

# The Voice

JANUARY 2010

# Voice

**ACEC**  
AMERICAN COUNCIL OF ENGINEERING  
COMPANIES OF TENNESSEE

THE VOICE OF TENNESSEE'S ENGINEERING COMPANIES

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## Engineers Advocate for Sustainability

by *Dodd Galbreath*  
*Executive Director & Assistant Professor*  
*Institute for Sustainable Practice*  
*Lipscomb University, Nashville, TN*

In 2008, Don Giddens, Dean of Engineering at Georgia Tech, released a report entitled, "Changing the Conversation: Messages for Improving Public Understanding of Engineering." The report addressed the lack of appreciation for the social contributions of engineers and a need to "... reposition engineering."



**Dodd Galbreath**

In September of 2009, the *Engineering News Record* reported findings from the first "state of the world" report by the International Federation of Consulting Engineers. It said "the unfolding impacts of worldwide infrastructure are putting acute pressure on the engineering profession to steer future development onto a more sustainable path." In essence, one million engineers have urged their profession to "... curtail future negative effects" of inefficiently dispersed infrastructure.

Cataclysmic economic events and new market dynamics have unveiled inefficiencies in our financial, media, health care, and energy sectors that also threaten the survival of some professions. This market pressure will continue to erode local revenue for costly, inefficient and highly dispersed infrastructure. These "perfect storms," however,

*(continued on page 2)*

## Tennessee Universities Teach Sustainability

In addition to Lipscomb University's new MBA program and graduate programs in sustainability described in the article, other Tennessee universities offer programs that encompass sustainability issues.

**Vanderbilt University** offers a minor in Environmental Engineering and in Energy and the Environment. In addition, Vanderbilt will offer three new Vanderbilt Initiative for Scholarship and Global Engagement (VISAGE) courses in spring 2011: sustainable development; sustainable development field experience; and sustainable development research.

The College of Engineering at the **University of Tennessee-Knoxville** addresses sustainability issues in nearly all program areas. A minor in Sustainability is available across all engineering departments. While already offering courses in sustainability—including green engineering, pollution prevention, nuclear energy, etc.—additional courses are in development related specifically to energy and sustainability.

At **Tennessee Technological University**, faculty and students in the College of Engineering are engaged in several sustainability initiatives. Class opportunities include the study of environmental remediation, the environmental impact of civil engineering projects, renewable and alternative energy, and other topics. Research experiences are available to students in a variety of green engineering fields. Productive re-use of waste byproducts, such as fly ash, in cement mixtures has been a long-term research strength of the College.

The **University of Memphis** Department of Civil Engineering has electives on environmental impact in the environmental engineering concentration. Sustainability and the environmental impact of design decisions are highlighted in the senior capstone design. Within two years, sustainability will be part of the curriculum starting in the freshman year.

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# It's a New Year Full of Possibilities

*by Ed Hargraves  
President, ACEC of Tennessee*

The New Year is here and it's full of possibilities for your firm and our profession. This is especially true if you take advantage of opportunities to get the word out to the general public

**Ed Hargraves**

and potential clients, as well as to our state legislators, about the vital services that the engineering profession provides to the public on a daily basis.

Two of these opportunities arrive on March 2; reserve this date on your calendar **now**. ACEC of Tennessee

events that day will give us the opportunity to 1) meet and discuss pending legislation with our state legislators; and 2) promote and put on display the varied and creative designs of our members.

The first event is the annual *Engineers' Day on the Hill* on the morning of March 2. It is a great opportunity for Tennessee engineers to talk with their legislators and to present our position on pending legislation. Legislators drafting new

bills that impact the engineering profession should and, in some cases, do seek our input especially regarding the technical aspects of engineering. Connections made on March 2 could affect our profession for years to come.

**Excellence on Display**

The second event is the annual *Engineering Excellence Awards* competition banquet on the evening of March 2. I strongly recommend that any firm that has submitted projects in this year's competition be certain to invite their clients to this awards gala. Here they can see many varied projects designed by Tennessee engineers in locations throughout our state and in other states. I've always been very impressed with the creativity and diversity of the engineering services offered by my colleagues. This event is an excellent opportunity to showcase your projects and to gain recognition for your firm's engineering talent.

