolve it. Situation assessment requires that the person addressing the situation separate it into its parts. Usually the *apparent* issue is not the issue at all. And usually the issue is not one, but many. Finally, before action is taken, it is important that the assessment be based on facts insofar as that is possible.

Before we look at what to do with a situation, it's important to note that another of the jobs of a leader or manager is to *look for* situations where "what is" does not equal "what should be," where "what should be" is the standard or goal. The leader looks not only at "production" processes, but at how well the unit is tracking with its vision and strategic plan; the effectiveness of relations with customers; clarity of communications; tangible results from targeted training; the match between individual performance goals and results achieved; adherence to schedule; accuracy of estimates; the degree to which the organization meets budget goals; safety record compared with standards; condition of the campus compared with the expectations; and many more. The leader goes to these lengths because it takes much less time to close a deviation early rather than later.

Once the leader has determined that the results of a situation assessment require corrective action, a decision must be made as to what action is appropriate. Charles H. Kepner and Benjamin B. Tregoe, in their book, *The Rational Manager*, have some suggestions. Usually, but not always, the first action is to solve a problem. The

appropriate first question often is, "Why did this happen?" A problem can be addressed by returning to the "is" word. We need to find out what is and what should be. Supporting questions might include: What specific item or action has deviated from the standard? And what very similar items have not? Where, specifically, is the deviation? Where is it not? When was the deviation first observed (by anyone)? What is the extent of the deviation?

Looking closely at the distinctions between what is and what should be helps specify the problem. And looking at any change (and its timing) that has taken place in one object or operation, without noticing changes in similar objects or operations, often uncovers the real cause.

Finding the cause of a problem is not the end, however. Something has to be done about the cause. Decision-making is the next step. The general question for decision-making is, "Which course of action should we take?" Sound decision-making starts with making a list of objectives for the decision. Describe what an excellent outcome would look like in qualitative and quantitative terms. Unless one starts with objectives, the first alternative that comes along looks good.

After listing as many objectives as possible, alternatives should be generated. Each is compared in turn with each objective to determine how well it meets the objective. The best fit is probably the best alternative. This process can be quantified by assigning a weight to each objective and assigning a score representing each alternative's success in satisfying the objective. Some of these alternatives may represent only a minor refinement that could constitute a step in continuous improvement. Or an alternative may define a change so sweeping that it would be categorized as starting over—business process reengineering or beyond. In the latter case, it may be wise to also determine

the probability and the seriousness of potential adverse consequences of the decision.

Finally, if the situation warrants serious attempts to keep it on track, it may be worthwhile to plan for the future. What could go wrong again? What can we do to prevent it from deviating from our "what should be?" What contingency action can we take to mitigate the fallout if it still deviates despite these preventive actions?

I hope you cringed several paragraphs earlier when I wrote, "one of the chief jobs of a leader or manager is to look for situations where 'what is' does not equal 'what should be.'" Some of you may remember the ancient (1981) book, *The One Minute Manager*, by Kenneth Blanchard and Spencer Johnson. These authors suggested that the key job of a manager is to catch people doing something right—and to praise that behavior on the spot. Assessment deals with comparing actual happenings with standards or ideals. Hopefully, that comparison does not always show a deviation. In an organization where worthy values are widely shared, "is" will usually equal or exceed "should." Then, it's not problem solving that is needed, but positive recognition of those responsible for making it happen.

My point is that assessment is only the beginning. It does no good to track down the answer to "What's going on?" unless you do something about the answer. So, while I urge you to ask the question often and in specificity, I also urge you to be prepared to follow through.

And don't forget to assess yourself, as Stephen Covey recommends in the opening quotation. Blanchard and Johnson would put it this way: "Take a minute. Look at your goals. Look at your performance. See if your behavior matches your goals." That's an assessment each of us might start the day with. 🏢

Facility Asset Management

A Continuous Improvement Capital Funding Model

by Matt Adams, PE.

I receive many questions, and I'm often involved in discussions regarding the estimating or modeling of capital renewal budgetary requirements. A meaningful capital renewal budget for non-profit institutions ranges from the high-level APPA/NACUBO defacto standard of 2 percent of the total facility replacement cost per year to the very detailed, and perhaps costly, facility condition assessment.

