Grand Conceptors

McClelland Consulting Engineers’ McMath Avenue, seen in the background, won the ACEC/A’s top award for design at the Engineering Excellence Awards. The same elements were used to calm traffic and protect Little Rock’s Fourche Creek.

Left to right are Byron Hicks, P.E., chairman and CEO; Maneesh Krishnan, P.E.; and Tim Brockway, P.E., LEED AP+. 
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Deal on water act nears completion
Sen. John Boozman says a final deal is nearing on the Water Resources Development Act. More work remains on the upcoming surface transportation bill.

Member Spotlight / ESI ready for big, small jobs
The firm’s projects include providing water across the Ozark Mountains, designing Arvest Ballpark, and designing Miracle League ballparks in Springdale and Joplin.

Cover Story / Street design judged year’s best
McClelland Consulting Engineers’ MacArthur Park Street Improvements project won the Engineering Excellence Awards Grand Conceptor award for combining traffic calming and wetlands protection techniques.

Bright lights are people’s choice
Brown Engineers’ money-saving lights used existing infrastructure to brighten Little Rock bridges.

Other winners take home hardware
ACEC/A Engineering Excellence Award winners are described.

AHTD’s Bennett details funding woes
The Highway Department’s head warns engineers that a lack of money in the federal Highway Trust Fund threatens state projects.
Garver congratulates Clinton National Airport for being recognized by ACEC of Arkansas with an Engineering Excellence Award.

We recognize our outstanding electrical Aviation Team for earning two consecutive ACEC Engineering Excellence Awards.

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According to the management solutions firm Morrissey Goodale, for the first time ever the American workforce is composed of four generations: Traditionalists (born before 1945); Baby Boomers, (born 1946 to 1964); Generation X (born 1965 to 1980) and Millennials (born after 1981).

This multi-generational mix poses challenges. Firm and project leaders must manage employees with age gaps of 40 years and completely different communication styles. Traditionalists tend to prefer memos, letters, personal notes and individual interaction. Baby Boomers prefer meeting face to face. Generation Xers prefer voice mail and email with direct and immediate feedback. Millennials prefer digital communications such as instant messaging and text messages along with collaborative interaction.

Leaders must adapt to these preferences in order to develop their staff. But they also must understand differences in the generations' cultural expectations.

For a Traditionalist, for example, family roles were neatly divided between breadwinner and homemaker, with the breadwinner expected to work long hours if necessary, or even if it wasn't that necessary. It was the way you demonstrated commitment to the firm.

Younger engineers are sufficiently committed, but they have a different set of family obligations. Both parents work, and both are involved in raising children. An older leader who fails to understand that evolution will spend a lot of time complaining about the younger generation's work ethic. Forcing a Millennial parent to attend city council or utility commission meetings four nights a week will not turn him or her into a Traditionalist. It might instead cost the firm – and even the profession – a very good young engineer.

Today's leaders must learn to set priorities. They must encourage a work-life balance that develops the firm and the employee in the context of the modern family.

How do leaders do this? By setting an example. Leaders who allow flex time need to be seen taking a lunchtime walk or a before-work bike ride. Otherwise, staff members will be reluctant to take advantage of flex time. It might be an adjustment for a Traditionalist to do this, but both he and the firm will benefit.

There's another set of needs that leaders must learn to balance – the needs of the staff and firm with the needs of the engineer's professional growth. Both younger and more mature leaders must commit personal time to serving the engineering professional community. Older leaders must encourage and train young leaders to develop a commitment to serving. A good leader would take an up-and-coming staffer to meet a member of the Legislature or the firm's banker. That young staffer also should be invited to ACEC/A and ASPE events so he or she can begin to appreciate the firm's place and commitment to the profession.

A good start would be the Agency Forum, an annual event each November or December where policymakers from various state agencies share relevant news in a relaxed setting. Or, have representatives from your firm attend the upcoming annual meetings of ASPE and ACEC/A.

One aspect of engineering that attracted all of us is that it deals in absolutes. A square is always made of four right angles, and pi is always 3.14159. What's fun is figuring out how to apply those absolutes to career-challenging situations. When new technologies like AutoCAD replace old ones like blueprints, we adjust.

It's not so different with people. It's an absolute that engineers of all ages want to build things that benefit society. But cultural expectations and communication styles change over time, and now the profession requires leaders to create a different work-life balance.

