

The Voice

ACEC

AMERICAN COUNCIL OF ENGINEERING COMPANIES OF TENNESSEE

THE VOICE OF TENNESSEE'S ENGINEERING COMPANIES

ACEC OF TENNESSEE PARTNERS

These companies provide Tennessee engineering firms with products and services and support the activities of ACEC of Tennessee through participation in the Partners Program. Additional information about these Partner Program participants is available at www.acectn.org.

Architectural Wall Solutions

Benefit Solutions, Inc.

Crow Friedman Group, LLC

ISCO Industries, LLC

Jacobs Technology

Lellyett & Rogers Company

ModernTech

Outsource Training.biz LLC

Sherman-Dixie Concrete Industries

Tennessee Concrete Association

The Crom Corporation

Thomas & Betts Corporation

United Structural Systems, Inc.

Water & Waste Equipment, Inc.

Wolf Creek Dam "Fix" Underway

by Dave Treadway, Nashville District, U.S. Army Corps of Engineers

Wolf Creek Dam, which forms Lake Cumberland in southern Kentucky, is leaking and the U.S. Army Corps of Engineers is currently working to stop seepage under and through the structure.

Since completion of a wall in 1979 to repair a similar problem, District personnel have closely monitored the project. While the original wall interrupted the progression of erosion, seepage has since found new paths under and around the wall, again requiring repair.



Dave Treadway

To address the seepage problems, the District prepared a Major Rehabilitation Report in 2005 that evaluated several alternatives to improve the long-term reliability of the dam. The recommended alternative is grouting to fill cavities and solution features under the dam and then construction of a new concrete diaphragm wall using the latest technology that will reinforce the purpose of the original wall. This new wall will start immediately upstream of the right-most concrete monoliths and run the length of the embankment into the right abutment which will take it 1,650 feet beyond the existing wall. It will be constructed to a depth which is deeper than the deepest sections of the original wall and as much as 75 feet deeper than the majority of the original wall. The cost is estimated at \$309 million. The current

schedule calls for a start in 2008 and completion of the work by 2014.

Advanced Construction Techniques LTD, of Toronto, Canada, is the prime contractor for grouting operations which began in January 2007. The purposes of the grouting are to improve the "short term" reliability of the dam, gain additional information on the foundation, and grout any openings that could cause problems during the wall construction. To date, 49 holes have been drilled in the gallery with 29 grouted. The contractor continues to drill the embankment and set casing with two sonic rigs. A total of 328 holes have been drilled and cased on the embankment. Grouting operations there have filled a total of 82 holes. All primary

(continued on page 2)



A geologist observes cuttings produced by a Cubex drill during foundation grouting upstream of the centerline of the earthen embankment of Wolf Creek Dam.

Board of Directors**President**

James D. Morinec, PE
CTE | AECOM, Nashville

President-Elect**Lillard Teasley, PE**

Teasley Services Group,
Nashville

First Vice President**Ed Hargraves, PE**

Askew, Hargraves,
Harcourt & Associates,
Memphis

Second Vice President**Steve Bostic, PE**

Lamar Dunn & Associates,
Knoxville

Secretary**Mike Pohlman, PE**

Pickering, Memphis

Treasurer**Susan Thrasher, PE**

Parson Brinckerhoff,
Nashville

Past President**Bill Johnson, PE**

ARCADIS, Chattanooga

National Director to ACEC**Mark Askew, PE**

Askew, Hargraves,
Harcourt & Associates,
Memphis

Director at Large**Harold Cannon, PE**

Cannon & Cannon,
Knoxville

Chattanooga Chapter President**Mark Harrison, PE, PG**

S & M E, Chattanooga

East TN Chapter President**Mike Stomer, PG**

S & M E, Knoxville

Memphis Chapter President**Stacey Morris, PE**

ETI Corporation, Memphis

Nashville Chapter President**John Wimberly, PE**

I. C. Thomasson
Associates, Inc.,
Nashville

ACEC Staff

Candy Toler,
Executive Director

Judy Logue

Manager of Member
Services

Infrastructure Needs Require Attention Now

by James D. Morinec, PE
President, ACEC of Tennessee

The tragedy in Minneapolis, Minnesota, followed by other infrastructure collapses in Mesa, Arizona, Las Vegas, Nevada, and China underscore both the importance of our industry and the impact that limited funding is having on our aging infrastructure. With no change to the current funding sources, TDOT is projecting a possible \$16 billion shortfall over the next 25 years to meet the state's transportation needs. If the gap is not met, the result will be a major decline in the quality of our transportation system. Ultimately, this will also impact the strong economy we all enjoy.