There is good reason for each approach and all of those reasons lie in the spectrum created by the latter extremes. As the capital budget compilation effort and complexity increases, we expect accuracy to increase. APPA and NACUBO have published virtually all of the current industry capital budgeting formulas and models. Of these, the "Backlog Projection Model" as defined in the joint APPA/NACUBO publication *Managing the Facility Portfolio*, is one of the more widely used. I too, have used this formula and even convinced boards, vice presidents, and others of its merit. However, few if any, institutions can fund renewal to the extent suggested by this model. The assumption that every component of every building is obsolescing, losing value



to inflation, and even causing other components to deteriorate in an accelerated manner is a "doom and gloom" scenario that overstates the reality of our industry's funding mechanisms. If this style of capital budgeting were truly reflective of institutional facilities, there would be very few buildings standing today.

We need a model that estimates major maintenance and renewal exclusive of systematic renovations or replacements, and assumes that our institutions cannot afford "perfect" facilities. A model that has as its basis a predictable, measured, and institution-specific standard offers a continuous improvement model for facilities renewal.

The best model is one that predicts capital items, which require little or no physical inspection, while accommodating the data created by a clearly defined assessment process. In this way, resources are minimized while results are maximized. The true capital funding model has several components. There are those that

address building components that fail quickly and often are predictable. These "frequent renewal components" are the finishes of the building.

Assuming the finish renewal activities are capitalized, a basic formula including unit costs, total number of units, current age, and life cycle are the only variables required for the capital renewal budget. Of these, only those finishes that have a life-cycle of 20 years or less should be included. Other finishes generally remain in place and are maintained by operational

dollars until the advent of a renovation or major mechanical system upgrade, e.g., fire sprinkler retrofit.

The following paragraphs explain the sub-components of a continuous improvement facilities renewal model.

1. Finish Renewal Budget (FRB) =
SUM: ((finish (1) * units * Count * Unit replacement cost)) * (Sum of years age) / Sum of years life cycle) + (finish (2)) + ... (finish (n))

This format provides a budget for moving forward from any place in time. The floors, ceilings, and walls are included for each building and only the largest two finish systems are included. In other words, if carpet and rubber flooring represent 50 percent and 30 percent of the floor space respectively, the remainder is not included. The smaller fractions of finish renewal are typically replaced by maintenance or departmental operational budgets. This low-level budget formula imbues continuous improvement primarily by forcing the

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predictable and systematic renewal of finishes. Otherwise, this is completed by institutions in an inconsistent manner without a policy driven life cycle determination.

2. Building Performance Renewal

Budget (BPR) = SUM: (Current major system cr/dm) + (Systems (1)(plumbing fixtures) * (Sum of years age) / Sum of years life cycle) + (Systems (2)(HVAC component) * (Sum of years age) / Sum of years life cycle) + ...

This format is for replacement of systems with like or currently available systems or for those systems that are within ten years of true failure. Systems included are roof systems, fire door and building entrance systems, HVAC existing system components inclusive of chillers and boilers, restroom fixtures, etc. The system components are only those items that can be replaced during the

life of the total original system installation. In other words, the components are included in the major maintenance and repair funding model prior to complete renovation of a building, when a total HVAC system could be replaced.

Current CRDM requires an initial assessment to determine initial baseline backlog and inventory of renewable system components. Very little assessment is required after the initial assessment.


Critical Outcome Budget (COB) = SUM: fiscal year (n) (Actual estimated upgrade projects resulting from continuous assessment)

This final piece of the funding model is not automatic after year one and forms the most significant impact on continuous improvement. Based on clearly defined critical outcomes, the facilities are assessed with respect to improving both performance and serviceability. The most obvious ex-

ample is energy. If energy efficiency and compliance with EPA Energy Star standards is a critical outcome, then assessment identifies and measures budget requirements for improvement. These budgetary placeholders are not included in other funding models and are very customized, unlike the previously illustrated finish and system performance formulas. Other critical outcomes might be: building control, fire and life safety, technology delivery, building performance reliability, noise attenuation, maintenance cost reduction, etc.