As with AutoCAD, a smart leader will adjust. That's what good engineers do.
Most of the time, the infrastructure that engineers design and the problems we solve create a safer, more sustainable world around us. And most of the time, we don’t get much credit for this. Which is the way we like it. Let others make speeches and get their names on the front of buildings. We’ll just keep designing things.

Yet even as engineers, we get a little recognition occasionally. Our names often will be engraved on a plaque. We give each other awards and genuinely applaud excellence, even when practiced by a direct competitor.

Sometimes, the press coverage of the latest engineering marvel will include a few words about the engineers who actually designed that marvel.

There are, on the other hand, many people who make our success possible who never receive any recognition at all and who don’t have the letters ‘P.E.’ at the end of their names.

“…There are, on the other hand, many people who make our success possible who never receive any recognition at all and who don’t have the letters ‘P.E.’ at the end of their names.”

Financiers keep us out of trouble – thank goodness they are detail people like us. Public relations and marketing specialists make sure potential clients know about our work, but we don’t always do a good job letting them know how much we appreciate their efforts.

I’m especially grateful to the one person who makes the Arkansas Society of Professional Engineers possible – our executive director, Angie Cooper. Anybody who has served as president of ASPE can tell you that Angie is the one running the show. It is not a stretch to say that she does the work of at least four people. She is the ASPE’s executive director as well as her own assistant. She is also the ACEC/A’s executive director and her own assistant. She organizes our board of directors meetings and special events, such as the upcoming ASPE annual meeting. She recruits new members and new member firms. She lobbies the Legislature and Arkansas’ members of Congress. She serves as the liaison with our national and state organizations.

She is, in other words, the engineer of ASPE’s success. So thank you, Angie, and thanks to everyone else who makes our work possible. We owe you a debt of gratitude, and as engineers, we always pay our debts.
Hall named AHTD’s chief engineer

Ralph Hall has been promoted to deputy director and chief engineer of the Arkansas Highway and Transportation Department.

He replaces Frank Vozel, who retired in December with 43 years of service to the department.

Hall previously was assistant to the director. He has been with the department since 1972. He has served as an engineering assistant, resident engineer, assistant district engineer, staff construction engineer, division head of materials and research, District Six engineer, and assistant chief engineer of operations.

Crafton Tull’s Tolley is Central Chapter Young Engineer

Travis Tolley, P.E., of Crafton Tull was named the Young Engineer of the Year for ASPE’s Central Chapter.

Tolley began his engineering career with Crafton Tull in 2005 and was named project manager in 2011. He has been involved in a variety of development projects, including commercial, retail, multifamily residential, large scale site development, industrial, and streets and drainage projects. He currently serves as a project manager over more than 30 active projects in the company’s Little Rock offices.

Tolley served as president of the ASPE’s Central Chapter in 2010-11 and is currently involved in the ACEC/A’s Emerging Leaders program.

A lifelong resident of Perryville, he graduated from the University of Arkansas with a bachelor of science in civil engineering degree in 1991 from the University of Arkansas with a bachelor of science in civil engineering.

Garver, researchers at UA to develop membranes for water

Engineering researchers at the University of Arkansas will join the National Science Foundation’s (NSF) Membrane, Science, Engineering and Technology Center, which focuses on developing materials for energy production, water treatment, pharmaceutical purification and chemical processing.

The center is a multi-campus collaboration that includes such institutions as the University of Colorado and the New Jersey Institute of Technology.

Garver, a longtime supporter of the UA College of Engineering, will be one of four industry partners providing the program with a total of $600,000 over three years. The NSF will commit $300,000 over five years.

“Garver is making an investment in research and development, and our commitment to this MAST Center is a major step in that strategic direction,” said Garver Director of Water Services Steve Jones in a company news release.

Dr. Ranil Wickramasinghe, a UA professor of chemical engineering, will focus on membrane separations, which includes water treatment, wastewater recovery and reuse, and bioseparations for the manufacture of biopharmaceuticals.

Garver’s Water Design Center works with Wickramasinghe to improve already-cutting-edge membrane technology. Such technology recently won Garv-
Forbes hired as Garver’s business development chief

Garver has hired Scott Forbes, P.E., as its business development leader. Forbes will focus on leading marketing efforts and building client relationships.