Consider the possibilities! Your participation in these two March 2 events can translate opportunities into future benefits for our profession and your firm. For more information on these events, visit [www.acectn.org](http://www.acectn.org).

## Sustainability (continued from page 1)

have not deterred or limited the inherently creative and adaptable skills of engineers.

**Universities & Engineering Groups Respond**

As early as 2002, Engineers for a Sustainable World (ESW) emerged as a national, non-profit network committed to building a better world. In 2005, Carnegie Mellon University, the University of Texas at Austin, and Arizona State University established the Center for Sustainable Engineering, supported by the National Science Foundation and the Environmental Protection Agency. New degree programs, such as Lipscomb University's MBA in Sustainability and Master of Science and Certificate of Graduate Studies in Sustainability, equip engineers and diverse professionals with new, competitive skills. The University of Michigan's new dual degree shared by the College of Engineering and the School of Natural Resources & Environment further supports this trend.

In addition, the Society of Manufacturing Engineers now considers environmental and social sustainability an "industrial requirement." Also, joint efforts by the American Society of Civil Engineers (ASCE), the American Society for Engineering Education (ASEE), the American Institute of Chemical Engineers (AIChE), the American Society of Mechanical Engineers (ASME), and the Institute of Electrical and Electronics Engineers (IEEE) resulted in

"The Engineers Forum on Sustainability" to promote the principles and practice of sustainability. (Editor's Note: The American Council of Engineering Companies (ACEC) Institute for Business Management is working in conjunction with the American Public Works Association (APWA) and ASCE to develop a "green scorecard" for non-building infrastructure projects. The scorecard will include sustainability factors in addition to energy efficiency, conservation and environmental considerations.)

As readers you may ask: "What does all this mean to me in the State of Tennessee?" Many of you may choose to redefine the engineering services you will purchase for your community in 2010. Many of you may contemplate why fellow engineers believe that society does not appreciate the social contributions of engineers.

As you read this newsletter in this New Year, you may develop a new resolution by asking yourself: "Why are so many engineers in business, consulting, professional societies, and academics in our country, and all over the world, moving to sustainability?"

Like so many first impressions, perhaps sustainability to "save the planet" is not the real issue. Perhaps the real answer lies with the collective actions of new and old engineers who simply want to survive and to create our best society.

# Judges Announced for Engineering Excellence Awards

A panel of eight judges will convene in February to review the entries in the 2010 *Engineering Excellence Awards* (EEA) competition and select the winners.



**Rick Gafford**

"We are very fortunate and honored to have such a knowledgeable group assembled to judge the entries," said Rick Gafford, PE, EEA program chair and vice president at Fisher & Arnold, Inc.

The 2010 EEA judges are Peter Heidenreich, consultant, Hall Strategies, Nashville; W. Marlin Keel, PE, RLS, director of public works / city engineer, City of Mt. Juliet; Diane Neighbors, vice mayor, Metropolitan Government of Nashville & Davidson County; Mike Oakes, PE, county engineer, Shelby County Government; Michael Skipper, director,



**Steven Field**

Nashville Area Metropolitan Planning Organization (MPO); Greg D. Reed, PE, PhD, associate vice chancellor for research, University of Tennessee, Knoxville; and Daniel A. Badoe, PhD, professor, Department of Civil and Environmental Engineering,

Tennessee Technological University, Cookeville.

In addition, Ipshita Thomas, EI, Tennessee Valley Authority, is a member of the panel of judges. Thomas was the winner of the ACEC national scholarship and the ACEC of Tennessee state scholarship in 2009.

"Several have served as EEA judges in the past; others are joining the judge's panel for the first time," noted Steven Field, PE, EEA program co-chair and principal at Stantec Consulting Services, Inc. "As a result, the judges' deliberations will reflect an ideal combination of experience and fresh perspective."