Continuous Improvement Capital Funding Model = Finish Renewal Budget (FRB) + Building Performance Renewal Budget (BPR) + Critical Outcome Budget (COB)

Capital items that fall outside of this combined formula model are not normally part of a major maintenance, repair and renewal budget. They fall into renovations, and this is typically funded separately in the institutional environment. Other models used in our industry today attempt to estimate all depreciation for every building component regardless of its renewal funding source. To include renewal estimates for items that are only replaced during major renovations is to overstate the major maintenance and repair budget.

In the current environment of accountability and high professional standards, this is inaccurate and inappropriate. Only those building component or systems that are replaced during the life of a building between major renovations are included. Improvements to the original systems that result in increased building performance and facilities serviceability are identified through continuous assessment. Continuous improvement takes place in the context of those unique "critical outcomes" specific to each institution. 

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Gauging Energy Consumption

by Jennifer Graham

I want to focus the theme of this issue, Assessment and Continuous Improvement, on the international energy issue. The energy crises and blackouts that California has faced seem to be the most popular and publicized. However, the inadequate supply of energy is an urgent issue that we all must face today.

This begs us to ask the question: is there really an inadequate supply of energy or are we overusing and wasting electricity? Unfortunately, there is no simple answer, especially because this question is now surrounded by a partisan political debate.

It's not only political science professors, however, who should be getting involved in this debate on your campus. One thing is clear: as other states and countries experience blackouts and energy problems, how much electricity we use, as humans, will be questioned. As facilities professionals, it is imperative that you are knowledgeable about the energy crisis, restructuring, and conservation programs, and that you develop an energy policy of your own.

On July 3, 2001 the *Christian Science Monitor* printed a story on energy usage at American colleges and universities, citing them as "among the nation's worst energy hogs." While you may disagree with this statement, especially if you are actively working with energy conservation programs on your campus, Mike MacDonald, higher-education sector manager of the



U.S. Department of Energy's Rebuild America program in Oak Ridge, Tennessee agrees with this assessment. "There are exceptions, and some schools are doing well. But, on average, it's worse than the private sector," says MacDonald in the article.

APPA is offering members two opportunities to get more in depth about the electricity industry and conservation programs. In July, APPA published the proceedings of its energy deregulation seminar that took place last March. The result is a comprehensive book, titled *Changing Currents in Deregulation*, (member price: \$55) that covers the history of the industry; electricity pricing and availability; the role of natural gas; predictions for future efforts in restructuring, and energy conservation programs. You can order the book through our website, www.appa.org, or call 703-684-1446 ext. 235.

The second opportunity APPA is offering is a two-day Energy workshop, presented in partnership with the National Association of College and University Business Officers (NACUBO), November 19-20, 2001 in Baltimore, Maryland. The panel of speakers will include both experts on the issue and others who have had to deal with an energy crisis. For more information, visit our website or NACUBO's at www.nacubo.org.

Also for your reference—since this is the Listnotes column—is advice from your peers taken from the APPAinfo listserve.

Question: *New Zealand has a looming electricity supply problem and our Government is encouraging at least a 10 percent reduction in use. A large proportion of our electricity is generated at hydro dams and we have experienced near drought conditions during our past summer.*

As a contribution to encourage savings, I would like to email the campus community daily or weekly short conservation messages. These would relate to turning off lights, computers etc.

I am aware that parts of the U.S. are also suffering energy restrictions and wonder whether anybody can recommend a resource of conservation messages, which can be downloaded and distributed to staff?

- The following communication was sent to all university staff yesterday to alert them to their role in reducing energy consumption.

Electricity Conservation

As you are aware the current low water-level status of our hydro-lakes has prompted the government to request targeted reductions in electricity use of 10 percent per household and 15 percent for the state sector operations.

It is hoped that significant reductions now, will reduce the risk of blackouts later in the year.

Facilities Management has been working on a number of energy savings initiatives over the past couple of years and these are currently holding the significant growth trends of power

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consumption in recent years exacerbated by a 25 percent increase in built space since the mid '90s.

The 15% Challenge

There is an opportunity for staff and students to make a difference in our electricity consumption and a range of suggestions are outlined below:

Lighting (General)

Turn off lights at times when natural light is adequate.

Turn off the lights when leaving your room.

Turn off the lights when the lecture theatre/ Tutorial Room is empty.