As a professional civil engineer licensed in three states, Forbes brings more than 29 years of experience in design and project management to Garver.

“I’ve known people who have worked at Garver for years,” he said in a press release, "so I know the quality of work this firm does. Garver has a great reputation in the A-E industry. I’m excited to be a part of the Garver family, and I look forward to doing great things here.”

SAU to start offering engineering this fall

Southern Arkansas University will begin offering a bachelor of science in engineering degree this fall, according to SAU President, Dr. Dan Williams. The new program will be housed in the Department of Engineering and will offer students the opportunity to pursue a career in the engineering field.

Garver has a long history of working with SAU and has completed numerous projects for the university, including the Van Buren Wastewater Treatment Plant Improvements.

Van Horn Construction

For more than 40 years, Van Horn Construction, one of the most highly regarded construction companies in the central United States, has crafted a reputation of building on success. And it has always done it the old-fashioned way – one quality project at a time.
Deal on water act nears completion

Highway bill is other major piece of infrastructure legislation awaiting action

Editor’s Note: This column is part of an ongoing series featuring members of Arkansas’ congressional delegation.

Back in 2006, the University of Arkansas at Little Rock (UALR) published the Arkansas 2020 report, which aimed to predict what the Natural State would look like in 2020. The project – initiated by the Arkansas Legislature – brought together state agencies and major universities to study potential growth and demographic changes as well as possible new policies, programs, and structures to address these developments.

The report highlights trends that are of great interest to the engineering community and civic leaders. According to the findings, four of the six “emerging urban areas” in Arkansas will likely experience growth rates exceeding the state’s average rate of 1.47 percent.

Indeed, we have witnessed rapid growth in many parts of the state since those findings were published. That is only expected to continue and expand.

Arkansas has traditionally been a rural state. The growth in many parts of the state since those findings were published. That is only expected to continue and expand.

Arkansas has traditionally been a rural state. The growth in many parts of the state since those findings were published. That is only expected to continue and expand.

By Sen. John Boozman

so that our communities can accommodate the projected influx of new Arkansans. This year in Washington, we have an opportunity to pass two major bills that will help in this regard – the Water Resources Development Act (WRDA) and a new highway bill.

With major rivers including the Mississippi and the Arkansas, our state has the third most miles of navigable waterways out of all 50 states. These waterways are critical to job creation, farming, transportation, recreation, and economic development.

I am working to make sure the final bill will reduce project delays, which will cut costs. It must also improve oversight and increase coordination with non-federal project sponsors. Additionally, WRDA should provide reliable maintenance of Arkansas ports on the Mississippi River, and it must improve levels of service at Army Corps of Engineers navigation projects.

Flooding is another major concern addressed in this bill. The 2011 Mississippi River flood claimed several lives, damaged buildings, roads and bridges, and severely impacted Arkansas farms. Without our levee and flood infrastructure, destruction would have been more severe. In 1927, the Mississippi River flooded 14 percent of our state. The flooding in 2011 would have been much worse without the infrastructure we have now. WRDA promotes continued wise investments in flood risk reduction.

The good news is we are close to finalizing a deal between both the House of Representatives and the Senate that reconciles the two different versions of WRDA. Once that is accomplished, I believe it will clear Congress with ease and be signed into law by President Obama.

Along with our waterways, we must have sufficient, structurally sound highways, roads and bridges to accommodate growth. Washington has a large role in this debate considering the highway bill is set to expire. The highway trust fund, which funds federal road projects, will be empty by this fall. Without reforms, including reforms that reduce project delays and cut bureaucratic red tape, states will not be able to complete current highway projects or start important new ones.

As a member of the Senate Environment and Public Works Committee, I am participating in hearings and discussions about how to tackle these problems. Wise infrastructure investments save money over the long term, create immediate jobs and produce decades of economic opportunity for communities. This is an important key to long-lasting growth and development. We can meet the needs of a growing state if public officials at every level work together and seek innovative solutions.
In the News  
Continued from page 9

to a press release from the university. The projected starting enrollment is more than 20 students.

The program was approved by the Arkansas Higher Education Coordinating Board in January. This will be the state’s only engineering program south of Little Rock.

Preparations will include construction of engineering facilities near the SAU Science Center and the new Agriculture Center. A study by WER Architects included outlines for a 11,015 square-foot construction project that was estimated at $2,753,580.

