

the news



PHILADELPHIA SECTION AMERICAN SOCIETY OF CIVIL ENGINEERS

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National ASCE Central Number 1-800-548-ASCE • Toll Free

The Sidney Robin Memorial Newsletter of the Philadelphia Section ASCE

Vol. 79-3

Our 94th Year

November 2006

NOVEMBER DINNER MEETING

Philadelphia Section, American Society of Civil Engineers

THURSDAY, NOVEMBER 2, 2006

Union League, 140 South Broad Street (at Sansom Street), Center City Philadelphia

Cocktails 5:30 PM • Dinner 6:30 PM • Meeting 7:30 PM

SUBJECT: Update on the Transportation Funding Reform Commission

SPEAKER: Karen J. Rae, Deputy Secretary for Local and Area Transportation, Pennsylvania Department of Transportation

RESERVATIONS MUST BE SUBMITTED BY FRIDAY, October 27, 2006. Please send your check for the number of attendees at \$40 per member or guest with advance reservation, \$50 at the door (with no reservation), \$20 per ASCE Student Member. Checks should be made payable to "Philadelphia Section ASCE" and sent to ASCE, PO Box 58186, Philadelphia, PA 19102-8186. Reservations can also be made on the Electronic Message Center, **800-461-4190**, or via e-mail at **info@asce-philly.org**. Walk-ins will be subject to acceptance on a space-available basis. **THERE IS NO GUARANTEE THAT SPACE WILL BE AVAILABLE IF YOU DO NOT RESERVE SPACE.**

SPECIAL FEATURE: Drexel University Night. The ASCE Student Chapter, Faculty and Alumni of the Department of Civil and Architectural Engineering of Drexel University will be honored at this meeting. All Faculty, Alumni and Students are cordially invited to attend and participate.



Karen J. Rae

During September, the State's Transportation Funding Reform Commission conducted hearings all over Pennsylvania for public comment on the Commission's findings and draft report, *Investing in our Future: Addressing the Transportation Funding Crisis*. A final report will be issued in November. The draft report can be viewed at www.dot.state.pa.us/tfrc. Karen J. Rae will present first-hand knowledge on the update regarding this important report on transportation infrastructure funding.

Ms. Rae assumed her duties as Deputy Secretary for Local and Area Transportation in March 2006. She has 28 years' experience managing transit-related agencies in three states. She has served as Director of Virginia's Department of Rail and Public Transportation from August 2002 until her appointment at PennDOT. Between 1998 and 2002, she was general

Continued on Page 2

PLEASE NOTE: The Union League has a dress code in effect. Please consult its website for more information: <http://www.unionleague.org/club-policies.php>.

DECEMBER JOINT DINNER MEETING

American Society of Civil Engineers, Philadelphia Section and
Society of American Military Engineers, Philadelphia Post

WEDNESDAY, DECEMBER 13, 2006

Philadelphia Airport Hilton • 4500 Island Avenue (south of Penrose Avenue), Philadelphia

Cocktails 5:30 PM • Dinner 6:30 PM • Meeting 7:30 PM

SUBJECT: Leadership in Energy and Environmental Design (LEED) Certification

SPEAKER: To Be Announced

RESERVATIONS MUST BE SUBMITTED BY FRIDAY, DECEMBER 8, 2006. ALL reservations should be made through the Society of American Military Engineers (SAME) PHILADELPHIA POST WEBSITE, www.samephiladelphiaipost.org. NO reservations will be accepted through the ASCE, Phila. Section's Hotline, Website or Post Office Box. The cost of the

Continued on Page 2



SECTION'S PRESIDENTIAL AWARD PRESENTED TO POLK

As noted in the report on the Spring Social in the October edition of THE NEWS, the Presidential Award is given at the discretion of the Section President in recognition of special achievements not otherwise covered by the Section's Awards Program. While "special achievements" can be a relative and intentionally vague phrase, the recipient of the Presidential Award this past spring, **William Polk**, has a long list of these throughout his 40-plus-year career.

Bill's extensive and varied service in the engineering field began upon his graduation from the University of Wisconsin with a Bachelor of Science degree in Civil Engineering in 1937. He worked for a year and a half with a steel fabricator in Chicago, then moved on to the Chicago, Milwaukee, St Paul and Pacific Railroad (also known as the Milwaukee Road) for 8 years. Following that, he had 14 years of service with Pittsburgh Plate Glass. PPG transferred Bill from Milwaukee to Pittsburgh in 1947, then to Philadelphia in 1957, so we can thank PPG for getting Bill to us!