Corridor Lighting

Works and Services will be reducing corridor fluorescent lighting where alternatives are available.

Car Park Lighting

The Fine Arts car park on Clyde Road will have no lighting from midnight until the following evening.

This park will effectively be closed from midnight until 7.00am.

Heating

Eliminate the use of small personal (fan) heaters. If the main building heating system is not providing a comfortable level of heat, please inform Works and Services. The small heater option is inefficient and a high energy user.

Ventilation

A number of building systems will be tweaked to lessen air flows.

Fume Cupboards

These should only be operated as required and not left unattended. Not only is electricity used to run the extract, the make-up air to the room has to be heated as it comes in from the outside.

Computers

Turn off your computer when you leave your office. At the very least, shut down the monitor.

Pumps

The water features at the Library and the Commerce Building will be shut down until further notice.

General

The Cleaning Service has recently been putting effort into altering the pattern of cleaning buildings in order to ensure that whole buildings are not lit up in their entirety from 4.00am, when the shift commences. This re-organization of their work processes has already resulted in savings in power consumption and is much appreciated.

Measurement

Each week I will provide the measure of our weekly electricity consumption and an assessment of the savings we are achieving.

You can visit the University of British Columbia Sustainability Office web page for energy saving actions and tips: www.sustain.ubc.ca/2ourinitiatives/energy_manage.html

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Understanding EPA Expectations

by Santo Manicone

Improving the environmental performance of a college or university is one way of limiting environmental damage and violations. According to the Environmental Protection Agency (EPA), colleges and universities should be implementing an environmental management system (EMS) that will enable their institutions to be in complete compliance with government regulations.

Well this could be a hard reality for a number of presidents that feel environmental programs are last on the list (in relation to parking problems) at their institutions.

I recently attended an EPA conference that was directed to educational facilities professionals. The conference covered the EPA programs scheduled for this year for compliance, inspection, and enforcement. It was clearly stated that educational facilities would be in line to receive a multimedia compliance audit by the EPA. Recent postings and articles concerning major violations on fellow educational campuses prove that they are doing just that.

As we all know, in recent years it has become evident that environmental problems are quite often the result of poor management or programs. Maintaining compliance with environmental regulations can be accomplished with relatively limited



management effort and a basic environmental tracking system. Every organization requires some rudimentary system in order to satisfy its regulators. The EPA is asking for universities and colleges to incorporate an informed and proactive EMS that will identify problems and correct them within a structured, campus wide program.

The EPA expects that the EMS program will continually provide an organization with an accurate understanding of the impact its activities are having on the environment, as well as useful estimates of potential impacts. The EPA is forcing environmental managers to use this format to ensure that adverse consequences are minimized, that internal environmental policies and external regulatory requirements are fulfilled, and that the roles and responsibilities of relevant staff have been effectively assigned and communicated. A critical element of this EMS program is the requirement for management to demonstrate a commitment to continual improvement by periodically auditing, reviewing, and revising its EMS.

The first step is to design an environmental policy for the institution. The policy must then be implemented and institutionalized. Once environ-

mental management programs have been in operation long enough to generate measurable results, management must check the system to ensure it is operating as designed and intended. Any shortcomings identified in these checks must then be revised and corrected. In time, these adjustments will include alterations to the environmental policy, which activates the next cycle.

The environmental policy must clarify compliance with environmental regulations, which may effect the organization, and stress a commitment to continuous improvement. Emphasis is placed on the environmental policy since it provides the direction for the entire EMS. The facility must declare its environmental objectives, and identify those, which will have the greatest environmental impact. These objectives become the primary areas of consideration within the company's environmental programs.

The environmental programs are essentially the blueprint the organization follows to achieve specific objectives and targets along the route to achieving the overall environmental policy. In contrast, the EMS establishes procedures, work instructions, and controls to ensure that implementation of the policy and achievement of the targets can become a reality. It enables people within the organization to understand their responsibilities, and to have an appreciation for the environmental objectives of the organization.

A number of supporting state regulatory agencies are experimenting with models for more effective and efficient ways to ensure compliance and meet environmental, enforcement, and performance goals.

