

The Voice

FEBRUARY 2011



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Infrastructure 101: Essential Lessons for Our Future

by *Steve Bostic, PE*
President, ACEC of Tennessee
and *Charles P. Smith, PE*
Hanson Professional Services, Inc.

When the economy is booming, infrastructure plays an obvious if thankless role. The obviousness includes crowded highways, overcrowded ports, busy airports, and shortages of clean water to name a few. What isn't so obvious to many Americans is the critical role infrastructure plays in our nation's future economic vitality and success.



Steve Bostic



Charles Smith

Every civilization since time began has been indivisibly linked to the effectiveness of its transportation and the availability of water, food and shelter. The fact that we are more technologically advanced than earlier civilizations doesn't make us less susceptible to poor systems linking us to these necessities. You can't eat computer chips, and you can't survive in a global market if you don't have competitive advantages. In the past, those advantages were derived from available natural resources coupled with knowledge, technology, and a way to

transport people and goods. Nothing in the basic equation has changed.

What has changed is the complexity. Global competition now includes things like labor rates, trade regulations, and the availability of instant information. While these complexities enhance the difficulty of maintaining a competitive edge, we can't get so caught up in the complexities that

When has simply maintaining current capacities resulted in success for any business or nation?

we forget the basics. Football teams don't win much if they can't tackle, students aren't successful if they can't read and write, and America can't thrive if we don't have the basic infrastructure in place in the future.

It is scary that we are not maintaining our current infrastructure, but something scarier is happening in our thinking. When has simply maintaining current capacities resulted in success for any business or nation?

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More than Jobs

During the last several years, even prior to the current economic troubles, there has been increased effort by engineers and others to get the message out that our infrastructure is in trouble. The truth and urgency of that message are gaining an increasing audience.

However, the full message is generally not understood. Many people recognize that building infrastructure creates jobs, but they only see the benefit in terms of the construction jobs it takes to build a project. The missing understanding is that the time and effort (read money) that is saved by efficient infrastructure systems translates to competitive advantage, which translates to success in the global marketplace and the associated economic development.

If America intends to thrive, we must not only fix what is broken, but also must understand what it will take to gain competitive advantage in the future, and then take action to achieve it. Just like every previous civilization, infrastructure is basic to our success.

Infrastructure Essential to Tennessee

In Tennessee, we should understand better than much of the country how important infra-



Highways are one crucial component of Tennessee's infrastructure. Pictured is the SmartFIX 40 project in Knoxville, recipient of the 2010 Grand Iris Award in the Engineering Excellence Awards (EEA) competition.

Infrastructure doesn't always need to get bigger, but it does always need to get better.

structure is to economic well-being. Where would we be today without the prior investment in hydroelectric, navigation, and flood control dams and the resulting advantages? How about the system of highways and railroads that have moved commerce to, from and through our state? Without this infrastructure, Tennessee would be a very different place indeed. What infrastructure does our state need to ensure a prosperous future?

In times of scarce resources, it is essential to prioritize. It isn't good enough just to throw money at construction jobs if the things constructed do not inherently improve the system. Infrastructure doesn't always need to get bigger, but it does always need to get better. In our world, better equals environmentally conscious, efficient, cost effective, and safe.

Engineers, as we gain the attention of government leaders and citizens about the urgency of infrastructure improvements, we must take our message to the next level. We can't afford to be understood as only pushing for capital expenditure for the sake of expenditure. We have to up our game and add sophistication to our argument – by focusing on how infrastructure is essential to the future of our state and nation.

Note: A number of resources are available for more information on the state of the infrastructure in Tennessee. These resources include The Infrastructure Report Card completed by the American Society of Civil Engineers of Tennessee; the Public Infrastructure Needs Inventory prepared by the Tennessee Advisory Commission on Intergovernmental Relations; and the work done by the Tennessee Infrastructure Alliance. Visit www.acec.org/newsletters/pastnews.htm to connect to these resources.

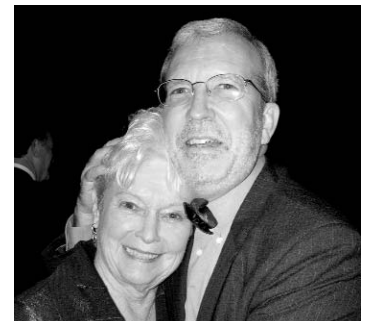
Tribute to Mary D. Shahan

Mary D. Shahan was the Executive Director of Consulting Engineers of Tennessee (CET) and the Tennessee Society of Professional Engineers (TSPE) from 1978-1990. She died on Dec. 19, 2010. This tribute was written by Steve Hays, FACEC, Gobbell Hays Partners, Inc.

