

Volume 45, April 2015

**Arkansas  
Professional**

**ENGINEER**

Official Magazine of the American Council of Engineering Companies of Arkansas & the Arkansas Society of Professional Engineers



## Mission Possible

**CEI wins the Grand Conceptor Award at the Engineering Excellence Awards banquet.**

At the Mercy Trailhead are, from right, CEI's Tom Oppenheim, P.E., project manager; Jacob Shy, project designer; Barney Hayes, Rogers parks director; and Andrea Brinton, assistant parks director.

**Also inside:**

- Full coverage of the EEAs
- Legislative wrap-up: Hope for highways?
- Becky Keogh brings engineer's perspective to ADEQ



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# Arkansas Professional / ENGINEER

Official Magazine of the American Council of Engineering Companies of Arkansas & the Arkansas Society of Professional Engineers

## News and Features

- 10** **Member Spotlight / Michael Baker**  
The international firm has a growing presence in Arkansas working airport, highway and bridge projects.
- 12** **ADEQ head has engineer's perspective**  
Becky Keogh says her engineer's background will help her make commonsense decisions as the new director of ADEQ.
- 18** **Young leaders practice right-brain skills**  
Emerging Leaders, a joint ACEC/A - ASPE program, teaches leadership and communication skills through hands-on, team-building activities.
- 20** **Roads bill fails again, but there's hope**  
A bill that would have dedicated tax revenues from auto and auto-related sales didn't make it far this session, but Gov. Asa Hutchinson has said he will create a task force to consider highway funding.
- 22** **Good Samaritan bill highlights session**  
Engineers who donate their time during and after a disaster won't be liable for unintentional mistakes thanks to a law passed this session.
- 23** **MKARNS gets classification, grant**  
The Corps of Engineers now considers the Arkansas River to be a high-use waterway.
- 24** **Cover Story / CEI, Garver win top prizes at EEA**  
CEI won the Grand Conceptor Award while Garver won the BancorpSouth People's Choice Award at the Engineering Excellence Awards.



- 24** *CEI won the Grand Conceptor at this year's Engineering Excellence Awards for reducing parking lot runoff into the Illinois River watershed. From right, CEI's Tom Oppenheim, P.E., project manager; Jacob Shy, project designer; Barney Hayes, Rogers parks director; and Andrea Brinton, assistant parks director*

## Departments

- 6** ACEC/A President's Column  
**7** ASPE President's Column  
**8** In the News  
**8** Calendar  
**9** Advertiser Index  
**11** ACEC/A Associate/Affiliate Members  
**15** Executive Director's Column  
**30** Engineering Marketplace

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# ACEC/A's busy season



**Brad Hammond**  
ACEC President

If you are a fan of the old HBO series, "The Sopranos," you may remember when Tony Soprano would say to his wife, "Hey, I gotta take this call. It's my busy season." I was thinking about that recently and realized that ACEC/A is in the middle of its busy season at the time of this article. And it has been an unusually busy season.

During the first quarter of every year, ACEC/A's primary focus is to monitor and address proposed legislation that might affect the business of engineering and/or the engineering profession. Regular sessions occur every odd year, making years like 2015 unusually busy. In addition, this session has been particularly busy, with more than 2,000 bills filed.

To make things unusually challenging, this is the first year ACEC/A has not engaged an outside lobbyist. The good news is that our executive director, Angie Cooper, has assumed that role, and she is unusually good at her job. In addition, our Governmental Affairs Committee chair, Dennis Ford, P.E., of FTN and Associates is unusually good in his role. In fact, I believe that we have monitored and addressed more proposed bills in a more organized and effective fashion than during any other year that I can remember.

Dennis has maintained a spreadsheet updating the status of every bill that we tracked, and we have begun organizing webinars to allow the membership to obtain and discuss information regarding the monitored legislation. We plan to continue holding these webinars during future sessions, and the webinars will begin early in the sessions.

Navigating the complex maze of politics and legislation requires constant vigilance, diplomacy, and the ability and fortitude to act quickly and decisively. In

addition, our association must maintain relationships with key legislators and other groups with similar goals and agendas. This is a challenging and time-consuming process.

There are also a lot of grey areas to consider. Not all legislation blatantly targets our profession or affects us all equally. Bills that propose bidding professional services or that affect licensure are relatively easy to identify and address, but what about legislation that affects other aspects of construction, regulation, or even the welfare of our clients? These bills might not seem to directly affect our profession, but they can have important indirect consequences. Plus, we must be cognizant of how our actions affect other organizations that are our allies on important issues of mutual interest.

Engineers are very good at meticulously analyzing the wording of legislation to determine if it will have a direct effect on our industry, but we are not always very good at recognizing the political strategy that can be embedded within. For example, while we determine through objective analysis that the current wording of a bill does not directly affect our interests, we can lose sight of the underlying political strategy that produced the bill – a bill that initially seems benign but that could easily grow during future sessions into a malignant tumor. As in the medical profession, early detection is key.

Legislative monitoring and advocacy can be challenging for engineers, who are accustomed to dealing in absolutes and are typically cautious, thorough, and straightforward. We also can have trouble with diplomacy and political networking.

But again, there is good news. Angie Cooper excels at diplomacy and networking, and multi-tasking is also in her repertoire. In fact, she has effectively handled full-time lobbying duties while planning ACEC/A's Engineering Excellence Awards and the ASPE Annual Conference in March. And, by the way, she has done all of this while still collecting dues and acting as our comptroller and bookkeeper. I can visualize Angie putting her phone to her ear while saying "I gotta take this call – it's my busy season." I just hope she isn't about to whack anybody like Tony Soprano.



