



THE FORGE

Newsletter of the Birmingham Branch of ASCE

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Meeting Information for September

We will be meeting at the Golden Coral once again on the 6th of September. The Golden Coral is located in Vestavia Hills, Alabama at 3117 Lorna Road, Hoover. The phone number there is (205) 822-1314.

The meeting will start at 11:30 a.m. There will be a short meet and greet followed by the business meeting and a guest speaker.

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Structural Technical Groups

By Andy Faulk

Some time around the middle of August, Mrs. Mary Ellen Saville emailed the branch leadership about a gap in the structural resources ASCE has listed for the region. Below is an excerpt from that email:

"I'm the Manager of the Structural Engineering Institute of ASCE, and I'm contacting you to ask for your help in identifying local Structural Technical Groups (STG) that might be in existence in your Section/Branch

See Groups on Page 3

The I-35W Tragedy

By Hawk Andrews

The National Transportation Safety Board immediately began a comprehensive investigation, which could take up to eighteen months to complete. One week after the collapse, debris and vehicles were just beginning to be moved to further the process of recovering victims. Hennepin County Sheriff Richard Stanek stated, "We are treating this as a crime scene at this point. There's no indication there was any foul play involved, [but] it's a crime scene until we can determine what was the cause of the collapse."

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A Message from the President

By Jonathan Byrd



“As we begin this year with a new path, let us come to it with an open mind, a receptive heart, and big ideas...”

Whether you like professional football, college football, or just the end of the baseball season, many of us look forward with anticipation, and rejoice in the knowledge that as of right now, our teams are undefeated. That has the possibility of changing immediately with the commencement of play. With Leo Tolstoy’s Birthday happening earlier this week I read a quote from the prolific author that said, “Everyone thinks of changing the world, but no one thinks of changing himself.” With our first meeting of the “new year” coming up on 6 September, I found myself thinking about our rotating officer situation. At first I thought that transformation would be a good topic for my spot in the newsletter, but then I changed my mind.

Each year we have a new incoming Secretary/Treasurer, our current Secretary/Treasurer moves to Vice-President, and the Vice-President moves to President. The President moves on to greener pastures, coming back to collect a Past President pin and/or plaque, and if the Branch is lucky, continues to serve as Andrew Murr, David Willingham, Lawren Pratt, Joe Meads, Kerry Henneberger and so many others have done. I cannot remember all of them but I could not have done my role as President without them either. Feel free to let me know the names of the other past officers I have left out, because they are deserving of my thanks too.

With our Branch Vice-President leaving several months back, it created a hole in our rotation which after many months of searching, discussing, and coaxing of other Past Presidents to return has culminated in the following statement: In an unprecedented move, the Branch (to the best of my limited knowledge) is on the verge of having its second two-time President, and first consecutive serving President—if of course you as a membership will have me.

As we begin this year with a new path, let us come to it with an open mind, a receptive heart, and big ideas of our own. In addition to having a chance to vote on our new officer slate at the September meeting, we hope to have some input on a possible move of our meeting location. I expect the discussion to be lively, but above all I expect to either decide to move or drop the matter entirely. I encourage all Branch members, even the ones who normally do not come to the Golden Corral in Hoover to attend to make their opinions known and voices heard.

I look forward to seeing you there.

From I-35W Tragedy on Page 1.

An employee of the NTSB had written his doctoral thesis on possible failure scenarios of this specific bridge while he was a student at the nearby University of Minnesota. That thesis, including his computer model of the bridge for failure mode analysis, is being used by the NTSB to aid in their investigation. However, his original software is no longer available. NTSB investigators were particularly interested in learning why a part of the bridge's southern end shifted eastward as it collapsed. The NTSB quickly ruled that out as a starting point, and shifted its focus to the north end of the structure.

Officials with DHS said there was no indication that terrorism was involved. The Federal

Highway Administration (FHWA) advised states to inspect the 700 U.S. bridges of similar construction.

On August 8 officials with FHWA announced they had found a possible design flaw in the bridge, related to large steel sheets called gusset plates which were used to connect girders together in the truss structure. Officials expressed concern about many other bridges in the United States sharing the same design and raised questions as to why such a flaw would not have been discovered in over 40 years of inspections. Although officials emphasized that the cause of the collapse had not yet been determined, Peters cautioned states to "remain mindful of the extra weight construction projects place on bridges."

Groups

Structural Technical Groups... continued from page 1

that we might not be aware of. The attached list is what we have on record through the Geographic Services Dept. in ASCE. This data will be included in the ASCE Official Register for 2008, and is posted on the SEI web site, so we want to be as accurate as possible.

The reason I'm contacting you:

- 1) We used to have 49 STGs, and the list now has only 37. I hope we haven't lost that many technical groups. Perhaps it's a simple matter of not being reported to ASCE Geographic Services.
- 2) SEI is planning the Annual Meeting for Chairs of local STGs and I want to be sure to reach/invite all the local STG chairs, because this gathering has been found to be very helpful in the past.

Please respond to let me know the status of STGs in your area so we can update our records. We realize many Chairs' terms may be about to end, but if your current STG Chair's name is not on the attached list, please send their name and contact information as soon as possible."