Winners of the *Engineering Excellence Awards* will be announced on the evening of March 2, 2010, during a banquet at the Franklin Marriott Cool Springs in Franklin, Tennessee. An overall *Grand Iris Award* will be presented in addition to a *Grand Award* in each entry category. Publicity concerning competition entrants and award winners is distributed statewide.



## 2010 EEA Entrants

Additions and Alterations to Thompson Boling Arena, Knoxville, TN: Ross Bryan Associates, Inc., for Studio Four Design;

Concurrently Maintainable Electrical and Mechanical Systems for Mission-Critical Facility at Marshall Space Flight Center, AL: Barge, Waggoner, Sumner & Cannon, Inc., for National Aeronautics and Space Agency;

FedEx Winchester Ramp, Memphis, TN: Fisher & Arnold, Inc., for FedEx;

Former Hahn Oil Facility Phytoremediation, Evansville, IN: AMEC Earth & Environmental, Inc., for CSX Transportation, Inc.;

Former Volunteer Army Ammunition Plant Soils Restoration, Chattanooga, TN: Tetra Tech, Inc., for U.S. Army Corps of Engineers, Mobile District;

General Shale Spring City Plant and Mines, Spring City, TN: S&ME, Inc., for General Shale Brick, Inc.;

Greening a Brownfield: Rails-to-Trails Assessment, Memphis, TN: EnSafe Inc., for Shelby County;

Interstate 40/Interstate 81 Corridor Feasibility Study, Statewide in Tennessee: Parsons Brinckerhoff, Inc., for Tennessee Department of Transportation;

Kingsport Waste Water Treatment Plant Upgrades CMAR Implementation, Kingsport, TN: Camp, Dresser & McKee, Inc., for City of Kingsport;

Livingston's New Water Source - Cumberland River, Livingston, TN: J. R. Wauford & Company, Consulting Engineers, Inc., for Town of Livingston;

Music City Central, Nashville, TN: TranSystems Corporation for Nashville Metropolitan Transit Authority;

Nashville International Airport RW 13-31 East & TW Tie-Ins, Nashville, TN: PBS&J, Inc., for Metropolitan Nashville Airport Authority;

Omohundro Water Treatment Plant Hazardous Materials Abatement, Nashville, TN: K. S. Ware & Associates, LLC, for Metro Nashville Water Services;

Optimizing I-69 Route Selection Via Geophysics, Memphis and Millington, TN: EnSafe Inc., for Tennessee Department of Transportation;

Regional Bicycle & Pedestrian Study for the Greater Nashville Region, Nashville, TN: RPM Transportation Consultants, LLC, for Nashville Area Metropolitan Planning Organization;

Ripley Courthouse Square, Ripley, TN: Askew Hargraves Harcourt & Associates, Inc., for City of Ripley-Ripley Downtown Development Corporation;

Rivertown Development, Memphis, TN: Burns Cooley Dennis, Inc., for Rivertown, LLC;

Riviana Foods New Memphis Facility, Memphis, TN: Pickering Firm, Inc., for Riviana Foods, Inc.;

S.R. 840 Socio-Economic Justification Study, Williamson County, TN: Wilbur Smith Associates for Tennessee Department of Transportation;

Sheffield Yard Wastewater Treatment Plant, Muscle Shoals, AL: AECOM for Norfolk Southern Corporation;

Signal Optimization and Corridor Study, Murfreesboro, TN: Neel-Schaffer, Inc., for City of Murfreesboro;

SmartFIX40, Knoxville, TN: Wilbur Smith Associates for Tennessee Department of Transportation;

Stones River Water Treatment Plant Expansion, Murfreesboro, TN: Smith Seckman Reid, Inc., for Murfreesboro Water & Sewer Department;

TDOT Smartway Memphis, Memphis, TN: Gresham, Smith and Partners for Tennessee Department of Transportation;

University of Memphis School of Law, Memphis, TN: Burr & Cole Consulting Engineers, Inc., for Tennessee Board of Regents;

Wastewater Treatment Plant Renovation, Pulaski, TN: J. R. Wauford & Company, Consulting Engineers, Inc., for City of Pulaski;

Water Utilities Planning Evaluation, Giles County, TN: Gresham, Smith and Partners for Giles County;

Willow Branch Stream Enhancement, McMinnville, TN: Stantec Consulting Services, Inc., for Tennessee Department of Transportation;

Wolf Creek Dam Exploratory Drilling and Pressure Testing, Jamestown, KY: K. S. Ware & Associates, LLC, for U. S. Army Corps of Engineers.