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# Maintenance necessary, though it's not much fun



**Rob Bullen**  
**ASPE President**

Humans are usually doing one of three activities: creating, destroying, or maintaining. Unfortunately, most of the time, only the first two are any fun.

Think of a kid alone in his room. What's he doing? If it's his choice, he's probably either building something (a tower, a model, a story) or breaking something, often gleefully. He only cleans the room – in other words, performs maintenance – because his mom makes him.

The same applies to the adult world. We like buying a new car; we don't like buying tires for the old one. It's much easier to make ourselves exercise when we are building toward something, like preparing for a race, or destroying fat cells where we can see the results in the mirror. Maintaining the same weight day after day with an uninspiring jog and a few sit-ups? Ugh.

Policymakers are people, too, so it's not surprising that, once again, lawmakers are leaving Little Rock without investing the money needed to maintain a healthy highway infrastructure. As you'll read elsewhere in this issue, a bill failed that would have dedicated to highways the tax revenues derived from the sale of cars, car parts and car-related services.

Gov. Asa Hutchinson has said he will appoint a task force to study highway funding, but it's hard to see how it will come up with any ideas that haven't already been considered. The problem is pretty straightforward: We don't spend enough on highways. The solution is also straightforward: We need to spend more. There are no new ideas on how to do this.

We must either raise the gas tax (politically difficult), take money from the rest of the budget and gore someone else's ox (ditto), put toll booths on highways (inefficient), or expand or institute another funding mechanism such as a vehicle miles traveled tax (also inefficient, and an invasion of privacy).

Even in this anti-tax environment, voters might be willing to pay for new roads. They voted in 2012 for the Connecting Arkansas Program, which is creating four-lane highways across the state. Everyone still dreams of building I-49 in western Arkansas and I-69 through the state's southeast quadrant.

But a big part of what's needed now is adequate attention paid on the roads and bridges we have. With 16,416 miles of pavement, Arkansas already has the 12th largest highway system in America. Unfortunately, this year the Highway Department cancelled a \$50 million overlay program to take care of some of those miles because it didn't have the funds. So in large part, Arkansans need to be asked to pay what's needed for maintenance – to replace their tires instead of buying a new car. That's a tough sell.

As engineers, we have a role to play because we're usually the grown-ups in the room. People listen to us because we base our decisions on facts and then present our findings in a logical way. And the facts are that maintaining a roadway through an overlay program costs taxpayers \$200,000 a mile, while reconstructing a roadway (in other words, destroying it and then creating it again, possibly because you didn't maintain it) costs \$1.5 million a mile.

I mentioned early in this column that human activity involves either creating, destroying or maintaining. You might have read that and thought, "Not true. You can also do nothing."

Technically, that may be right. But as we see every time we drive on Arkansas' roads, if you're doing nothing, you're failing to maintain. That's the same as destroying, but without the fun.

## In the News

### ACEC Deep South Convention will be July 9-11 in Florida

The ACEC's Deep South Convention and Exhibitor's Trade Show will be at the Sandestin Golf and Beach Resort July 9-11 in Sandestin, Florida.

The convention will bring together engineering firms from Arkansas, Alabama, Louisiana and Mississippi, along with vendors that serve them. Engineers can earn six professional development hours of credit. ACEC/A will hold an executive committee meeting at 1 p.m. July 9.

Speakers include:

- Ray Kogan, president of Kogan & Company, which specializes in strategy and management consulting for design and construction firms. Logan has helped more than 100 architecture and engineering firms develop strategic plans.
- Suzanne Harness, AIA, a licensed architect and construction lawyer. She is a risk management consultant with ConstructionRisk and is the president of Harness Project Solutions, a consulting practice that provides procurement counseling, arbitration, mediation, training and other services.
- Steve Hall, ACEC's vice president of government affairs. Hall is the ACEC's chief lobbyist.

– Dr. M. Keivan Deravi, Ph.D., a professor of economics at Auburn University, whose Alabama Economic Forecasting Model is used to predict that state's economic variables.

– Justin Ehrenworth, executive director of the Gulf Coast Ecosystem Restoration Council.

– Sarah Walpert, branding, social media and communications expert.

The resort sits on 2,400 acres with more than seven miles of beach and bay. Amenities include golf, tennis, water sports, and a pedestrian village. Children are welcome at all social events at this kid-friendly affair.

Reservations are \$650 for ACEC members if made by June 26 and \$675 afterwards. Non-members pay \$750 and \$775. Reservations for rooms must be made by June 1 by booking online at [www.sandestin.com/2349UF.aspx](http://www.sandestin.com/2349UF.aspx) or calling 800.320.8115. Use the ACEC group code 2349UF. Rooms are available afterwards on a space-available basis.



**April 29**

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**April 30**

Emerging Leaders Contracts & Risk Reduction  
Fayetteville, Garver

**May 7**

ACEC/A Board Meeting  
Emerging Leaders Roundtable & Graduation  
Fayetteville, McGoodwin, Williams & Yates

**May 20**

ASPE Board Meeting  
Little Rock, Executive Offices

**June 5**

ACEC/A Board Meeting  
TBA - Tentative

**June 24**

ASPE Board Teleconference

**July 9-11**

Deep South Meeting  
Sandestin, Florida

[Sandestin.com/2349UF.aspx](http://Sandestin.com/2349UF.aspx) or calling 800.320.8115. Use the ACEC group code 2349UF. Rooms are available afterwards on a space-available basis.