In 1960, Bill switched from the private sector to the public side, and back to the transportation field, as he became the Assistant Executive Director and Chief Engineer of the new Passenger Service Improvement Corporation (PSIC) in Philadelphia. Those of you who are students of local transportation know that PSIC "begat" the Southeast Pennsylvania Transportation Compact, SEPACT, in 1961, and in 1964 it became SEPTA. He served as Project Manager with the specific charge to effect improvements on commuter rail lines, including more frequent service, lower fares, expanded station parking, and new/refurbished railcars.

Continued on Page 4



PRESIDENT'S MESSAGE

ASCE is committed to providing you with ACCESS to DECISION-MAKERS. This is no less true for our upcoming ASCE, Philadelphia Section meetings. We have two great women decision-makers scheduled to speak to our Philadelphia Section. **SAVE THESE DATES!**

- **KAREN RAE**, Deputy Secretary for Local and Area Transportation, Pennsylvania Department of Transportation – speaking **November 2, 2006**
- **RINA CUTLER**, Deputy Secretary for Administration, Pennsylvania Department of Transportation – speaking **January 17, 2007**

In November, Karen Rae will be discussing the updates regarding the Governor's Transportation Funding Reform Commission. In September 2006, the commission held six listening sessions around the state. The one held in Philadelphia took place September 15th. It was very interesting to hear representatives from various organizations – including ASCE – who expressed their opinions about the commission report and why transportation funding reform is critical to the future and viability of Philadelphia and the State. A final report will be issued in November – **DON'T MISS** our November meeting with Karen Rae who plays a very important role in the Commission. She will provide us with a first-hand update!

Rina Cutler is an amazing professional and is a key high-level decision-maker at PENNDOT. ASCE is honored to have her speak at our joint meeting with ASHE on January 17, 2007. Sign up at info@asce-philly.org or call our hotline **1-800-461-4190**.

See you at our ASCE, Philadelphia Section meetings!

Sincerely,
Carol C. Martsolf, P.E.
President — Philadelphia Section, ASCE

NOVEMBER DINNER MEETING

Continued from Page 1

manager and chief executive officer of the Capital Metropolitan Transportation Authority in Austin, Texas. She also served for seven years in management positions at the Niagara Frontier Transportation Authority in Buffalo, New York, and was transportation director for Greater Glens Falls (New York) Transit. Ms. Rae holds a B.S. degree from East Stroudsburg University.

DECEMBER DINNER MEETING

Continued from Page 1

meeting and dinner is \$32 per person in advance (\$35 at the door). Walk-ins will be subject to acceptance on a space-available basis. **THERE IS NO GUARANTEE THAT SPACE WILL BE AVAILABLE IF YOU DO NOT RESERVE A SPACE.**

Energy efficiency and conservation are two factors that have recently become extremely critical in building and facility design. The *Leadership in Energy and Environmental Design* (LEED) program has been developed in response to this need. Efforts of the LEED program have led to "green" buildings and similar structures. The means and methods for the acquisition of LEED certification will be reviewed at this meeting.

At the time of this printing the speaker has not been confirmed. Please consult the SAME Philadelphia Post website noted above for updated information on the speaker.

**How many legs does a dog have
if you call the tail a leg?**

**Calling a tail a leg
doesn't make it a leg.**

— Abraham Lincoln

YMF SHARON PEREZ-SUAREZ

Continued from Page 3



S. Pérez-Suárez

Atlantic Region, who are regulated by the Resource Conservation and Recovery Act (RCRA) in hazardous waste and chemicals management. In addition, she is the project manager for several Federal Waste Minimization activities.

Sharon has over 5 years of experience in government and university research. She holds a bachelor's degree in Geology from the University of Puerto Rico at Mayagüez; and two master's degrees, one in Geochemistry from the University of Florida at Gainesville and another in Civil Engineering from the University of Colorado at Boulder. She is currently certified as a Project Management Professional (PMP) by the Project Management Institute in Pennsylvania.

Sharon currently serves as the Technical Groups Chair on our YMF Board. In her free time, you can find her playing tennis, mountain biking, spending quality time with her 11 year-old son, Alejandro, or studying for the EIT, the CHMM and the USPTO Patent Bar certifications.

WHOOPS!?! (AGAIN...)