James D. Morinec

The shortfall is already reflecting on the volume of engineering work awarded by TDOT. The Department has indicated it is not planning any new project starts during the fiscal year that started in July. During the past year, only nine new roadway design contracts were awarded.

Last year in Tennessee, the legislature took limited action to start addressing the funding shortfall TDOT faces. Knowing how difficult it will be to pass an increase in the gas tax, the legislature approved legislation that allows TDOT to develop

two pilot projects to be funded through tolls. Under this legislation, it will take years to select, engineer and build the pilot projects. In addition, there are several milestones to be met that could derail the process along the way. Another bill that would allow Private Public Partnerships to fund transportation projects was referred to a summer study committee. The bill won't receive further consideration until at least January 2008. Toll roads have been a viable way to finance needed roads throughout the history of our country. Many of the roads we use today were originally built as private toll roads. In spite of this history, the legislature is taking a slow and cautious approach to see if alternative transportation funding can work.

One of ACEC of Tennessee's goals this year is to become more proactive in our efforts to impact legislation that affects the engineering community. The need to increase funding for transportation infrastructure impacts more than our industry. We need to use our unique talents and combined voices to educate the legislature on the need to move quickly to provide alternative funding sources for Tennessee transportation infrastructure. Your participation in *Engineers' Day on the Hill* is one way to make this happen. I encourage you to become familiar with the issues and contact your respective legislators to help them understand the need to move quickly to find a permanent solution for the funding shortfall.

Wolf Creek Dam . . . continued from page 1

holes in the critical section where the embankment and concrete meet have been grouted and most secondary holes, with a total of more than 77,500 gallons of grout forming a "grout curtain." Rock coring is being done with an LF90 and production rock drilling is being done with Cubex drills. A weekly progress report on that work can be found at http://www.lrn.usace.army.mil/WolfCreek/weekly_progress.htm

The Corps has implemented several risk reduction measures while the 'fix' is underway. In January 2007, the Corps made the decision, based on public health and safety concerns, to lower the lake to elevation 680 to reduce hydrostatic pressure on the dam while work is underway.

VCI-Doyon JV, of Knoxville, Tennessee, is the prime contractor for reconstruction of nearby Halcomb's Landing which will be used as a lay-down area during construction of the diaphragm wall. A new boat ramp and access road is part of that reconstruction, slated to be completed this year.

Welcome, New Members

TLC Engineering for Architecture

6 Cadillac Drive, Ste. 200

Brentwood, TN 37027

615-297-4554

Key Contact: W. Thomas Clevenger

Email: tom.clevenger@tlc-eng.com

TLC Engineering provides mechanical (HVAC and plumbing), electrical, structural, and communications & technology design services for commercial, institutional, industrial, and mixed-use facilities. TLC also offers traditional building commissioning and LEED design and commissioning.