### Crafton Tull adds two Marines as project managers

Crafton Tull is welcoming two U.S. Marines with extensive engineering experience as project managers in its Rogers office.

Thomas Hennelly, P.E., is actively involved in the American Society of Civil Engineers and the Society of American Military Engineers. He and his wife of 29 years, Carmen, Northwest Arkansas



**Hennelly**



**Morrow**

residents since 1991, currently reside in Goshen, where they are members of Saint Joseph Catholic Church in Fayetteville. Raised in Little Rock and a former student of the Little Rock Catholic High School for Boys, he received a Bachelor of Science in Civil Engineering at the University of Arkansas at Fayetteville.

Jerry Morrow, P.E., also became a member of the Crafton Tull team as a project manager in

Rogers. A Vietnam veteran, he has 32 years of engineering experience. Morrow is an Arkansas native who grew up in Fort Smith and graduated from the University of Arkansas at Fayetteville with a Bachelor of Science in Civil Engineering. He and his wife of 37 years have raised three daughters in Arkansas.

"Crafton Tull is passionate about community involvement, and we feel our new team members share that passion," said Matt Crafton, president and CEO. "The fact that both men grew up in Arkansas, and chose to raise their families here shows they share that passion."

### FTN staffers reach new professional achievement levels



**Phillips**

Sharon Phillips, FTN director of human resources, recently received her professional in human resources PHR® and SHRM-CP® certifications. Both certifications

are recognized as professionally relevant credentials for those who have mastered the technical and operational aspects of HR management,



including knowledge of U.S. laws and regulations.

To become certified, an applicant must pass a comprehensive examination and demonstrate a strong background of professional human resource experience. Phillips started working with FTN as a word processor 22 years ago and worked her way up to her current position. She resides in Little Rock.



**McCoy**

Kathryn McCoy, P.E., recently earned her license after passing the Professional Engineering exam in Environmental Engineering in October 2014. McCoy is a water resources/environmental engineer. She earned her Bachelor of Science in Biological Engineering from the University of Arkansas at Fayetteville in 2009 and her Master of Science in Civil Engineering from the UA in 2012.

McCoy has been with FTN a little more than four years. The main focus of her work involves hydrologic and hydraulic analyses of open channels. She also has experience in water quality modeling and analyses of natural waterbodies. She currently works in FTN's Little Rock office



**Moffitt**

and lives in Lonoke with her husband, Jesse, and 3-year old son, Caleb. FTN's Drew Moffitt has recently earned GISP certification. This is achieved by meeting points-based benchmarks with relevant educational achievements, professional experience, contributions to the profession, and by affirming his commitment to ethical practices. GISPs have obtained a level of professional maturity and experience that is widely acknowledged in the GIS industry. GISPs must recertify every

five years. Moffitt has been with FTN since June 2008 and started his GIS career in 2004 working at the Deputy Chief of Staff Engineering Office at Camp Robinson. He lives in Little Rock.

FTN is a water resource and environmental consulting and engineering firm that is headquartered in Little Rock and has branch offices in Fayetteville, Baton Rouge, and Jackson, Miss.

*Continued on page 11*

## Advertiser Index

Garver.....	Cover
Improved Construction Methods.....	3
Crafton Tull.....	5
RP Power.....	9, 21
BancorpSouth.....	11
FTN Associates.....	13
Van Horn Construction.....	15
Hawkins-Weir Engineers.....	16
McGoodwin, Williams and Yates.....	19
McClelland Consulting Engineers.....	23
Brown Engineers.....	29
ETEC.....	31

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## ACEC/A Member Spotlight

# Michael Baker: Growing here at home

Arkansas office draws on expertise of nationwide specialists

If you're crossing the I-40 bridge over the Mississippi River in the next couple of months, you might see what looks like a special forces team tethered on the span high above the freeway. Those inspectors will be members of an army that's more than 5,000 people strong – Michael Baker International.

The firm, which also performed the task in 2012, has been selected for projects like this because of its expertise in a variety of disciplines, said Mike Stengel, Michael Baker's Arkansas office manager. Because the M-shaped bridge is taller than a man lift can reach, inspectors will do much of their work by rappelling off the top of the bridge.

"It's hard to find something that transportation clients need done that Michael Baker doesn't have the experience to do it," he said.

Another example of Michael Baker's capabilities is a recent design project to replace the aging pin and hanger assemblies on a Highway 64 bridge spanning the Arkansas River at Fort Smith. Although previously common for longer span bridges, pin and hangers are seldom used today because they lack structural redundancy. In addition to replacing the pins and hangers, the design provided redundancy by retrofitting the girders with permanent "catcher" supports.

"It's something that doesn't get done every day, and Michael Baker had been fortunate to have quite a bit of experience in this type of work," Stengel said.

In addition to its national and international experts, Michael Baker has a growing local presence – 11 full-time staff members, including seven engineers, plus four part-timers in Little Rock, and seven staff members with two engineers in Bentonville.

The growing staff is needed because the firm has been ramping up its Arkansas efforts and diversifying its portfolio in recent years. Until a couple of years ago, the Arkansas offices specialized in airports, but it's now one of the firms working on the Connecting Arkansas



**ONE FIRM, MANY SPECIALTIES.** Top, an inspector with Michael Baker International inspects the I-40 bridge over the Mississippi River. Left, the Bella Vista Bypass, where Michael Baker is providing full-service construction management administration services on a \$50 million project. Below, the newly constructed airfield maintenance facility at the Bill and Hillary Clinton National Airport, where Michael Baker has been one of two on-call engineering consultants since 2005.