What's with this "Interim" Thing?

The Editor accidentally reverted to his former title as Interim Editor in the "Thanks to Our Sponsors" article in the October edition of THE NEWS. No, there was no demotion or anything like that involved (as far as we know!), merely another "brain cramp" on the part of your Editor who once again must have fallen asleep at the controls. Your Editor will try once again to banish the word "interim" from his repertoire (now there's a fancy word!) and hopefully will not use it to describe his title in the future.

ASCE, PHILADELPHIA SECTION OFFICERS AND BOARD OF DIRECTION — 2006-07 SEASON

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DECEMBER 8, 2006**

TECHNICAL GROUPS/CHAIRS

Information on the ASCE, Philadelphia Section's Technical Groups is given below. Vice President **Mark Tiger** will coordinate activities of the Groups. If you have any topics that you think would be of interest to the Groups, please feel free to pass this information along to the Group Chair.

CONSTRUCTION

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SUGGESTION BOX

DON'T FORGET! — SEND US YOUR SUGGESTIONS!!

In last month's President's Message, ASCE, Philadelphia Section President **Carol Martsoff** reminded us that a new electronic **Suggestion Box** has been established to solicit and field good ideas from Section members for future events, programs, areas of concentration, etc. She kicked off this idea at the Spring Social in May and awaits your thoughts, comments, etc.

We are hopeful that you, our members, will put this tool to good use and give us feedback on things we should be focusing on, thinking about, and/or doing. Accordingly, we hope that you will send us your thoughts for consideration. These should be directed to suggestions@asce-philly.org.

TENTATIVE MEETING SCHEDULE — 2006-07 SEASON

Your ASCE, Philadelphia Section's Board of Directors is busily assembling an interesting meeting schedule for this season. While all details of this schedule remain to be fully developed, we have provided this information for your planning and advance notice. This information will be updated in each edition of THE NEWS as well as on the Section website.

For purposes of marking your calendar, coming meetings are scheduled as follows:

Wednesday, January 17, 2007

PaDOT Update; Rina Cutler, Deputy Secretary and Acting District 6 Executive; Joint meeting with American Society of Highway Engineers, Delaware Valley Section • Radisson Hotel, Valley Forge, PA

Thursday, February 8, 2007

Topic/speaker to be determined; Joint meeting with ASCE, South Jersey Branch • Wyndham Hotel, Mount Laurel, NJ

Thursday, March 8, 2007

University of Pennsylvania Capital/Expansion Program; Amy Gutmann, University President; Joint meeting with Women's Transportation Seminar, Philadelphia Chapter; Mid-Atlantic Section, Institute of Transportation Engineers; and Engineers Club of Philadelphia • Union League, Philadelphia, PA

Thursday, April 12, 2007

Comcast Building, Project Team; Joint meeting with Engineers Club of Philadelphia • Union League, Phila., PA

May 2007

Annual Spring Social/Dinner Dance

YOUNGER MEMBER FORUM NEWS

By Fred Vesce, Forum Editor

John Federico, Forum President 2006-07

Urban Engineers, Inc.
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(215) 922-8080
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YMF Guest Speaker: Dr. Robert Traver, P.E.

The ASCE, Philadelphia Section calls on its YMF board to provide guest speakers to one of our dinner meetings every year. The October meeting was "it" this year, with **Dr. Robert Traver, P.E.**, Associate Professor from the University of Villanova's Department of Civil and Environmental Engineering Department, as the speaker (see the full meeting report elsewhere in this issue). Dr. Traver's subject was *Lessons Learned From Hurricane Katrina*. He currently serves on ASCE's 14-member Hurricane Katrina External Review Panel (ERP). The YMF would like to thank **Jeremy Colello, P.E.** for inviting Dr. Traver to speak about such a significant topic. More information on this topic, in general, can be found through the ASCE's national website www.asce.org, keyword: katrina.

Philadelphia Section YMF Bowling Night

The forecast was for a cool and dry night, but some folks at the University of Pennsylvania may have thought rain was around the corner. This was because "Thunder" could be heard from the nearby Strikes Bowling Lounge, where the YMF descended to make some noise. On Thursday, September 21, 2006, nearly thirty members ate, drank and bowled into the night during the YMF's first social event of the season. Thanks go out to the YMF for sponsoring the event, which was free to student members, and Social Chairs **Cathy Golata** and **Sheri Miller**, for putting such a great event together. You can find out about upcoming Phila. Section YMF events at their website <http://www.ymfphilly.org>.