Mary D. Shahan was one of the finest people I have ever known. Her integrity and competency were beyond reproach. She lived her life with great energy, enthusiasm, boldness and determination. She always inspired me.

I first met her in 1979, shortly after she had convinced CET (now ACEC of Tennessee) to launch a public relations committee (its first PR committee ever). I walked into her office asking if there was something I could do to help the engineering profession. I walked out as chair of this new committee.

Mary D. had a vision for PR. She very much believed that engineers are the unsung heroes of our modern society, and she was fully dedicated to doing everything possible to have engineers as well recognized and respected as other professions. Through the years, she was a major force for good in the engineering community.



Mary D. Shahan and Steve Hays are pictured at ACEC of Tennessee's 40th anniversary celebration in 2008.

Winners Will Be Announced March 8 Tickets on Sale Now

On Tuesday evening, March 8, ACEC of Tennessee will host the *Engineering Excellence Awards* gala, the Tennessee engineering community's premier event, at the Loews Vanderbilt Hotel, Nashville. More than 250 engineers, public officials, business leaders and guests are expected to be there to hear the winners of the competition announced. Based on



Dick Burleson

the deliberations of an independent panel of judges, the *Grand Iris Award* will be presented to the competition's overall winner. A *Grand Award* will be presented in each entry category.

Dick Burleson, legendary Southeastern Conference

football referee, will be the featured speaker. Burleson, who is a civil engineering graduate of Georgia Tech, is vice president of ACEC member firm Neel-Schaffer, Inc. His recently released book, *You Better Be Right*, reached the Best Sellers list at Barnes & Noble Bookstores.

Invitations were mailed in early February. Tickets must be purchased by March 3. For additional information, contact Judy Logue at 615-242-2486 or jlogue@tnec.org.

A Special Thank You

Thank you to the companies sponsoring the 2011 *Engineering Excellence Awards* program. Sponsors – as of January 25 – are:

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TLM Associates, Inc.; TTL, Inc.;

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Vaughn & Melton Consulting Engineers.

Sponsorship opportunities at the EEA gala event are still available! For information, contact Judy Logue at jlogue@tnec.org or call 615-242-2486.

2011 EEA Entrants (arranged by project location)

East Tennessee

CDM: Biologically Enhanced High Rate Clarification, Knoxville, TN, for Knoxville Utilities Board;

Cannon & Cannon, Inc.: Cedar Springs Presbyterian Church Parking, Knoxville, TN, for Cedar Springs Presbyterian Church;

Gresham, Smith and Partners: An Innovative Solution - The DDI Interchange, Alcoa, TN, for City of Alcoa and Tennessee Department of Transportation;

Gresham, Smith and Partners: Knoxville Utilities Board 2nd Creek Wastewater Storage Facility, Knoxville, TN, for Knoxville Utilities Board;

H.W. Lochner, Inc.: I-75 Widening and Interchange Reconstruction, Ooltewah, TN, for Tennessee Department of Transportation;

Ross Bryan Associates, Inc.: Clayton Center for the Arts, Maryville, TN, for McCarty Holsaple McCarty Architects;

S&ME, Inc.: Gay Street Streetscapes, Knoxville, TN, for City of Knoxville;

S&ME, Inc./PDC Consultants, LLC: Little Chatata Creek Realignment, Cleveland, TN, for Cleveland Municipal Airport Authority;

S&ME, Inc.: Stream Restoration at Bristol Motor Speedway, Bristol, TN, for Bristol Motor Speedway

Vaughn & Melton Consulting Engineers, Inc.: Gay Street Streetscapes Improvements, Knoxville, TN, for City of Knoxville;

Wilbur Smith Associates: Barnhart Super Heavy Haul, Knoxville, TN, for Barnhart Crane & Rigging Co.;

Wilbur Smith Associates: Dollywood Access Study, Pigeon Forge, TN, for Dollywood;

Middle Tennessee

AECOM: Water Treatment Plant Raw Water Reservoir Rehabilitation, Franklin, TN, for Water Management Department, City of Franklin;

AMEC Earth & Environmental, Inc.: CSXT Emergency Response for Flood Repairs, Kingston Springs, TN, for CSX Transportation;

Barge Waggoner Sumner & Cannon, Inc., TTL, Inc. and I.C. Thomasson Associates, Inc.: Schermerhorn Groundwater Removal System, Nashville, TN, for Schermerhorn Symphony Center;

Garver Engineers, LLC: Runway 2L-20R Reconstruction, Nashville, TN, for Metropolitan Nashville Airport Authority;

K.S. Ware & Associates, LLC: CONRAC Deep Foundation Investigation, Nashville, TN, for Metropolitan Nashville Airport Authority;

West Tennessee

CSR Engineering, Inc.: Pedestrian Underpass at Lane College, Jackson, TN, for Lane College;

Tetra Tech, Inc.: Shelby County Greenline, Memphis, TN, for Ritchie Smith Associates and Shelby County, TN.