Program that's building a network of four-lanes across the state. The firm is doing all the environmental and design work on a 19-mile stretch of Highway 70 between Hot Springs and Interstate 30. Its engineers also are working on the design for pavement rehabilitation of a couple of stretches of I-530 near Pine Bluff.

Because of those and other projects, the firm added six team members to its roadway and bridge design group in the last two years. Stengel said that growth was intended to allow it to do much of its work with in-state personnel. "We're still in building mode," he said.

The firm hasn't lost its focus on its airport business. Michael Baker is one of two on-call consultants for the Bill and Hillary Clinton National Airport in Little

Rock and has ongoing on-call contracts with nine municipal airports.

For projects at the Little Rock airport, Michael Baker handles all the planning, design and construction management through closeout. It recently completed two simultaneous projects that required the closure of the main runway. One involved laying 25-foot asphalt shoulders on the primary runway, while the other involved replacing in-pavement incandescent lights with LED lights. Another major recent project was replacing the existing airfield maintenance facility with a much larger one. A couple of years ago, the firm replaced about 750 of the airport's taxiway lights with LED lights and replaced a couple of hundred airfield guidance signs with LED signs.



## In the News (Cont'd)



Richardson



Geurin



Trulove



Moorehead

### Brown Engineers serves Habitat for Humanity, students

Melanie Richardson, P.E., LEED AP BD+C, of Brown Engineers is serving as the American Society of Heating, Refrigerating and Air-Conditioning Engineers 2015-16 sustainability chair. She organized a "Smash Mob" to deconstruct a home donated to Habitat for Humanity of Pulaski County (HHPC). Volunteers dismantled plumbing, lighting and oth-

er fixtures for reuse or resale at HHPC's "ReStore" outlets.

Scott Geurin, E.I., LEED AP BD+C, and Alex Trulove, E.I., LEED AP BD+C, of Brown Engineers met with hundreds of students at Arkansas Tech's recent Engineering & Technology Career Fair. On March 31, Geurin and Trulove were to team up again for the STEM Career Fair at the University of Arkansas.

Mitchell Moorehead recently joined Brown Engineers as a computer engineer. He received his Bachelor of Science in Electrical Engineering with an emphasis in computers from Christian Brothers University in Memphis.

#### ACEC/A ASSOCIATE/ AFFILIATE MEMBERS

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**PLATINUM CIRCLE.** Pictured are David Burstein, P.E., of PSMJ; Bruce Brown, P.E., Dee Brown, P.E., ATD, and Nick McNeill, P.E., of Brown Engineers; and Frank Stasiowski, FAIA, of PSMJ Resources.

### Brown named to PSMJ Platinum Circle of Excellence

Brown Engineers in December became the only Arkansas firm among six nationwide to be inducted into the Platinum Circle of Excellence by global A/E management consultant PSMJ Resources.

The Circle of Excellence honors those firms scoring highest each year in PSMJ's comprehensive analysis of 13 benchmarks for sound management and fiscal responsibility. The Platinum Circle is PSMJ's salute to those firms that earn inclusion in the annual Circle of Excellence for at least four of the past five years.

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Jeremy Cox, CIC

# ADEQ head has engineer's perspective

Hutchinson appointee has experience in both public and private sectors

By **Steve Brawner**  
Editor

The newly appointed director of the Arkansas Department of Environmental Quality is a chemical engineer with 30 years of experience in both the public and private sectors.

Becky Keogh (Kee-oh) came to the job from BHP Billiton, where she helped the diversified global resources company develop its onshore oil and gas regulatory and compliance programs. Earlier in her career, she was deputy director of what is now ADEQ from 1996 to 2006 and, before that, worked in a staff position for the agency in the early 1980s. Keogh has a degree in chemical engineering from the University of Arkansas and is a Little Rock native. When contacted by Gov. Asa Hutchinson about the job, it didn't take her long to say yes.

The last time Keogh worked for ADEQ, the staff was spread across seven buildings in southwest Little Rock. She now occupies a top-floor office in a beautiful LEED-certified headquarters where 400 employees can walk the Arkansas River Trail on their lunch break.

*Arkansas Professional Engineer* sat down with her in that office to talk about her philosophies and goals for the agency.

**Where do you see this agency heading?**

"My approach is a bit more of a commonsense approach. We have to definitely meet the rules and the federal regulations, the state regulations, but we want to implement them in a way that is workable, is practical, but yet meets the desired outcome that the citizens of the state expect and deserve. So my approach is kind of that way, is to come in and analyze what's important to the state, what's important to business, what's important to the communities and then try to work through those issues and find solutions. Coming from an engineering background, I'm kind of problem-solv-



**BECKY KEOGH** stands in front of her chemical engineering diploma from the University of Arkansas in her top-floor office at ADEQ's headquarters.



ing focused, so I look at each situation as an issue, and then try to analyze it, come up with the best plan given what resource we have and what the outcome is, and then develop those actions appropriately. That's kind of my approach to it."