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One model is to test the hypothesis that the use of an ISO 14001 environmental management system has a positive effect on environmental performance, with compliance as the starting point. The idea is to encourage a system that will maintain not only compliance but enhance overall environmental performance, while making environmental protection more effective and efficient. The ISO 14001 standard is one framework for such a system, but not the only one. In and of itself, ISO 14001 does not set specific levels of performance. At its core, ISO 14001 provides for a framework for establishing an environmental policy and setting performance objectives for the EMS.


Analysis of impacts, implementation plans, training auditing, and management feedback are all elements within the EMS system. The specific goals and tactical objectives are

unique to each institution, just as the environmental policy uniquely reflects the character of the organization. The EMS program tool can help any organization achieve multiple and mutually reinforcing goals to benefit a wide range of issues such as waste water, underground fuel tanks, air emissions, regulatory permits, and hazardous waste storage management.

Whether an institution is seeking certification or upgrading its current management system to conform to current federal regulations, it must examine its existing internal environmental auditing program to ensure that the program is ready to meet the challenge of implementing an environmental management system (EMS).

As I stated, environmental and social accountability management systems are designed to manage regu-

latory compliance issues and minimize non-regulatory exposures to risk. This approach can be used to affirmatively demonstrate compliance with regulatory requirements and, beyond that, provide a practical approach for diligent management of the environmental and human risks and impacts associated with school activities.

The approach and the level of EMS involvement can be adapted to meet the specific needs of any educational institution with an environmental program, and an acknowledgment of social responsibility, in almost any stage of development. The precise purposes an organization wants its system to serve will significantly define the system. This is basically what the EPA is trying to enforce by issuing penalties and performing audits. Good luck with your program. 

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The Bookshelf

Book Review Editor: Theodore J. Weidner, Ph.D., P.E., AIA

Assessment and continuous improvement can be accomplished in many ways. Two tools that may assist facilities managers to assess and improve their current condition, whether personal or professional, are explored here. I find both of these texts particularly practical and beneficial; they also identify that facilities management is not all technology and equations.

Our ability to create and interpret the written word is as important as the technical parts of the job. It is particularly pleasing to find that the enjoyment of dramatic literature has beneficial work results. Maybe the next Shakespeare play I see can be written off as a business expense.

In addition to the explicit reviews of this column, let me also make a plug for a book that I've purchased but haven't read yet: *John Adams* by David McCullough. I've read all of McCullough's previous books from *The Johnstown Flood* to *Truman*. He's an excellent writer who can hold your interest on minor details and sweeping ideas equally. If you're looking for a gift, or a hint for the holidays, buy this book.

Ted Weidner is the associate vice chancellor for facilities and campus services at the University of Massachusetts/Amherst. He is also the co-chair of APPA's Trades Staffing Guidelines Task Force and can be reached at tweidner@admin.umass.edu.



How to Produce Effective Operations and Maintenance Manuals, by Mike Tidwell. Reston, Virginia: ASCE Press, 2000. 85 pp, softcover.

Regardless of campus size, there are several complexities and operating needs that must be documented for current or future employees, training purposes, or regulatory requirements. Creating an O&M manual can be difficult if one is not familiar with the needed content or is uncomfortable with writing in general. While this book will not solve writer's block, it will help with an organization focus on writing such a document.

The author has experience in water treatment facilities and draws examples from that perspective. He recognizes that we may have access to manufacturer information and should build on it to create a document that is relevant to our own facility. Just be-

cause we get O&M manuals for new or renovation projects doesn't mean that the submitted manuals will be used instead of gathering dust on the shelf.

As in all good advice, the book begins with the end in mind. Who is the audience, what do they need, what are their priorities, etc.? One can follow the development of a manual through these steps including involvement of the intended user, draft reviews, and a feedback form for future changes. The author also provides some helpful hints to make the document more readable such as fonts, inclusion of figures and photos, and the ultimate: placing the document online so it is more readily available and updateable.

If you have taken a course in technical writing, this book will provide a quick reference and outline to create a manual. If you are unfamiliar with technical writing or process documentation, this book is a good start to creating a manual. Its small size means it will be a handy reference rather than a book to gather dust.

Power Plays: Shakespeare's Lessons in Leadership and Management, by John O. Whitney and Tina Packer. New York: Simon & Schuster, 2000. 303 pp, hardcover.