Future Cities Competition: Be a Mentor, Judge or Volunteer

The Delaware Valley Engineers Week Council will host the **12th annual Philadelphia Regional Future City Competition** at Villanova University on a Saturday in January. The event has regional middle school student teams compete to see who can present the best future city concept model and essay. Engineers are needed to serve as team mentors for several schools within the greater Philadelphia area. Please visit the website at www.futurecityphilly.org or contact **Jennifer Wetzel** at jwetzel@futurecityphilly.org for more information. There you can see all the schools registered to compete and also sign up to be a preliminary or essay judge or a general volunteer for the 2007 competition.

Student Chapter Scavenger Hunt

The YMF, ASCE Philadelphia Section is trying something new and exciting this year: a Fun Event for College Students. On **Sunday, November 5, 2006**, students from the local student chapters of ASCE will be searching Old City Philadelphia in a **Scavenger Hunt**. Section members are invited to join us for a fun, sociable afternoon. For more information or to sign-up for the Hunt contact **David Hanly** at david.hanly@dmjmharris.com, or (215) 735-0832 or the Younger Member Forum College contacts Co-Chairs: **Tze-Wei Choo** at TChoo@Pennoni.com, or (215) 222-3000 or **Shivani Mahajan** at smahajan@hntb.com, or (215) 568-6500.

YMF Member Spotlight Sharon D. Pérez-Suárez, PMP

Sharon works as an Environmental Engineer with the US Environmental Protection Agency (EPA). In the Waste & Chemicals Management Division, she provides technical assistance to commercial facilities and industry consultants in the Mid-

Continued on Page 2

PM⁴

*Professor Malarkey's
Project Management
Practical Methods,
Pitfalls and Musings*

WHAT IS A PROJECT?

By Ann M. Tomalavage, P.E., P.M.P.

The Project Management Institute defines a project as a temporary undertaking to create a unique product or service. Temporary means that the project has a defined beginning and end point. (Some projects feel like they'll never end! That may be because the team wasn't clear from the beginning on where the end was.) Once the project is "complete", the team will be disbanded. The end product of the project (a new wastewater treatment plant or road, a new accounts payable system, this year's picnic or holiday party) may be turned over to the client of the project (an external client or an internal department) for ongoing operation and maintenance.

Unique doesn't necessarily mean, "We've never done this before." It may mean, "even though we have designed and built a bridge before, this bridge goes through wetlands protected by new regulations."

Projects are carried out to meet established goals for cost, schedule, and quality. Projects are accomplished by teams assembled specifically for the project. Because projects typically require the expertise of many disciplines, team members may come from several departments within your organization – and possibly subcontractors. Many of the team members may never have worked together before. Many may also be juggling other projects at the same time.

It's important to understand the difference between projects and processes (or ongoing operations).

Examples of projects are:

- Designing or building a new highway
- Developing a new accounts payable system
- A wedding

Examples of processes or ongoing operations are:

- Repairing the highway or plowing the snow
- Processing bills using the new accounts payable system
- Being married

What is Project Management?

The Project Management Institute defines project management as "the application of knowledge, skills, tools, and techniques to project activities in order to meet or exceed stakeholder needs and expectations from a project."

The sharing of resources — people, equipment, information, facilities, tools, money — frequently leads to conflict and requires skillful negotiation to make sure that the project gets the necessary resources throughout the course of the project. The team is really responsible for managing the project. The project manager is responsible for keeping the project team focused on goals, budget, schedule, and quality.

Project management has been around for centuries. The Pyramids and the Great Wall could never have been built without a good project manager. The concept of project management as a discipline was developed in the early 1960s for use in managing the U.S. space program. Because project management is such a successful concept, many industries and disciplines have embraced it: the military, construction, electric power generation, transportation, banking, pharmaceuticals, and software development.

The rapid rate of change in both technology and marketplace competitiveness has demanded increasingly rapid and effective responses to client needs. Functional organizations are often unable to accommodate the wide variety of activities and expertise necessary for successful project completion. Project management has evolved to make better use of resources by getting work to flow horizontally (across distinct functional units) as well as vertically (up and down within an organization). This reduces the need to restructure functional organizations with each new project.