**The previous director, Teresa Marks, was an attorney. How will it be different having an engineer in this position?**

"I can only come at it from my perspective. So my perspective is that as an engineer, I'm trained to go through a logical analysis of a problem or an issue, and/or to establish a programmatic approach to how I want to reach a solution or an end point. An attorney probably does that same thing. From what I understand, law school is an education of logic and analysis as well. I think probably a lawyer approaches it more within the boundaries of what they're trained to do in terms of the legal processes. I'm probably taking more the technology and the technical solutions into account

a little stronger and working then with legal counsel to make sure that the solution that we come up with is going to fit within the law."

**Is there a blind spot in engineers' thinking? This is not really a political position, but everything's political these days. Engineers say, "If you put this here and this here, it will connect, and we're good." But in the political world, the sands shift. Do you have to refocus your thinking a little bit?**

"I think an engineer is trained to consider all the information, to gather facts and gather information. That's not that different from a politician. You take science, and hopefully good science, and then you apply it, and in the engineering world, you take into account the cost factors and the realistic factors. Politics to some extent has to do that too, so I don't know that they're that far different. Because in politics you have to take into account a little bit more the human

element, but in a good engineering solution, you're going to take into account the risks, too, and whether the human element will cause the solution to succeed or whether it might cause it to fail."

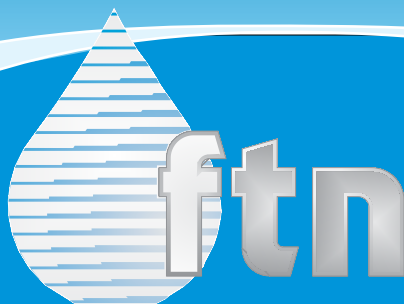
**The way I've heard other ADEQ officials speak to engineers in the past is, "Look, you'd much rather deal with us than the EPA, so just work with us. We're on your side. We're going to try." Is that kind of how it is?**

"I think there's a general sentiment that a state agency probably can walk the talk a little bit more realistically than a federal agency at times and that they see some of the pitfalls and perhaps some of the unintended consequences of some of the federal rules. So I think overall most companies and/or citizens would like to work with us because we can offer an Arkansas version of that regulation, you know, what makes sense here. Regulations are written to broadly apply, and

*Continued on next page*

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**“ Coming from an engineering background, I’m kind of problem-solving focused, so I look at each situation as an issue, and then try to analyze it, come up with the best plan given what resource we have and what the outcome is, and then develop those actions appropriately. ”**

**- Becky Keogh**



we must take those and we must look at how they really apply to a problem here in Arkansas, and some of those one-size-fits-all sometimes need some tweaking, if you will, to make sure it’s going to really come with the desired outcome. Again, it’s about, I think the state has some ability to kind of work toward the outcome of what that regulation is, where a federal government may not see the impact as readily of a decision that they make. So that’s why people like state government.

“Some would argue that they can influence state government. I think ‘influence’ is probably a strong word. I think ‘inform’ might be a better (word). They have a closer connection to be able to provide information so that the decisions are more relevant to what’s going on in the state of Arkansas.”

#### **What do you see as being the upcoming environmental issues that engineers need to be aware of?**

“Well, we have a number of things out there. I’m still looking at what exactly we’re facing. I’ve been a bit disconnected from all the state’s issues. But I think that some of our challenges are taking into account, from an implementation standpoint, it’s just the number of federal regulations that are coming down, understanding those, being able to break those down and make those relevant and coming up with plans on how different businesses can comply with those federal plans, and how we can implement those in permitting programs or compliance programs as the case may be. So I think engineers should be aware that’s our job is to implement those federal rules, so we’d like to work with engineers on those solutions to make the solutions cheaper, faster, more effective. That’s one of the things, if we can do that, that would be a real win because sometimes it’s easy to get bogged down in the legal and not look at what is the actual technical answer on the problem.”

#### **Is there anything you know you want to do as director at this point?**

“Internally, I want to work on what we do and try to take into account some of what I’ve learned in the private sector around productivity and effectiveness, you know, try to build some of those processes. I think in the engineering world, the engineers will often bring about a lean engineering process where they look and bring in Kaizen teams to look at how you break down barriers in a process, for instance, or in a problem-solving format, so I’d like to try to take some of that and bring it into this agency, see what we can do. Other agencies across the country have used that similarly.

“You would say, well, that doesn’t really fit a government agency, but actually, yes, it can, and it’s been demonstrated to be effective in other environmental agencies. So I’d like to kind of learn from those folks that have done it, are ahead of us, but also bring that in to this agency, look at what we can do on speeding up our permitting processes, which are so important for economic development, for jobs, but also making sure that we have the proper controls in place. ...

“We can’t sacrifice the quality for the expedience. We have to look at both in balance. As we work externally, I want to look at how we work. I think the agency really is culturally going to be working for how we can provide information, how we can help the understanding of the requirements better. I don’t think many people are out there intentionally not complying with environmental policy. So I think most of the time it comes down to that they either don’t understand it or they didn’t observe what was required timely, so I’m trying to see how we can be more helpful. Not that we’re the government, we’re here to help, but I’ve asked our staff to first step out and say, ‘How can I help? What is it you’re needing help from this agency?’ But we obviously will uphold the law and do our appropriate

role of enforcement where needed when we do have bad actors or entities that don’t respond to the requirements.

“I’m a bit purpose-driven and outcome-focused, so that’s the culture I’m trying to instill in the agency and same way with the business community or the industries or the engineers that come in and meet with us. I like to kind of ask them to bring to me quality products because then we can be more expeditious in our reviews and in getting the approvals that are necessary for them to get their, quote, ‘license to operate’ in place, so we want to really work to make sure that that line of communication is open and that understanding is clear and there’s clarity in what’s required but also a little bit more certainty in the expectation of the agencies.”