Geosciences Design Group

447 Metroplex Drive,

Nashville, TN 37211

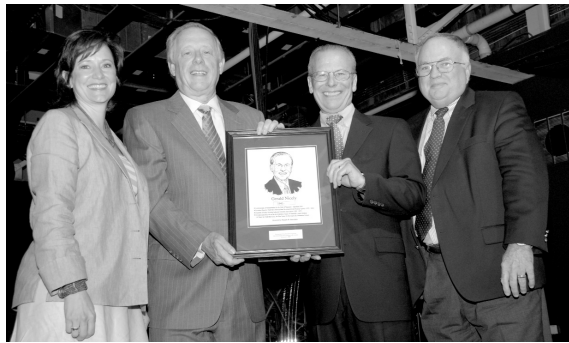
615-331-7770

Key Contact: Larry Weber, PG

Email: lweber@ttlinc.com

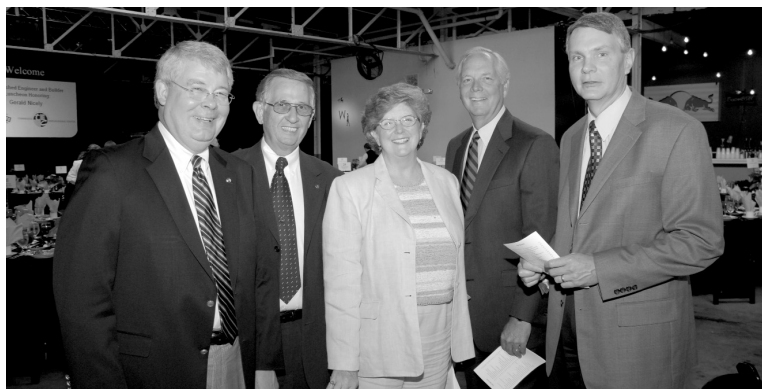
Geosciences Design Group provides geotechnical and environmental engineering services, analytical laboratory services, and materials testing.

Commissioner Nicely Honored as Distinguished Builder



Plaque Presentation: Susan Duvenhage, President, Adventure Science Center; Governor Phil Bredesen; Gerald Nicely, Commissioner, Tennessee Department of Transportation; and Jack Wood, PE, retired, Barge Waggoner Sumner & Cannon and a driving force behind the creation of the Tennessee Engineering Center.

Among the more than 200 people who attended the event honoring Commissioner Nicely were (left to right): Garland Rose, PE, Barge Waggoner Sumner & Cannon, Nashville; Mack McCarley, PE, Qore, Chattanooga; Candy Toler, ACEC of Tennessee; Jeff Arnold, PE, and Rick Gafford, PE, Fisher and Arnold, Memphis.



The Tennessee Engineering Center and the Adventure Science Center have honored Gerald F. Nicely, Commissioner of the Tennessee Department of Transportation, in recognition of his contributions to the construction of Tennessee's infrastructure. Governor Phil Bredesen, Honorary Chair of the August 1 event, reviewed the career accomplishments of Mr. Nicely. A plaque honoring Mr. Nicely is now displayed on the "Wall of Fame" in the lobby of Adventure Science Center.

Thanks to PAC Contributors

Thanks to all of the individuals at ACEC member firms, Partner companies and others who have contributed a total of more than \$8,000 to the Tennessee Professional Engineers Political Action Committee.

Joe Ballard, Barge Waggoner Sumner & Cannon
Robert Campbell, Jr., Robert G. Campbell & Associates
Angie & Harold Cannon, Cannon & Cannon
Everett Cowan, Gresham Smith & Partners
Jim Currey, TDOT Aeronautics Division
David Davidson, Barge Waggoner Sumner & Cannon
David Garst, Lewis, King, Krieg & Waldrop
Terry Grubb, Wilbur Smith Associates
David Harrell, Vaughn & Melton
Mark Harrison, S & M E
Ed Hudgens, Ameresco Federal Solutions
Bill Johnson, ARCADIS
John Kenny, Facility Systems Consultants
David Kimball, ModernTech
Sandra Knight, Bradley County Engineer
Steve Lane, Smith Seckman Reid
Judy Logue, ACEC of Tennessee
Jim Morinec, CTE/AECOM
Tom Needham, SSR Ellers
Pickering, Inc. PAC
Sidney B. Smith III, Ragan Smith
Mike Stomer, S & M E
Jerry Stump, Wilbur Smith Associates
Robert L. Sytar, Gresham Smith & Partners (ret.)
Lillard Teasley, Teasley Services Group
Susan Thrasher, Parsons Brinckerhoff
Candy Toler, ACEC of Tennessee
Gary Tysinger, Tysinger Hampton & Partners
Kathy Ware, K S Ware & Associates
David West, Barge Waggoner Sumner & Cannon

Time for Engineering Students to Submit Scholarship Applications

During the past five years, ACEC of Tennessee has awarded \$5,000 in scholarships to Tennessee residents studying engineering at a state ABET engineering school. Past winners have been students at Tennessee Tech, Vanderbilt and UT-Knoxville. One past winner was runner-up in the national ACEC competition and received an additional \$3,000 scholarship. The scholarship program is another example of ACEC of Tennessee's commitment to education and the future of the engineering profession.

ACEC of Tennessee will award another \$1,000 scholarship next year to a Tennessean pursuing a degree in engineering. Students must be entering their junior, senior or fifth year of college or graduate school in the fall of 2008. Interested students should contact Candy Toler (ctoler@tnec.org) during September to request an application and receive more information.