One of the greatest benefits of project management is its disciplined approach to planning, organizing, monitoring, and controlling the activities and resources involved in accomplishing the project goal. It also requires the ability to influence, since the project manager often does not have organizational authority over the people who will accomplish the work of the project.

Successful project management — the ability to achieve a desired goal on time, within cost limitations, and through the active support of others — is a difficult and complex venture. Project management is simple — but it is not always easy!

Ann M. Tomalavage, P.E., P.M.P., helps organizations worldwide to be more profitable by improving their project management skills. Ann can be reached at **(610) 326.0205** or **ann@malarkey.us**. Her website is **www.malarkey.us**

Project Management Institute (PMI) is an international organization dedicated to advancing the profession of project management. It touches all professions from engineering to IT to education, hospitals, accounting firms and pharmaceutical firms. Visit PMI's website at **www.pmi.org**.

SECTION WEB SITE!

Check us out at **www.asce-philly.org**. Make sure you bookmark this site to check on our latest meetings and events, links and much more! Comments and/or suggestions? Please contact us either via our Electronic Message Hotline at **1-800-461-4190** (24 hours a day) or e-mail at **info@asce-philly.org**.

POLK LIFETIME RECOGNITION

Continued from Page 1

Having accomplished the basic goal of the improvement of commuter rail service in the Philadelphia area, Bill returned to private industry as a management consultant in 1966, but he didn't stay long. He "bounced back" to public service in 1968 at the then-Pennsylvania Department of Highways. As the Special Assistant for Mass Transportation, his duty was to merge all transportation functions under the new Department of Transportation, which was formed in 1970. At that point, he was promoted to Deputy Secretary for Local and Area Transportation. This encompassed statewide mass transit, aviation, and municipal services programs, as well as navigation on the Delaware River and Lake Erie.

In 1984, having accomplished many more undertakings at PennDOT, Bill retired, completing an impressive 47 years of service to the engineering profession.

Bill, who is an energetic fellow despite being a couple of years younger than our Section, is truly an asset to the civil engineering profession and our Section. As such, we are proud to have recognized him with our Presidential Award. Congratulations once again, Bill!

THANKS TO OUR SPONSORS — WOULD YOU LIKE TO BE ONE?

The ASCE, Philadelphia Section has continued its successful **Sponsorship Program** this season. Thus far, 31 local firms have opted to participate for the coming season. As always, the Section extends its collective "thank you" to our sponsors for their commitment and continued support of the Section.

There are several benefits available to you as a Section Sponsor. For a low \$300 annual fee, you too can be a part of this program and have your business card appear in each edition of THE NEWS. Your logo will appear on a "thank you" board on display at each main Section meeting. Your firm will be listed as a Section sponsor in the program for our annual Spring Social/Dinner Dance. You will also be able to post two employment ads on the Section website free of charge for the duration of the season.

You may have seen the cards of those who have decided to become Section Sponsors for the current season in THE NEWS. The format of this has changed slightly this year, with pages 7 and 8 of each edition of THE NEWS reserved as our Sponsors' Pages.

If your firm is not in this esteemed group, and you would like to become a sponsor, this is the time to consider it. For more information on the program, please contact our Editor, **Bob Wright** at **(215) 686-5538** or **newseditor@asce-philly.org**.

**Energy and persistence
conquer all things.**

— Benj. Franklin

HISTORICAL PERSPECTIVE

A History of Standard Time in the US

Hopefully, you will be turning your clock back one hour at the end of October, as we move from Daylight Savings Time to Standard Time. (If you don't, you may wonder why you've been an hour early for everything a few days after the switchover!)

And, then, you may ask, what does time have to do with Engineering? Did you know that our time zones were basically set up to deal with transportation issues and that the railroads were among the first groups to push for standardization of time and time zones? Did you know an Engineer played a major part in this? Did you know you spring forward and fall back (and were you an hour early for work on the first day of Standard Time)? Read on.

The first person in the United States to sense the need for time standardization was an amateur astronomer, William Lambert, who as early as 1809 presented to Congress a recommendation for the establishment of time meridians. This was not adopted. In 1870, Charles Dowd began a new push for time zone standards. He revised his proposal in 1872, and it was adopted virtually unchanged by US and Canadian railways.