McClelland’s Krishnan gets P.E. license

Maneesh Krishnan, P.E., of McClelland Consulting Engineers has successfully passed the Principles and Practice of Engineering Exam to become a licensed professional engineer. Krishnan is a project manager at MCE’s Little Rock office who specializes in traffic and transportation.

Krishnan graduated from Osmania University with a bachelor’s degree in civil engineering and earned a master of science degree in civil engineering from the University of Arkansas at Fayetteville.

CEI’s Diehl presents technical paper

Andrew Diehl, P.E., CPESC, CEI Engineering Associates, Inc., presented a technical paper titled “SWPPP Preparation: From the Eyes of a SWPPP Reviewer” at the International Erosion Control Association (IECA) Environmental Con-

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ACEC/A Member Spotlight

ESI ready for big jobs, small jobs

Firm’s work includes water extensions, Arvest Ballpark

When Max Hall founded Engineering Services, Inc. in 1972, the firm’s focus was extending water service to unserved areas. The firm still does that – and a lot more.

Among its recent accomplishments is a project for the Ozark Mountain Regional Public Water Authority that is extending water across areas of north central Arkansas. The project addresses a critical need for clean water for 21,000 customers who beforehand were reliant on springs, ground water and wells. Many water sources have been deemed unsafe for human consumption by the EPA because they are contaminated with naturally occurring substances. The project has received more than $72 million in public funding and includes the placement of 110 miles of large-diameter water transmission mains across 18 entities.

True to its heritage, the firm continues to work on smaller projects, including extending water service to 350 unserved families in rural southeast Washington County. It also designed improvements to the city of Marshall’s aging wastewater treatment plant, helping it remain compliant with Arkansas Department of Water Quality effluent requirements. More than 600 customers enjoy the benefits.

Over the course of the last two decades, ESI has become a full-service firm capable of handling a wide variety of projects. Those include individual residential home construction, subdivisions, and municipal street and drainage projects. It’s done the site work for numerous Harps Food Stores. It is working with the city of Springdale to build two recreational and sports facilities along with three new fire stations. It donated the design work for Miracle League ballparks in Springdale and Joplin, Missouri. Those facilities allow individuals with physical challenges to play sports.

Daniel G. Lazenby, ESI engineering technician, said the more comprehensive approach was “a natural extension for us to some degree just because a lot of the small cities and areas we served would from time to time have small developments and things they needed to be done, so we turned into being the engineer for all the projects for these smaller clients.”

Perhaps the firm’s most visible project has been Arvest Ballpark, home of the Northwest Arkansas Naturals and baseballparks.com’s 2008 Ballpark of the Year. ESI did all the engineering and surveying work for a project that included a 1,600-vehicle parking lot, 64,000 square yards of asphalt, a 2.5-acre detention pond, and 3,000 linear feet of storm drainage pipe.

ESI is owned by four individuals: the retired chairman, Jerry Martin, P.E., (license inactive), who joined the firm in 1971; the company’s president, Philip Humbard, P.E., P.L.S.; Brian Moore, P.E., vice president; and Tim Mays, P.E., secretary/treasurer.

Along with engineering, the staff has its own in-house surveying, drafting, and construction observation departments. The staff of 35 includes nine graduate engineers and three licensed professional land surveyors, two of whom are also licensed professional engineers, and two graduate landscape architects. While the bulk of its work is in Arkansas, it also has completed projects in Oklahoma and Missouri and is licensed to practice in Kansas.

“We pretty much just pride ourselves on being able to do just about everything. ... Regardless of how big or small the project is, anybody can come to us, and we can provide the engineering solution for them,” Lazenby said.
Pipeline milestone a reminder: Call 811

As individuals, we can prevent our own disasters by calling before we dig

By Governor Mike Beebe
Guest Writer

Arkansas recently marked the one-year anniversary of the detrimental Pegasus pipeline breach in Mayflower. The pipeline, owned by a subsidiary of Exxon-Mobil, ruptured and spilled more than 200,000 gallons of heavy crude oil. This oil seeped into a neighborhood subdivision, lake, drainage ditches and a cove near Lake Conway.