When I first heard about this book I was amused, and at the same time in agreement with the premise that the plays of Shakespeare provide good lessons in leadership and management. Granted, Macbeth is not a figure whose actions should

be emulated; he did a lot of killing. But there are lessons learned about what not to do probably more so than the positive lessons or ideas.

The book is divided into three major sections: "Power, for good and for evil"; "All the World's a Stage, business as theater;" and "The Search Within, integrating values, vision, mission, and strategy." All three are relevant for leading a large business organization. But how well does Shakespeare do at addressing modern business challenges?

In "Power," we see how the lust for power brings people both to leadership



and ultimate failure when not properly balanced with humility. *Macbeth*, *Richard III*, and *Othello* are excellent examples of talented people who rose to the top. Alas, not all of us aspire that high, or as high as CEO, so some of the examples and cautions may appear not to apply.

The ability to develop and keep a trusted staff is also described; *Henry V* comes to mind particularly the modern interpretation by Kenneth Branagh. *Henry V* is also discussed at length when describing how great leaders are also good actors.

Lastly, in the section on mission and strategy, *Hamlet* is used as an example of unsuccessful implementation of strategy. Whitney includes several examples and parallels from his career, as well as the careers of others to point out both success and failure; the Internet Bubble has provided many recent examples.

I particularly enjoyed references to business leaders including Jack Welch and Larry Bossidy. We all recognize the previous successes of GE through Jack Welch. Those who watch the financial pages also know that Larry Bossidy has been called back from retirement to reposition Honeywell. Maybe there will be a sequel to this book to specifically address these two men and the recent events that affected them.

While the book is certainly sprinkled with clear, real world examples of good and bad leadership and management, I'll probably use it more to appreciate Shakespeare's works. Connections made between these plays, the sub-plots, and real situations are excellent. Regardless, I recommend this book as a pleasant diversion from the usual how-to-be-a-good-leader fare; it encourages you to read some great literature instead of a non-fiction book. Surprise! 📖

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DORMA Architectural Hardware introduces its new EMF/EMR series of holder/release devices preventing the spread of fire and smoke by automatically shutting barrier doors during a state of alarm. Featuring an electromagnetically controlled, frame-mounted track, the EMF/EMR devices operate as hold-open units under normal conditions. During an alarm state, current to the electromagnetic device is interrupted, allowing the door closer mechanism to take over and shut the door. For additional information contact DORMA Architectural Hardware at 800-523-8483.



Gateway Safety, Inc. has designed the high performance ProLite Series protective eyewear. Fashionable sports styling and comfortable fitting, the ProLite Series is designed for demanding work environments. Offering an innovative 8-base lens that extends around the face, replacing traditional side shields, this design provides workers with more than 180 degrees of eye and face protection. The ProLite Series exceeds ANSI and CSA standards. To find out more call Gateway Safety, Inc. at 800-822-5347.



Bison, Inc., well known as one of the leading makers of basketball and volleyball equipment, now offers a full line of football goal posts. With both competition single post and recreational H-post designs, this new line has goals for all high school, college, and recreational applications. There are now eight Bison football goal post models to choose from, with galvanized or official yellow finishes, in both official high school and NCAA dimensions. An H-style, combination football/soccer goal is also offered. Permanent mount or removable ground sleeve available. More information is available by calling Bison, Inc. at 800-247-7668.



Coming Events

APPA Events

For more information on APPA seminars and programs, visit our website's interactive calendar of events at www.appa.org.

Nov 19-20—Energy Conference.

(held jointly with NACUBO),
Baltimore, MD.

Jan 13-19, 2002—Institute for Facilities Management.

Tampa, FL.

Jun 10-14—Leadership Academy.

Scottsdale, AZ.

Jul 21-23—APPA 2002 Educational Conference & 89th Annual Meeting.

Phoenix, AZ.

Jan 26-30, 2003—Institute for Facilities Management.

Ft. Worth, TX.

APPA Regional Meetings

Sep 13-15, 2001—RMA Regional Meeting. Tucson, AZ. Contact Paul Smith, 520-206-4758 or psmith@pima.edu.

Sep 29-October 3—ERAPPA Regional Meeting. Hershey, PA. Contact Ford Stryker, 814-865-4402 or hfs2@psu.edu.