#### **Did the governor give you any guidance?**

“He asked me to work hard, and I agreed to do that, and that we’re going to come about and apply some common sense, but he’s very interested in protecting the resources of the state of Arkansas and seeing the environmental challenges that we face be resolved in a way that’s acceptable both from a community standpoint but also not basically stop economic development. Obviously, he campaigned on a jobs (platform), so we want to make sure that our procedures and processes here help attract economic development, not distract economic development. And that’s the commitment I made to him is that we would work closely and work across government to make sure that happens.”



# Build relationships first

## Members of Congress can't hear us if we don't speak

Engineers might be tempted to wash their hands of politics – particularly the kind that occurs in Washington, D.C. Our profession makes decisions based on facts, logic, and timeless principles. Congress ... does not always make decisions the same way. It can be enough to make us all want to hide behind our drafting boards and computer screens.

If that's your attitude, get over it. This is the 21st century, and politics is just a part of doing business – particularly in our profession, where governmental entities are often our biggest clients.

A great example of engineers being involved is the ACEC Annual Convention April 19-22. The event brings engineers together for educational sessions and big-time speakers. General Stanley McChrystal, former commander of American and international forces in Afghanistan, will speak on leadership, while CNN's chief Washington correspondent, Jake Tapper, will discuss "Political Polarization: Prospects for Progress."

By the time you read this, it probably will be too late to make plans to attend, but you can always come to the next one. The topics are weighty, but the atmosphere is relaxed. You can network with people inside and outside the industry.



**Angie W. Cooper**  
Executive Director

At the fall conference in 2010 in Puerto Rico, I ran into MSNBC's Joe Scarborough, who couldn't have been friendlier and even performed a spot-on Bill Clinton impersonation. At the fall conference in Palm Springs in 2009, I chatted with Vicente Fox, former president of Mexico.

I can't promise you'll meet famous TV hosts or former world leaders, and frankly, those aren't the people I most want you to visit. Instead, I'm hoping you'll get face time with the people who make decisions that really matter to our profession: the six people who represent Arkansas in Congress and their staffs.

This is a very important year for our profession. The federal government's transportation infrastructure law, MAP-21, expires this year and must be extend-

ed or, better, reauthorized for a multi-year period. Without legislative action, the Highway Trust Fund will run dry. There's at least some hope that something will get done because highways are one of the few things that Republicans and Democrats agree is important.

Members of Congress are much more likely to work together to solve problems if they have encouragement from the outside. Arkansas has a relatively new congressional delegation – half the seats were occupied by someone else last year – and they need to hear from us. Sen. Tom Cotton is a rising star in the Republican Party, and there will be many seeking his attention, especially now that he's moved from the House to the Senate. Let's make sure engineers have his ear. Rep. French Hill from the state's 2nd congressional district has spent his career in banking, so let's show him how infrastructure is the best investment America can make. The 4th District is now represented by Rep. Bruce Westerman, P.E. We've got one of our own in that seat, so let's make sure he hears from us.

You didn't go to engineering school to play politics. You went to engineering school to learn to build things. However, the most important thing engineers can build is relationships, particularly with the people that matter. Construct those first, and the rest will follow.



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# 35 Years of Commitment to Engineering



## *Welcoming* **Fred M. Oswald, P.E.** A Pillar of Arkansas' Environmental Engineering Community

Environmental engineers in Arkansas form a tight-knit and distinguished group of professionals who work together for the benefit of our state. Every member of that group is valued, but only a select few rise to the top. With a career spanning over 40 years, Fred Oswald is an undisputed member of that elite group.

Born in 1948, Fred grew up in the heart of Little Rock on Taylor Street. He attended Catholic High School, where he excelled in sports as well as academics. He received a football scholarship from the University of Arkansas, where he earned a B.S. in Chemical Engineering in 1971. He continued his education at the U of A by earning a M.S. in Environmental Engineering in 1973. After graduation, Fred was appointed as a district engineer for the Arkansas Department of Health. He then served as a Captain in the U.S. Army Medical



*Fred attended Catholic High School and received a football scholarship to the University of Arkansas.*



*Fred (center) pictured with Hawkins Weir President and CEO David Petrus (left) and Little Rock Principal Aaron Dossing (right).*



# ing Client Success



Service Corps for three years. Following his military service, Fred worked for a short time as



*Fred with the Arkansas Dept. of Health circa 1970s*

an environmental coordinator with the Monsanto Agriculture Products Company in El Dorado. In 1978, he began work in the consulting field with the Mehlburger firm in Little Rock. Nine years later, Fred founded his own consulting firm, Oswald Engineering, Inc. Over its 28 years, Oswald Engineering developed an impeccable reputation based on client service and expertise, primarily in the areas of water and wastewater systems. Fred has been known for always conducting business with integrity and for his trademark smile.

In 2015, Oswald Engineering became a part of a larger but likeminded firm, Hawkins-Weir Engineers, Inc. Established in 1980, Hawkins-Weir Engineers was also founded on the principles of integrity and client service. The company possesses a

similar DNA to Oswald Engineering, with approximately 75% of its business directly related to water and wastewater systems. Hawkins-Weir Engineers' regional office in Little Rock celebrated its 5th anniversary this January. Since the opening of that office, Oswald Engineering has partnered with Hawkins-Weir on several projects. The friendships developed during those years, combined with the two companies' shared core values, made the merger a natural fit. Fred is currently serving as a Senior Environmental Consultant with Hawkins-Weir Engineers and can be reached at: [Fred.Oswald@Hawkins-Weir.com](mailto:Fred.Oswald@Hawkins-Weir.com).