Twelve months later, Pegasus remains shut down in Arkansas after spilling about 5,000 barrels of noxious crude and forcing residents from their homes. Whether it will remain closed permanently is uncertain. Exxon officials have told me they will be conducting pressure tests on the pipeline in the coming months. I continue to have concerns, specifically wanting to move the section of pipeline that runs near the Lake Maumelle watershed. Pipelines are a vital part of our nation’s energy infrastructure, but questions linger about the age and viability of Pegasus. The federal government will have the final say on whether or not the pipeline is restarted.

The pipeline break serves as a reminder of the network of infrastructure that exists underground throughout Arkansas. Too often, we forget about this subterranean web of pipes and wires that help power our homes, vehicles and utilities. And because of that, we see too many cases of unintentional damage, injury and death caused by digs conducted without the right information.

An underground utility line is damaged somewhere in the U.S. every three minutes. Much of this damage is done by homeowners simply working in their own yards or on their own property. Thankfully, that damage can be avoided with a simple, free phone call to 811.

Every April, the Arkansas Public Service Commission, Arkansas One Call and the Common Ground Alliance promote the National Call-Before-You-Dig number. By calling 811 at least 72 hours before any digging is begun, potential excavators and homeowners can request markings for utility-line locations at intended dig sites.

Even small digging jobs, like planting trees and shrubs, should be preceded by a call to 811. Utility companies are happy to help identify where lines are, since avoiding accidents is just as beneficial to them as it is to you. The depth of utility lines varies, and there may be multiple utility lines in a common area. The best visual or practical spot for a tree in your yard could be the most dangerous spot, depending on what’s underground.

Oil-and-gas pipelines, water lines and utility lines are important to our modern way of life. However, whether it’s a major corporation or a family home-improvement project, safety must remain a top priority for all of us. As a state, we can be vigilant in working with federal officials to make sure major pipelines running through Arkansas are operated responsibly. We can keep ourselves and our wallets safe from potentially dangerous accidents at home by simply calling 811 before digging into the ground.

From the Governor

BancorpSouth Insurance Services, has a long tradition of supporting and partnering with engineering companies in Arkansas. Since 1991, we have worked with PLAN providing impactful tools such as continuing education, contract review, risk mitigation and insurance programs designed specifically for the engineering industry. We appreciate the opportunity to be a part of your organization and look forward to providing dependable services to your organization.
GRAND CONCEPTOR. McClelland Consulting Engineers won this year’s Grand Conceptor Award for its work designing two streets at Little Rock’s MacArthur Park. Pictured are, from left, Maneesh Krishnan, P.E., McClelland; Tim Brockway, P.E., LEED AP+, McClelland; Barbara Richard, Pulaski County Public Works; Daniel Phillips, Pulaski County Public Works; Sherman Smith, Pulaski County Public Works; Spence Churchill, Township Builders; and Dan Beranek, P.E., LEED AP, McClelland.

Street design judged year’s best
MacArthur Park work by McClelland calms traffic, absorbs water
By Steve Brawner

What happens when an engineering firm makes a park more accessible, calms traffic, and protects wetlands at no more cost than traditional design methods? For one, it wins the ACEC/A’s Grand Conceptor Award.

The award, selected by a panel of judges for the firm that displays the highest levels of engineering achievement, was earned by McClelland Consulting Engineers (MCE) at the annual Engineering Excellence Awards banquet at the Governor’s Mansion Feb. 27.

MCE also won the Engineering Excellence Award in Category H – Transportation, Large Projects.

Working with Township Builders, MCE helped complete an important phase of a master plan for Little Rock’s MacArthur Park near the William H. Bowen School of Law. The design transformed McMath Avenue into a pedestrian-friendly green street with a landscaped median. MCE also designed Pulaski County Lane, which runs roughly parallel to Interstate 630. The two roads make the entire park more accessible.

According to Tim Brockway, P.E., LEED AP, MCE’s primary project designer, the project integrated traffic calming and water conservation techniques in a way that served both purposes.

Both streets are designed to be narrower for traffic safety. McMath Avenue has 11-foot travel lanes, which are a couple of feet narrower than typical city streets, while lanes on Pulaski County Lane are about 10 feet wide. McMath Avenue has eight-foot-wide parallel parking lanes on both sides that are bordered by pedestrian bulbs that jut out into the pavement at each of the intersections. The parking spaces are made of pervious pavement in the parking stalls, the design allows water to flow across the pavement to streetside rain gardens and grassy swales. The planting palettes involve pure native plants and an informal look.