Sep 30-Oct 3—PCAPPA Regional Meeting. Vancouver, BC, Canada. Contact John Wong, 604-432-8299 or jwong@bcit.ca.

Oct 7-10—AAPPA Regional Meeting. Australia. Contact Amanda Hart, amanda.hart@anu.edu.au.

Oct 9-13—CAPPA Regional Meeting. Cape Girardeau, MO. Contact Alvin Stoverink, 573-651-2214 or amstoverink@semovm.semo.edu.

Oct 20-23—SRAPPA Regional Meeting. Roanoke, VA. Contact Bill Elvey, 540-231-4397 or wmelvey@vt.edu.

Oct 28-31—MAPPA Regional Meeting. Madison, WI.

Contact Kris Ackerbauer, 608-265-2758 or orkackerbauer@lpm.wisc.edu.

Other Events

Sep 26-29—The National Association of Women in Construction 2001 Conference. Anchorage, AK. Contact NAWIC, 817-877-5551 or www.nawic.org.

Oct 3—The School Environment: Effects on Students' Well-Being & Learning (8:00 am to 4:00 pm). Baltimore, MD. Contact Barbara Day, 800-882-8846 x122 or bdlay@carpet-rug.com or www.carpet-rug.com.

Oct 29-31—EDUCAUSE 2001: An Edu Odyssey—A Portal to a New Universe of Ideas in IT. Indianapolis, IN. Contact EDUCAUSE, 303-449-4430 or www.educause.edu/conference/e2001.

Nov 8-9—Physical Plant Craft Association Conference. University of Idaho, Moscow, ID. Contact Paul Herrra, 505-646-1598 or pherrera@nmsu.edu or www.pcca.net.

Nov 10-13—PGMS 2001: Charting a Course in Excellence. Tampa, FL. Contact Professional Grounds Management Society, 410-223-2861 or pgms@assnhqtrs.com or www.pgms.org.

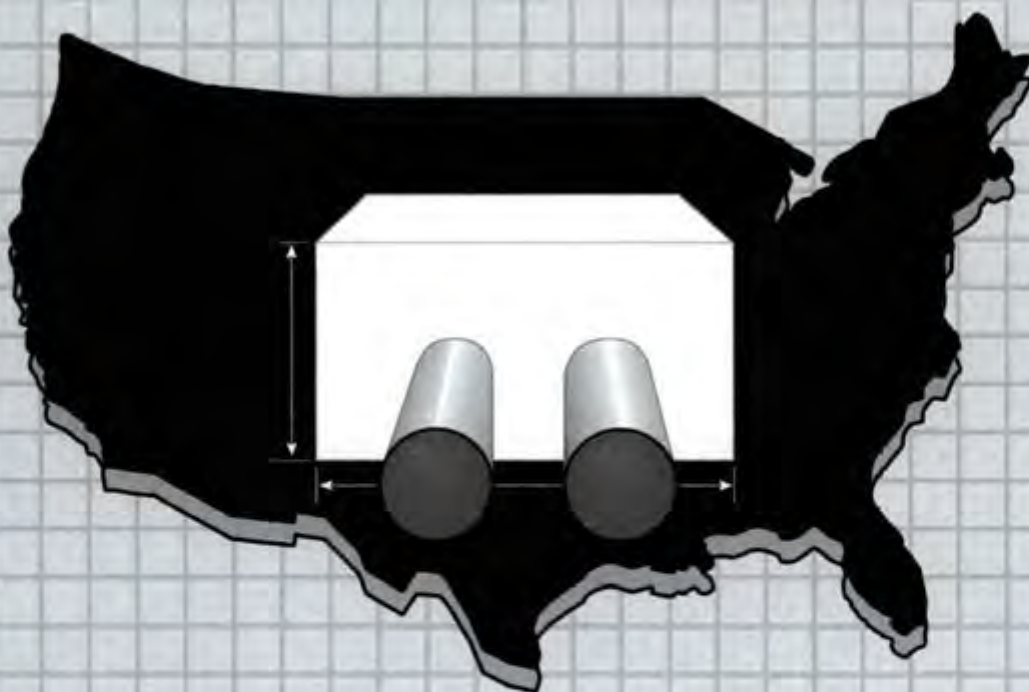
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