CALENDAR

SEPTEMBER

21

"School of Rock"

Seminar presented by
Tennessee Concrete Pipe
Association and
Tennessee Concrete
Association

8:00 a.m. – 4:00 p.m.,
Tennessee Engineering
Center

Information:

Mike Kusch

615-386-4407 or

www.shermandixie.com

SEPTEMBER

26 - 29

ACEC Fall Conference

Grand Wailea Resort,
Maui, HI

Member News

- Askew Hargraves Harcourt and Associates, Inc., Memphis, announces the addition of Allen Williams, PE, as new Civil Engineering Department Manager.
- C. Todd Justice, PE, has joined S & ME, Inc. in the firm's Knoxville branch. His experience includes performing geotechnical engineering analyses and explorations.
- Dennis Hammaker, PE, has received the *Dan Barge Jr. Award of Merit* from Barge Waggoner Sumner & Cannon (BWSC), the firm's highest honor. Hammaker is an engineer in the Water Resources Department of the firm's Knoxville office.

Tennessee Engineering Center
800 Fort Negley Boulevard
Nashville, TN 37203

Return Service Requested

PRESORTED
STANDARD
U.S. POSTAGE PAID
Nashville, TN
Permit No. 1078

SEPTEMBER 2007

INSIDE

- Wolf Creek Dam "Fix" Underway – page 1
- Infrastructure Needs Require Attention Now – page 2
- Commissioner Nicely Honored as Distinguished Builder – page 3

Congratulations

The following ACEC of Tennessee member firms are included on the Engineering News-Record (ENR) Top 500 List of Engineering Firms:

AMEC Earth & Environmental, Inc.
ARCADIS
Barge Waggoner Sumner & Cannon, Inc.
Brown and Caldwell
Buchart-Horn, Inc.
CDM
CEI Engineering Associates, Inc.
CH2M Hill
EnSafe, Inc.
Fuller Mossbarger Scott & May Engineers, Inc.
Garver Engineers, LLC
Gresham Smith and Partners
GRW Engineers, Inc.
H.W. Lochner, Inc.
Kimley-Horn and Associates, Inc.
Neel-Schaffer, Inc.
Parsons
PBS&J
Pennoni Associates, Inc.
QORE Property Sciences
S&ME, Inc.
Smith Seckman Reid, Inc.
Stantec
Tetra Tech, Inc.
TLC Engineering for Architecture
URS Corporation
Volkert & Associates, Inc.
Wilbur Smith Associates

FROM THE EXECUTIVE DIRECTOR

In Praise of Engineers

by Candy Toler
Executive Director, ACEC of Tennessee

This year we celebrate 100 years of licensure of engineers in the United States. Thanks to John Cothron, Executive Director of the State Board of Architects and Engineers, Governor Bredesen proclaimed August 2007 as *Engineering Licensure Month*. It's an occasion worth marking.



Candy Toler

Wyoming was the first state to license engineers in 1907. Licensure in Tennessee occurred in 1921, when the state board was created. Protection of the public's health, safety and welfare continues to be the goal of the State Board, whether members are considering applications, referrals from building officials and the State Fire Marshal, or new policies. The Board meets regularly and its meeting schedule is posted on the Board's website (<http://www.state.tn.us/commerce/boards/ae/index.html>).

As we mark this significant milestone in the engineering profession, we mourn the loss of

those who died when the I-35 bridge in Minnesota collapsed last month. Tennessee has been widely recognized as having one of the best highway systems in the country. In a guest editorial in *The Tennessean* in August, Ed Wasserman assured Tennesseans that "all bridges open to traffic on our public roads are safe and can be crossed with confidence." Ed Wasserman is the Director of the Department of Transportation Structures Division and he should know. He supervises inspection of the state's bridges.

While it will be some time before we know what caused the Minnesota bridge collapse, we need to consider that all of Tennessee's infrastructure . . . our bridges, our roads, and our public utilities . . . are aging. At the same time, they are being called upon to serve a growing population.

Licensure of engineers was enacted 100 years ago to protect the public. Engineers are very mindful of the responsibility entrusted to them. ACEC of Tennessee will renew its efforts to encourage reconsideration of infrastructure funding options.