*Fred is known for his integrity and trademark smile*

in Little Rock's Quapaw Quarter. Together they raised two daughters: Dr. Catherine

Despite all of Fred's many achievements in the field of environmental engineering, he is most proud of his family. Fred lives with his wife, Sarah, a retired administrator, in an historic home

Robben, a chemical engineering graduate, now a pediatrician in Little Rock and married to Dr. Whit Robben; and Dr. Liz Oswald, who holds a PhD in biomedical engineering and is a management consultant in Washington, D.C., where she lives with Dr. Jose Azar.



*Fred pictured with wife Sarah and daughters Catherine (left, with husband Whit) and Liz (right, with Jose)*

Hawkins-Weir Engineers invites you to join them on Sunday, April 26, 2015, as they honor Fred M. Oswald's distinguished career of service during a reception to be held at The Porterhouse Steaks and Seafood Restaurant in Hot Springs. The drop-in reception, which will be held during the 84th Annual AWW&WEA Conference, will be from 6:00 to 8:00 pm. Cocktails and Hors d'Oeuvres will be served and no RSVP is required. **HW**





## Young leaders practice right-brain skills

Program gives engineers, others chance to learn leadership, communication

By **Steve Brawner**  
Editor

Six young design professionals are practicing right-brain communication and leadership skills through the Emerg-

ing Leaders program, the annual eight-session class offered jointly by ACEC/A and the ASPE.

Participants are Ben Perea, E.I., Seth Yancey, P.E., and Jordan Culver, P.E., of Garver; Chris Dougherty, P.E., of McGoodwin, Williams and Yates; Clint Hopper, P.E., of Crafton Tull, and Kevin Hall, S.I. of CEI.

This year's class on Sept. 30 completed its first session, a team-building class on an outdoor challenge course at Northwest Arkansas Community College. Other Emerging Leaders sessions have included public speaking with a Dale Carnegie-certified trainer, as well as sessions covering business principles, government, conflict resolution, and contracts and



**TEAM BUILDING.** Opposite page, top, participants in the Emerging Leaders program consider how to move facilitator Hannah Shelburne into a standing position as she leans against a rope suspended behind all of their backs. The solution? Just drop the rope, and she'd have no choice but to stand or otherwise lose her balance. Pictured are, from left, Ben Perea, E.I., of Garver; Chris Dougherty, P.E., of McGoodwin, Williams and Yates; Shelburne; Jordan Culver, P.E., of Garver; Kevin Hall, S.I., of CEI; and Seth Yancey, P.E., of Garver. Left middle and right middle, the engineers practice their communication and problem-solving skills in the "Helium Hoop" and "Whale Watcher" challenges. This page, Hall, Yancey and Perea make their way across the "Corporate Box" using squares that they were required to share and use according to certain parameters.



risk reduction. Another session involves a Senior Leadership Roundtable with engineering firm principals.

Led by Challenge Quest facilitator Hannah Shelburne, the team-building session featured a variety of exercises aimed at challenging participants' critical thinking and communication skills.

In the first challenge, the participants along with Shelburne suspended a circular rope behind their backs, the object being to move her from a leaning to an upright position as she resisted. The participants tried dragging her forward and to the sides, walking her against a tree, and even, half-jokingly, tying her up. No matter what they tried, Shelburne managed to remain at least partially in a leaning position until, prompted by her suggestions, they let go of the rope. With nothing to lean against, she had to stand straight or else fall backwards. The point? Sometimes a person can't be coerced to act; they have to choose to do it themselves.

Another challenge was "Helium Hoop," where the participants gathered around a plastic hoop that rested on their pointed index fingers. The goal was to lower it parallel to the ground without it leaving anyone's fingers. It seems simple, but, true to its name, on the first try they actually raised the hoop until their arms were outstretched. On a second try, they communicated better and lowered it to the ground, though gaps did appear between it and some of their fingers. Perea then suggested they stabilize the hoop

by each holding it with one finger above it and one finger below it. The hoop did not remain quite parallel to the ground as they lowered it, but the job was done quickly, which led to a discussion about how to balance efficiency and perfection when completing a project.

Among the other challenges were "Corporate Box," where the participants were challenged to walk across an area by stepping on small squares that they shared with each other; and "Whale Watcher," where they climbed aboard a platform and then spread out to the two ends so that it balanced like a see-saw with neither end touching the ground. The exercises required them to listen to instructions, to consider alternate ways of solving problems, and to communicate with each other. Prior to "Corporate Box," the participants gathered to rehearse the task, which impressed Shelburne.

"It's something I don't see very often," she said.

Shelburne instructs many groups and has worked with engineers about three times. Asked how engineers differ from other participants, she said, "There's a lot of thought that happens that might not necessarily be normal for other groups. ... Planning happens before an initiative is actually started. Conversations are had that might not have happened with other groups. Typically engineers have brains that just want to think and want to analyze, whereas a lot of other groups, they have those minds, but they're always utilized with one leader in mind. I haven't seen that come out today."

Asked where engineers' skills typically might be lacking, Shelburne replied, "I think engineers can almost be too agreeable, meaning there are too many voices that must be valued, and sometimes you just have to dismiss someone's ideas."

Graduation of this year's class will be May 8 after its Senior Leadership Roundtable.