A traditional design would direct rainwater into a curb and pipe that would lead it racing – polluted and heated by the street – toward the Fourche Creek watershed. The watershed, which includes 2,000 acres of urban wetlands, reaches across the length of Little Rock and empties into the Arkansas River.

By taking advantage of conservation techniques, that rainwater can be purified naturally before entering the watershed.

“The idea is just to get the water in contact with the soil beneath the surface to allow it to absorb whatever it can, and whatever it can’t, then it’s slowed down, the pollutants are removed out of it, and then it runs off downstream,” Brockway said.

He described the use of both pervious pavement and natural cleansing areas as a “belt-and-suspenders approach.” “By choosing materials we chose, there were repeated and overlapping opportunities for water to be slowed down, captured, and treated for pollutants,” he said.
The total cost of the project was about $2.5 million. Brockway believes that the project was able to achieve its goals without increasing costs.

"I think we probably actually saved money over traditional because we have fewer inlets and fewer pipes, or at least no more, and ... we have almost no curb along Pulaski Lane," he said. "And with the narrower paving, you take four city blocks of pavement and reduce it by 10 percent, I know we saved 10 percent or more on our ... street paving budget, so I really don't think there was a cost premium at all. In fact, some cases, depending on how you develop it, you can save money over what you used to do as standard operating procedure as a developer."

Pervious pavement was used only on parking lanes because of the project’s experimental nature. The material has been available for decades but is not broadly used because of durability concerns. However, Brockway said the technology has improved significantly.

Brockway said this was one of the state's first low-impact-development, multi-block streets. These kinds of designs, he said, are part of a trend nationally. Arkansas’ regulatory environment does not require such designs, but national regulations will force a move in this direction.

“We as engineers must stop designing and building the infrastructure that creates the very problems we then try to solve,” Brockway said.

**Lights are people’s choice**

By working with existing wiring, Brown Engineers cut the time to light up Little Rock

By Steve Brawner

Editor

Nighttime motorists and pedestrians in downtown Little Rock – as well as passengers on aircraft flying above the city – won’t have trouble finding this year’s People’s Choice Award winner, but it probably will look different each time they see it.

Brown Engineers was selected for the award because of its work lighting the Main Street Bridge, Junction Bridge, and the Clinton Presidential Park Bridge. More than 1,300 LED fixtures were installed – each able to produce 16 million colors. Systems can be lit statically or be animated, and they can operate independently or synchronistically across all three bridges. A nearly infinite number of light shows are possible.

The award was selected by attendees of the Engineering Excellence Awards banquet from among all award winners. The project also won the Engineering Excellence Award in Category I – Special Projects, Large Projects.

Bruce Brown, P.E., was the electrical engineer of record. Scott Geurin, E.I., worked with him on the analysis and electrical design.

What set the project apart was the way Brown Engineers cut costs and construction time in its design of the power distribution and fiber communication systems. Geurin discovered that the existing conduit and wire on the Junction Bridge and Clinton Presidential Park Bridge could support the LED lights and controls with some engineering work. On the Junction Bridge, for example, engineers reused the main trunk wire and conduit, requiring new wiring only from control panels to lights.

Using existing wiring was a challenge. The wiring on the Clinton bridge dated back many decades, when it was used to power the raising and lowering of the railroad’s lift span. But the process

Sherman Smith, P.E., Pulaski County Public Works director, praised the work of McClelland Consulting Engineers and its project partners. “They did a great job on the design,” he said. “It was easy for us. You get a good design team, then you get a good contractor, and then you have meetings of all the stakeholders, and they’re all focused on getting this done and following the master plan and making it work – I mean, it’s an easy way to do a job. I wish they were all that easy.”

Continued on next page
cut many weeks of construction time on a high-profile project and reduced the time construction workers spent suspended under bridges on scaffolds.

The Main Street Bridge had no existing power system and required an all-new power distribution design. Complicating the project was the fact that the bridge soon will carry an increased traffic demand with the planned rebuilding of the nearby Main Street Bridge. To reduce traffic safety risks for LED programmers and maintenance crews, Brown’s team mounted junction boxes to the bridge’s rails inside the pedestrian zones.

President Bill Clinton was on hand for the ceremonial lighting of the bridges Dec. 19. Since then, the bridges have been lit green on St. Patrick’s Day and in the competing teams’ colors on Super Bowl Sunday. “I’ve had friends who tell me that they’ll go to dinner and then just drive by the lights just to see them,” Geurin said.