Statewide

EnSafe, Inc.: GIS Mapping - Stormwater Outfalls on State Highways, various locations, TN, for Tennessee Department of Transportation;

Out of State

Askew Hargraves Harcourt & Associates, Inc.: Rebuilding Caruthersville High School, Caruthersville, MO, for J. J. Bullington;

Barge Waggoner Sumner & Cannon, Inc.: Tennessee River Modeling, Tennessee River Watershed, VA, NC, TN, GA, AL, for Tennessee Valley Authority;

EnSafe, Inc.: Pilot Test - Extreme Degradation Conditions, Tampa, FL, for Helena Chemical Company;

Neel-Schaffer, Inc.: Tag Along Creek Drainage Improvement Study, Lacombe, LA, for St. Tammany Parish, Louisiana Government

CALENDAR

**FEBRUARY
20-26**

60th Annual
Engineers' Week
*Engineers Make a
World of Difference*

**MARCH
7**

Legislative Reception
5:30 p.m., Sheraton
Downtown Nashville

**MARCH
8**

Engineers Day on the Hill
9:00 a.m.

Engineering Excellence
Awards Banquet
6:00 p.m. - 9:00 p.m.
Loews Vanderbilt
Hotel, Nashville

**MARCH 30 -
APRIL 2**

ACEC Annual
Convention &
Legislative Summit
Washington, D.C.

Member News

• Memphis-based engineering design and construction management firm, AFRAM Corp., has earned a 2010 *Best of Memphis Award* in the Consulting Engineers category from the U.S. Local Business Association for the third consecutive year.

• Michael A. Cochrane, PE, a principal of Gresham Smith and Partners, has been elected one of three at-large directors of the Society of American Military Engineers (SAME) Nashville Post.

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WELCOME, NEW ACEC MEMBER

Hall, Blake & Associates
A Division of Geotechnology
648 Whitney Avenue
Memphis, TN 38127
(901) 353-1981
www.geotechnology.com

Key Contact:
Ashraf ElSayed, PhD, PE
Chief Engineer
a_elsayed@geotechnology.cc

Hall, Blake & Associates
provides geotechnical and
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services. It also provides
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and observations, geophysics
and non-destructive testing.

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Smith Cashion & Orr, PLC
231 Third Avenue North
Nashville, TN 37201
615-742-8580
www.smithcashion.com

Contact:
Vic L. McConnell
VMcConnell@smithcashion.com

Smith Cashion & Orr is a
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out of the design/construction
process.

FROM THE EXECUTIVE DIRECTOR

Let's Seize the Occasions!

by Candy Toler
Executive Director, ACEC of Tennessee

2011 is a year full of potential for engineers, with a new governor and staff, new commissioners heading state departments, and 22 new legislators. Let's seize the opportunity to educate our elected and appointed officials.



Candy Toler

There are several upcoming events that will be outstanding occasions to "make our case" to these new officials. We might not be able to solve the budget issues for the state, but we must continue our efforts to protect the health and safety of Tennesseans.

The ACEC Legislative Reception on **March 7** and *Engineers' Day on the Hill* on **March 8** are two opportune occasions to inform law-

makers about the role of engineers in helping Tennessee be a safe place to live. The reception will begin at 5:30, with a briefing. *Engineers' Day on the Hill* activities will begin at 9:00 am with a briefing in the TN Municipal League banquet room (223 6th Avenue North). **Please let me know that you will join your colleagues from across the state to participate in these events.**

Also, you will want to be there for the *Engineering Excellence Awards* banquet on the evening of **March 8**, the Tennessee engineering community's night to shine.

Plus, I encourage you to attend the ACEC Convention and Legislative Summit **March 30-April 2** in Washington, DC, and participate in visits with Tennessee's Representatives and Senators to discuss important issues.

Let's seize these four occasions and excellent opportunities to tell our story! I urge you to register today to participate.