It took the persistence of a Canadian Civil/Railway Engineer, **Sandford Fleming**, to instigate the initial effort that led to the adoption of the present time meridians in both Canada and the US. Time zones were first used by the railroads in 1883 to standardize their schedules. Fleming also played a key role in the development of a worldwide system of keeping time. Trains had made the old system — where major cities and regions set clocks according to local astronomical conditions — obsolete. Fleming advocated the adoption of a standard or mean time and hourly variations from that according to established time zones. He was instrumental in convening the 1884 International Prime Meridian Conference in Washington, at which the system of international standard time — still in use today — was adopted.

This adoption occurred in November 1883. Before then, time of day was a very local matter. Most cities and towns used some form of local solar time, maintained by some well-known clock (for example, on a church steeple or in a jeweler's window). There were as many as 56 different time zones across the US at that time!

While, on the surface, the issue of local time seems to be a simple one, it could be anything but. For example, Detroit kept local time until 1900, when the City Council decreed that clocks should be put back 28 minutes to put the city on Central Standard Time. Half the city obeyed, while half refused. After considerable debate, the decision was rescinded and the city returned to its own local time. A derisive offer to erect a sundial in front of City Hall was referred to the Committee on Sewers. Subsequently, in 1905, Central Standard Time was adopted by popular vote.

The new standard time system was not immediately embraced by all, however. Use of

standard time gradually increased because of its obvious practical advantages for communication and travel. It was not until 1918 that standard time in time zones was established in US law. The Act of March 19, 1918, sometimes called the Standard Time Act, formalized the four time zones we now know in the continental US as well as Daylight Saving Time (DST).

The Standard Time Act shuffled several towns and cities to place them in time zones that were consistent with surrounding areas, with the intent of having metropolitan areas in one zone to the extent possible, and a better matching of local time to traditional sunrise/sunset. One example of this was Detroit, which was moved from the eastern extremities of the Central zone to the west edge of the Eastern zone. While DST, a widely-disliked part of the Act, was repealed in 1919, standard time and the time zones remained in law, with the Interstate Commerce Commission (ICC) having the authority over time zone boundaries. At the time, ICC was the only federal transportation regulatory agency. When Congress carved the Department of Transportation out of the Department of Commerce in 1966, it transferred the responsibility for the time zone issues to the DOT.

DST, on the other hand, became a local matter. It was reestablished nationally early in World War II, and was continuously observed until the end of the war. At that point, its use varied among states and localities. The Uniform Time Act of 1966 provided standardization in the dates of beginning and end of daylight time in the US but allowed for local exemptions from its observance. This has been modified several times to revise the beginning date of DST. Most of Indiana and the entire states of Arizona and Hawaii have opted not to recognize DST. A debate continues in Indiana as to whether the entire state should be in one time zone — most of the state's area is in the Eastern time zone, but most Indianans (or are they Indianites?), who live in the Chicago and Louisville metropolitan areas, are on Central time.

Time zone boundaries have changed greatly since their original introduction and changes still occasionally occur. DOT issues press releases when these changes are made. Generally, time zone boundaries have tended to shift westward. Places on the eastern edge of a time zone can effectively move sunset an hour later (by the clock) by shifting to the time zone immediately to their east. If they do so, the boundary of that zone is locally shifted to the west; the accumulation of such changes results in the long-term westward trend.

Thanks to the United States Naval Observatory and webexhibits.org for background information.

**Resolve to attend ALL
Section Meetings and
Functions This Year!**

TECHNICAL GROUP ACTIVITIES

Joint Structures and Construction Groups

November Dinner Meeting

SUBJECT: Roll-In/Roll-Out Bridges

SPEAKER: **Tariq M. Bashir, P.E.**, Project Manager at New York State DOT and **Genaro Lozano, P.E.**, HNTB

DATE: Thursday, November 16, 2006;
6:00PM–7:30PM

COST: \$10 (sandwiches and soft drinks) will be provided. Students pay \$5.

LOCATION: Conference Room Y, 16th Floor, Municipal Services Building, 15th Street and Kennedy Boulevard, Philadelphia, PA

The roll-in, roll-out system was used for the replacement of the Hillside Avenue and Jamaica Avenue bridges over the Van Wyck Expressway. It has shown a great potential of staged bridge construction with minimum disruption to the flow of traffic.

Reservations are required and seating is limited to 30. Please call the Electronic Message Center: **1-800-461-4190** (Open 24 hours/day).

MAYBE THAT ENGINEERING DEGREE IS GOOD FOR SOMETHING...

If you've wondered about your career choice lately...