Brown added, “It’s going to be here forever, and people will be able to enjoy it for decades to come, and being part of that, being able to say we were a part of that project and we designed the electrical system on that is really exciting.”

The $2.4 million project was made possible by a $2 million gift from Entergy Arkansas, which was celebrating its 100th year. Philips Lighting donated the lights. Koontz Electric performed the installations.

Other winners take home hardware

Five other engineering firms took home hardware from the Engineering Excellence Awards banquet at the Governor’s Mansion.

Those winners were:

McGoodwin, Williams and Yates won in Category A – Studies, Research and Consulting Engineering Services, Small Projects, for a wastewater system study

Continued on page 18

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MORE AWARD WINNERS. Top photo, Garver won in Category B – Building/Technology Systems, Small Projects, for a communications upgrade at the Bill and Hillary Clinton National Airport. Pictured are, from left, Tom Sutton and Tom Clarke with the airport and Garver’s Eric Farmer, P.E., Mike Massey, P.E., and Adam Roberson, P.E. Middle photo, Brad Wingfield, P.E., left, with PMI poses with Max Sestili, stormwater manager for the city of Hot Springs. PMI won in Category D – Surveying and Mapping, for an impervious area GIS analysis for the city of Hot Springs. Bottom, Crafton Tull received two awards. It won in Category F – Water and Wastewater, Large Projects, for its design of the landscape surrounding the Northwest Arkansas Community College Center for Health Professions building. It also won in Category G – Water Resources, Large Projects, for its work on the Rogers Regional Sports Park. Pictured are, from left, Daniel Ellis, P.E., vice president; Matt Crafton, P.E., CEO; and Jonathan Ely, P.E., project manager.

the firm performed for Jonesboro City Water and Light. The firm performed a comprehensive study utilizing data from recent flow monitoring results, land-use projections, census data and other sources. Water billing data was geocoded into a GIS system to help determine actual per capita usage. The design eliminated the need for the existing lift station by implementing a gravity flow system that will reduce energy costs by half a million dollars during the next 20 years.

Garver won in Category B – Building/Technology Systems, Small Projects, for a communications upgrade at the Bill and Hillary Clinton National Airport. Garver replaced a crash phone system to meet current FAA guidelines, correct system deficiencies, add dispatch to the overall three-way conversation, and provide other airport improvements. The new system more reliably and efficiently protects the public as well as airport and other agency staff.

PMI won in Category D – Surveying and Mapping, for an impervious area GIS analysis for the city of Hot Springs. PMI partnered with EFS GeoTechnologies to use proprietary GIS software to determine the impervious area of the entire city of Hot Springs. The data was cross-referenced to assign a residential or commercial designation and an impervi-
ou area size. A table of the information was compiled and provided to the city's economist, who consulted with PMI as necessary. As a result, the city developed a rate schedule that properly reflects the impact each property has on the watershed, and the city can continue to fund necessary repairs and uphold best management practices.

Crafton Tull won in Category F – Water and Wastewater, Large Projects, for its design of the landscape surrounding the Northwest Arkansas Community College Center for Health Professions building. In addition to designing the 83,000-square-foot building, Crafton Tull also protected and enhanced the adjacent wetland, which contains the rare Delta post oak species. By utilizing bioswales and creating an earthen berm, the project kept the ecosystem healthy and viable. The project is currently being considered for the U.S. Green Building Council’s LEED Gold designation.

Crafton Tull also won in Category G – Water Resources, Large Projects, for its work on the Rogers Regional Sports Park. Crafton Tull provided full-service engineering, architecture, and planning for a new 59-acre sports park. The park houses four softball fields and two competition softball fields with accompanying concessions and pavilions and connects with the Rogers trail system. The entire complex is in a flood zone with wetland areas, which created design challenges. Crafton Tull utilized a sustainable approach to provide an improved user experience by creating a more natural habitat with flumes and drainage swales, which benefits the environment and the community's well-being.
AHTD’s Bennett details funding woes

While other agencies get more money, highway dollars are flat - and running out

By Steve Brawner
Editor

“It was the best of times of times; it was the worst of times” begins the novel “A Tale of Two Cities” by Charles Dickens. The same could be said for highway funding, said Scott Bennett, P.E., director of the Arkansas Highway and Transportation Department.