## CALENDAR

**FEBRUARY**  
**14 - 20**  
Engineers' Week

**MARCH**  
**2**

Engineers' Day  
on the Hill  
State Capitol,  
Nashville

9:00 a.m. to 1:30 p.m.

Engineering Excellence  
Awards Banquet

Franklin Marriott  
Cool Springs

6:00 p.m. to 9:00 p.m.

**MARCH**  
**3**

ACEC Board Meeting  
Franklin Marriott  
Cool Springs

8:30 a.m. to 11:30 a.m.

## MEMBER NEWS

- Marshall Elizer, PE, PTOE, executive vice president of transportation at Gresham, Smith and Partners, has assumed the role of president of the Tennessee Chapter of the Intelligent Transportation Society of America.
- Barge Waggoner Sumner & Cannon (BWSC) has received the 2009 Employer Recognition Award from the American Society of Civil Engineers (ASCE). The award recognizes companies that encourage and support the involvement of young engineers in local, regional and national ASCE activities.
- Timothy D. Smith, PE, a geotechnical and construction materials testing engineer with more than 12 years of experience, has joined the staff of the Nashville office of S&ME.

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## In Memoriam

Billy Sumner, PE, F.ACEC, who co-founded engineering firm Barge Waggoner Sumner & Cannon (BWSC) in 1955, died in Nashville on December 1, 2009. Mr. Sumner served as national president of ACEC from 1975-1976, one of only two Tennesseans in the history of the organization to hold this distinguished position. He was inducted into the ACEC College of Fellows in 1999.

When ACEC of Tennessee marked its 40th anniversary in October 2008, Mr. Sumner made a comment that could well apply to his own professional legacy. He said, "We owe members of the profession who went on before us because, if it weren't for the things they did both professionally and technically, there would not be a profession for us to participate in." Thank you, Billy Sumner.

## FROM THE EXECUTIVE DIRECTOR

### *GooGoos in December; General Assembly in January*

by Candy Toler  
Executive Director, ACEC of Tennessee

**A**CEC of Tennessee hosted the Winter Meeting of the ACEC state executives in December. They came from Oregon, South Carolina and dozens of points in between. I welcomed them with GooGoo Clusters and introduced them to Nashville-style fun on Lower Broad!

Discussion focused on state legislative issues. Many states are continuing efforts to pass Qualifications-Based Selection (QBS). Idaho recently passed legislation giving the licensing board the authority to enforce QBS for all public entities; if engineers "bid" on public projects, they could have their licenses revoked. Some states hope to address the issue of indemnification clauses in contracts which are not insurable.

Dave Raymond, president of ACEC (national), provided an update. He observed that "shovel ready" means vanishing jobs, while new infrastructure creates sustainable jobs and an investment for the future. He reported that ACEC is promoting "Stimulus 2," which includes funding for water projects through grants and reduces the red tape required to get funding through state revolving funds. "Stimulus 2" also includes a 6-year transportation bill.

#### Legislators Return

The Tennessee General Assembly returns on January 12 for a special session on education reform called by the Governor. All the legislation from the 2009 session will be carried over and may be discussed. There will undoubtedly be additional issues introduced that will affect the practice of engineering. I will keep you posted. As always, I encourage you to participate in *Engineers' Day on the Hill on March 2*. Come represent your profession; speak on issues affecting public health, safety and welfare.



A Very GooGoo Welcome—Candy Toler (center) presents GooGoo Clusters to Scott Heidner, Kansas, president of ACEC state executives, and Alison Davis, Oregon, secretary-treasurer of ACEC state executives. They were among the 25 people who attended the state executives' organization Winter Meeting in Nashville.