According to *USA Today*, Pittsburgh Steeler Offensive Coordinator **Ken Whisenhunt** credits his degree in Civil Engineering from Georgia Tech with helping him call plays. "There are a lot of people who are glad I didn't put my degree into practice on all those bridges and roads out there," Whisenhunt said. "But the school was difficult, and you have to be creative in how you solve problems in Civil Engineering. So that's where my degree has translated well for me in play calling."

A recent National Science Foundation (NSF) survey found that people who earned a bachelor's degree in Science or Engineering (S&E) generally report that their Science and Engineering knowledge is important to their job, even if it happens to be non-technical work. According to the survey, among those workers whose only degree was an S&E bachelor's degree, 27% had S&E occupations, while 63% working in non-technical fields still said their jobs were related to their S&E degree.

Of those who went on to receive advanced degrees, the largest proportion, almost 29%, took those degrees in non-S&E fields, namely business, law, or medicine. "S&E knowledge remained important to the jobs of most S&E bachelor's holders with advanced degrees, being reported as necessary by a majority of both those with master's degrees in business and those with other non-S&E advanced degrees," the NSF report said.

Thanks to civilconnection@cenews.com and **Mike McAtee** for this information.

ENGINEERS NEED UNITY TO BUILD PUBLIC AWARENESS

By Kathryn Gray, P.E., FNSPE

This article was republished with permission from the May 2006 edition of PE, the magazine of the National Society of Professional Engineers (NSPE). Ms. Gray is the current National President of NSPE.

Have you ever attended a surprise party and thought, how did the guest-of-honor not know about this? I recently had a surprise birthday party for my mom, and she was shocked, excited, thankful, and surprised all wrapped into one! When you think about all that is involved in the planning, you wonder how anyone could miss the clues. There are lists of food, beverages, guests, and schedules, along with invitations, reservations, decorations, and confirmations. It takes an enormous amount of energy, preparation, and coordination to assemble all the pieces to bring everything and everyone together. But when successful, it makes for the perfect event.

I'd like to draw an analogy with the daunting task of increasing public awareness of engineering. We expend much energy in programs to encourage Engineering careers, but studies show that the American public doesn't have a clue about the profession. From our perspective, there are decisions not only about whom to target,

but also what to say, who should say it, when to say it, and how often to say it. Then add in development, creativity, funding, and delivery of the message, and you can envision a huge, almost insurmountable task. We can complicate this further by recognizing the numerous players — industry, academia, professional societies, government, and the media — each promoting its own activities and definitions of Engineering. It's no wonder the message isn't clear. Success will not be achieved until the Engineering community coordinates activities to deliver cohesive messages to a defined audience to accomplish unified, worthy goals.

Since I'm not one to dwell on the negative, to our advantage the Engineering community has access to studies conducted by respected authorities, such as the National Academy of Engineering. In 2002, NAE published *Raising Public Awareness of Engineering* (www.nap.edu/catalog/10573.html). The report provides insight on the problem and recommends solutions. NAE advocates a coordinated campaign throughout the Engineering community, delivering consistent, effective messages.

The Academy reported that many organizations have invested significant resources in what amounted to ineffective or marginally effective

public-image campaigns over the years with no consistent message nor measures of effectiveness. After compiling survey data from over 175 Engineering-related organizations, NAE estimated that these organizations had spent over \$400 million attempting to promote Engineering as a career option for students and instill in the public an appreciation for the importance of Engineers to society.

Perhaps you remember NSPE's American Engineering Campaign. If you recall, we promoted four key messages: 1) Engineering is fun and exciting, 2) Engineers are leaders, 3) Engineers improve the quality of life, and 4) Engineering provides the foundation of our everyday life. Other organizations promoted different discipline-specific messages. Many promotional messages, including NSPE's, were evaluated by the NAE Committee on Public Awareness of Engineering, but not all of the messages made NAE's "most promising" list.

With funding from the National Science Foundation, NAE has established an oversight committee, including key players in the Engineering community and media specialists. This committee will move ahead with the recommendations and develop a short list of credible, compelling, tested messages that will effectively communicate Engineering's importance. The committee will focus on messages geared to four target audiences: students; parents, teachers, and guidance counselors; the Engineering community; and policy makers and opinion leaders. To reach the desired outcomes, the goal will be a coordinated public awareness campaign promoted with cooperation from the entire Engineering community.