(See included list and contact information on pages 5 and 6.)

I Can See Through Walls

By Andy Faulk

Ever wish you could see through walls? Well now you can - sort of...

A Hungarian architect in 2004 combined fiber optical fibers with the most widely used building material, concrete, to produce a new type of wall. The concrete supposedly has the same structural properties of normal concrete, but now allows light to pass right through. He has named it LitraCon™ (<http://www.litracon.com>). Thousands of optical fibers form a matrix that are laid parallel to one another.

While this technology is not completely new it does bring up possible solutions to design issues we've faced in the past. How about using the LitraCon™ concrete in walls or ceilings to allow natural light through? Perhaps this could change the users' opinion and mood toward working in a concrete structure? Instead of feeling locked away in some grey dark place they would feel welcomed with light and a perception of openness.



New ORNL Roof System Means Savings for Homeowners

By Ron Walli, ORNL

Homeowners could see their summer utility bills fall by 8 percent or more with a new roof and attic system being developed at the Department of Energy's Oak Ridge National Laboratory.

From an energy efficiency perspective, roof technology has not progressed substantially in hundreds of years, but that is changing with the use of active thermal mass components, reflective pigments and coatings, subventing, radiant barriers and other novel techniques being tested by a team led by Bill Miller and Jan Kosny of ORNL's Building Envelopes group. Their prototype roof and attic system works by reducing attic temperatures by about 22 degrees Fahrenheit during a typical summer afternoon and decreasing the amount of heat that gets transferred through the attic floor to the living space.

"The next generation roof will consist of infrared reflective materials that are dark in color yet reflect light as if they were white," Miller said. "In addition, radiant barriers and phase change materials will be integrated into a dynamic attic system that reduces utility bills for homeowners. The conservation strategies contribute on a much grander scale by lowering peak demand on utilities, reducing carbon emissions and, ultimately, they could lead to cleaner air." - excerpt from ORNL newsletter, 8/28/07

September is National Preparedness Month



ASCE has joined with the Department of Homeland Security for National Preparedness Month. It is a nationwide effort to encourage all Americans to take simple measures to prepare for emergencies in their homes, schools and businesses. The goal is to increase public awareness about the importance of preparing for emergencies and to encourage individuals to take action.

You can find out more information on the following website:

<http://ciasce.asce.org/NationalPreparednessMonth.html>

Sharon D. Banks Award

The Transportation Research Board is seeking nominations for the Sharon D. Banks Award for Innovative Leadership in Transportation. The TRB award will be made during the Chairman's Luncheon on January 16, 2008, during the TRB 87th Annual Meeting.

For more information go to TRB's website, www.trb.org.

Nominations are due by 8/31.



The Whole Nine Yards

Upcoming Events

- The 9th International Conference on Fluid Control, Measurements, and Visualization (FLUCOME 2007) [16-Sep-07]
- ICE - 5th International Conference on Current and Future Trends in Bridge Design, Construction and Maintenance [17-Sep-07]
- 7th International Symposium on Field Measurements in Geomechanics [24-Sep-07]
- 137th Annual ASCE Conference in Orlando, Florida [1-Nov-07]

The Rest of the ...

- Nominations for Historic Civil Engineering Landmark status are due by Sept. 14. For information on the program, visit http://content.asce.org/history/ce_landmarks.html.
- The Alabama Environmental Management Commission denied a petition by environmental groups that urged the state to adopt stricter standards to protect its waterways from cancer-causing pollutants. After its unanimous vote, the commission will allow a committee to review Alabama's water quality standards and report its findings in six months. "The petition has been denied, it has not been killed," said Dr. Laurel Gardner, a member of the commission. "It's still very much alive." The groups that filed the petition asked that Alabama join 28 other states that require carcinogen levels in streams to be low enough that no more than one in one million people could get cancer from them. Alabama uses a less protective risk factor that allows one in 100,000 people to get cancer. EPA allows states to use either standard, but most use the more protective one. Alabama

See The Rest of the... continued on page 8

Contact Information for Structural Technical Groups

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The Rest of the... continued from page 4

Power Co., the Business Council of Alabama, the Alabama Coal Association and the Alabama Pulp and Paper Council all objected to stricter pollution rules. The Business Council objected to "a significant financial impact on the Alabama business community" and stated that the petitioners failed to justify the additional expense on industry. Clean water advocates said they were disappointed the commission discussed the economics of regulation so much and the cost of cancer so little. *U.S. Water News Online 7/5.*

- Investigators from the U.S. Environmental Protection Agency's (EPA) criminal division are looking into a 2005 Missouri dam failure, the Associated Press is reporting. The Taum Sauk reservoir in southeast Missouri failed in December 2005 as a result of improperly installed and maintained water-level monitors. <http://www.ago.mo.gov/newsreleases/2007/052207c.htm>.
- Nominations for the OPAL, OCEA and CEFI awards are being sought. Check ASCE's website for more information: <http://www.asce.org>.

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"I have been cautioned to talk but be careful not to say anything. I do not consider this a difficult task." - Mark Twain

Do you have something to say? Let's hear it, and maybe your thoughts will be in the next newsletter.

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