Speaking at the Engineering Excellence Awards banquet, Bennett said Arkansas is the only state where voters approved statewide highway funding programs in two consecutive years. In 2011, voters said yes to the Interstate Rehabilitation Program, a $1.2 billion bond program to repair 450 interstate miles. In 2012, they voted for the Connecting Arkansas Program, which will fund a number of projects statewide. The Highway Department took bids Feb. 26 for that program’s first project, a $52.7 million construction of part of the Bella Vista Bypass. The signature project will be the repair and expansion of the Interstate 30 bridge over the Arkansas River in downtown Little Rock, which he said will “be probably what goes down in history, at least for a little while, as our engineering marvel.”

Together, the Interstate Rehabilitation Program and the Connecting Arkansas Program are enabling the state to maintain or improve 630 miles of interstate. Unfortunately, that’s only 3.8 percent of Arkansas’ 16,400 miles of highways, the 12th largest system in the country. And that’s why this is not the best of times.

Bennett took the engineers through a review of the state’s transportation funding problems. Federal funding makes up...
70 percent of the state’s highway construction program, but funding is falling because fuel taxes, which are the primary funding mechanism, haven’t been raised since 1993 and were not indexed to inflation. If Congress does not act, the Highway Trust Fund will be empty later this year, meaning there will be no federal money for highways. Meanwhile, while Arkansas state revenue has been growing at 4.5 percent a year, the Highway Department collected less state revenue each of the past two years.

Bennett showed how inflation and other factors have eroded purchasing power over time. In 1977, $100 million would widen 143 rural highway miles from two lanes to four lanes. In 2011, that same amount would widen 15 miles. In 1977, $10 million would overlay 400 miles of two-laned highway. In 2011, it would only serve 55 miles. In 1977, a $25 million bridge program would build 136 bridges. In 2011, it would build 29.

Continued on next page
ACEC/A invited to ASPE conference

Annual event will be held June 4-5 at Fayetteville’s Chancellor Hotel

There’s a reason that ACEC/A and ASPE have the same executive director working in one office.

Reducing the overhead and getting rid of the redundancy is a very engineering thing to do. After all, the two organizations share the same goal – advancing the profession – even though their missions are different. ACEC/A enables firms to work collaboratively on issues that concern them all. ASPE builds the profession one engineer at a time by reinforcing how even the profession’s competitors can work together for shared interests.

In that spirit, ACEC/A is invited to this year’s ASPE Annual State Conference, which will be June 4-5 at the Chancellor Hotel in Fayetteville.

The format for ASPE’s meeting will be similar to what it has been in years past. June 4’s events will include speakers and seminars from some of the state’s most respected engineering experts. That night, ASPE will gather at beautiful Arvest Ballpark (designed by our own ESI, as told on page 12) to watch the Northwest Arkansas Naturals baseball team play Tulsa. We’ll have the party deck.

The next morning will feature more classes before the conference’s highlight, the awards luncheon. As usual, the Engineer of the Year and the Young Engineer of the Year will be honored.

Another highlight will be the presenting of well-deserved diplomas for this year’s Emerging Leaders class. Ten participants from the state’s design firms have been undergoing a series of classes to learn right-brain creative, communication and leadership skills. They’ve completed a team-building course, practiced public speaking, studied conflict resolution, and learned about business principles and state government policies. By the time they are finished, those design professionals are more than “emerging,” They’ve emerged.

The best part of the luncheon is when the state’s newest PEs are presented a plaque recognizing their achievement. It’s always exciting to see the profession’s next generation add those two letters at the ends of their names.

ACEC/A’s meeting will begin Thursday after lunch. We’re still planning the lineup, but we know it will be focused on business practices.

That event will take the place of what has recently become an annual ACEC/A trip to Branson. We figured our state’s engineers would prefer a shorter, cheaper, business-focused event.

May I encourage you, especially if you are a leader in your firm, to attend both the ASPE and ACEC/A meetings? Our profession depends on both strong firms and strong engineers. When ACEC/A member firm leaders attend ASPE events, it sends a message that the professional development of individual engineers is important. ACEC/A events, meanwhile, reinforce how even the profession’s competitors can work together for shared interests.

Besides, there’s a price break for engineers who register for both, and saving money is a very engineering thing to do!
Because details matter

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