Measurements for long-term outcomes will be essential. According to the report, a coordinated public awareness campaign will lead to "more technical literacy among decision makers; more technical literacy in the general public; and more and better prepared students in Engineering." The long-term outcomes will include increased global competitiveness and national security, improved public policy and standard of living, and a "public more intelligently engaged in technology issues that affect their lives."

The NAE report prescribes objectives and recommendations for short-term goals focusing on public relations and public affairs, and long-term goals on education intervention. Current activities promoting science, technology, Engineering, and math education is one part of the longer term goal. Planning and preparations are underway. Although a small part of the larger Engineering community, NSPE must serve as a leader in bringing everything and everyone together to increase interest in the Engineering profession. Raising public awareness of Engineering is a challenge that needs to be addressed with an enormous amount of energy, preparation, and coordination. I'm confident, however, that if a profession of problem solvers can come together, we will increase the public awareness of the important role of Engineering in their lives.

OCTOBER DINNER MEETING

Wednesday, October 4, 2006

Union League, Philadelphia PA

Lessons Learned From Hurricane Katrina

by Jim Markham, Staff Writer

The first monthly meeting of the Philadelphia Section of ASCE's year had a wholly appropriate topic — Hurricane Katrina — as we anxiously wait for the passing of this year's hurricane season.

Carol Martsolf, the Philadelphia Section President began the meeting by imploring each guest to look under their chair as one of them had gift certificate to The Olive Garden stuck to it. At press time we aren't sure whether Ms. Martsolf removed the gum from everyone's chair prior to this exercise or if she simply had faith in the excellent staff at the Union League.

After briefly describing ASCE's upcoming meetings (described elsewhere in this edition of THE NEWS), Ms. Martsolf introduced the **Swarthmore Student Chapter President, Jessica Mandrick**. Ms. Mandrick indicated that the six members of the Chapter had not done much in the time since they were last featured in the spring, and then promptly listed several events that they had undertaken, including concrete bowling! (*For some reason, neither technique nor scores were discussed.* —Ed.)

John Federico, President of the Younger Member Forum gave the group a brief update on the YMF activities, including a recent bowling event in September. Mr. Federico then introduced our Featured Speaker, **Dr. Robert G. Traver**.

Dr. Traver was a member of of ASCE's 14-member *Hurricane Katrina External Review*

Panel (ERP). This panel was convened at the request of the US Army Corps of Engineers. As a member of the expert panel, he is responsible for reviewing reports generated by the US Army Corps of Engineers Interagency Performance Evaluation Task Force (IPET) and to provide an objective, independent technical review of the findings.

Dr. Traver described in detail how New Orleans was developed without a system wide approach towards drainage and flood control for major storms. He described the disaster that befell New Orleans during Hurricane Katrina, as not only a natural disaster, but also as an Engineering system disaster. He had several photos as part of his presentation that enabled him to describe the Engineering failures that led to the devastation.

After describing the Engineering failures that led to the disaster, Dr. Traver focused on next steps and recommendations. Chief among these recommendations is to *Keep Safety First*; a line that is borrowed from the first canon of ASCE's Code of Ethics (<https://www.asce.org/inside/codeofethics.cfm>)

After an engaging question and answer period, Ms. Martsolf thanked Dr. Traver on behalf of the Philadelphia Section.

For more on the ASCE Assessment Team and their findings see: www.asce.org/static/hurricane/team.cfm.



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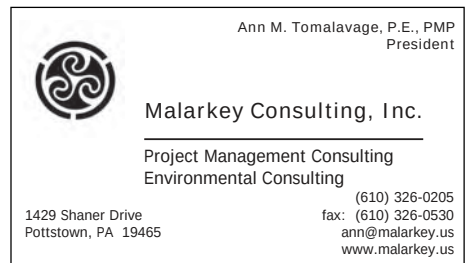


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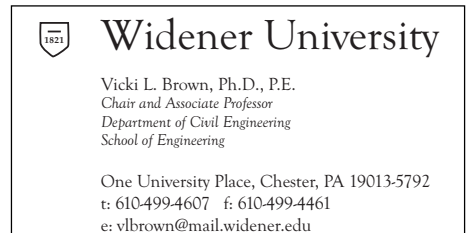


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COMING NEXT ISSUE...

- More information on the January and February meetings
- Updated meeting schedule
- Reports on the November and December Section meetings
- Results of the latest Section Salary and Benefit Survey

Look for this in the December/January edition of THE NEWS, coming in mid-December.

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