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**MAKING THE CASE.** Scott Bennett, P.E., director of the Arkansas Highway and Transportation Department, right, and Rep. Dan Douglas, R-Bentonville, listen to a legislator's question while testifying before the House Committee on Public Transportation on Feb. 18. At far left is Randy Zook, president and chief executive officer of the Arkansas State Chamber of Commerce, who also testified for the bill.

## Roads bill fails again, but there's hope

Governor opposes funds transfer but does pledge to appoint working group

By **Steve Brawner**  
Editor

Scott Bennett, P.E., director of the Arkansas Highway and Transportation Department, often quotes the novel "A Tale of Two Cities" during his presentations: "It was the best of times, it was the worst of times."

Times haven't changed yet when it comes to highway funding, but there is a glimmer of hope that they could get better. Gov. Asa Hutchinson said during a press conference March 11 that he will appoint a working group to study highway funding "probably within a week after the session concludes." While highways aren't a focus of this session, they could get more attention soon – maybe even a special session.

"Depending upon whether there is a consensus arrived from the working group, that will dictate as to whether any special session is needed down the road," Hutchinson said.

Bennett's literary quote refers to the fact that, while Arkansas voters twice in recent years have voted for highway funding, the state and federal governments have not made similar commitments. The department faces a \$16.8 billion funding shortfall over the next decade, with \$20.4 billion in expected highway needs but only \$3.6 billion in known revenues. This year, the department canceled its usual \$50 million overlay program. Overlaying costs \$200,000 a mile, while reconstruction costs \$1.5 million a mile.

House Bill 1346 by Rep. Dan Douglas, R-Bentonville, would have reversed that trend by dedicating \$2.8 billion in general revenues over 10 years to highways from sales taxes collected from the sales of new

and used cars, car parts and auto services. Seventy percent would have gone to highways, 15 percent to counties, and 15 percent to cities. The bill passed the House Committee on Public Transportation Feb. 18, but then support quickly collapsed. The same forces that stopped a similar bill in 2013 stopped this one – other groups that receive state funding, and a governor who opposed the idea.

Groups representing public schools, higher education and human services feared highways would take a slice of the pie they now share, and they were not placated by Douglas' efforts to work with them. The transfer would have applied only to money raised above \$2.2 billion through sales and use tax collections, and the Highway Department gave up severance tax revenues so all two-year community colleges could reach at least 75 percent of their targeted funding. It wasn't enough.



More importantly, Hutchinson was opposed. While he initially encouraged Douglas and Bennett to run the bill, it just didn't fit into his balanced budget in the end. Finally, Douglas agreed to kill the bill before it ran in the House, and, in the same meeting, Hutchinson agreed to create the working group.

Douglas thinks it's possible the working group could lead to a special session on highway funding. If not, perhaps the issue could be discussed in the 2016 fiscal session.

"Basically, we're kicking the can down the road just a little bit, but we're building a wall down there to catch it to where it won't go too far before we make a decision," he said in an interview.

The working group will have its work cut out for it. Highways traditionally have been funded through state and federal motor fuels taxes, which have not been raised since 1993 at the federal level and since 2001 at the state level. General inflation and the rising cost of construction

together would make this a significant cut. For example, \$100 million would widen 143 rural highway miles in 1977 but only 15 miles today, according to the Highway Department. Coupled with that, however, is the fact that the gas tax is based on a declining revenue source: As cars become more fuel-efficient, they use less gas, and therefore drivers pay less in gas taxes. However, few elected officials are willing to consider raising the gas tax.

The combination of too many needs and not enough revenues left the federal Highway Trust Fund nearly depleted last year until Congress, as is often the case these days, cobbled together a temporary fix and extended the highway bill, which was expiring. That fix only lasts until the middle of this year. Bennett expects Congress to pass some kind of highway bill, but no one knows what that will look like.

"Everybody's coming up with options, but the options seem to be more of the same," he said in an interview. "We're going to find a way to shore up the trust

fund for a year, and that will give us time to talk about a real solution. And the time to talk about a real solution is now."

Arkansas voters did say yes in 2011 to the Interstate Rehabilitation Program, which is using \$575 million in bonds to repair and maintain interstate highways, and in 2012 voted for a half-cent sales tax to fund the \$1.8 billion Connecting Arkansas Program to build a network of four-lanes. The two programs have provided the Highway Department with much-needed sources of revenues – making this, in one way, the best of times. But, as Bennett often points out, the two programs, both temporary, affect only 630 miles, or 3.8 percent of the state's highway system, leaving many needs unmet.

The goal of House Bill 1346 was to meet those needs. According to Bennett, 34 states dedicate some general revenue to highway improvements. Arkansas just hasn't been one of them. "A lot of what people have said, 'Oh, you're diverting

*Continued on next page*

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revenue. You're diverting revenue from the general fund.' Well, actually, another way to look at it is we're trying to stop the diversion of highway revenue into the general fund," he said.

Still to be answered: What could the working group propose that hasn't already been considered? The Blue Ribbon Committee on Highway Finance – basically, another working group – in 2010 offered four suggestions: bonds for an interstate rehabilitation program, a temporary half-cent sales tax, and a state aid program for cities, all of which are now reality; along with the substance of House Bill 1346, which has failed in two straight sessions despite early support.

"I think the result is going to be somewhat similar to what it's been in the past," Bennett said. "I mean, there are only so many options for generating more money for highways. You either reallocate the existing capital that you've got coming into the state, or you raise taxes, or a combination of both, or you do nothing. And I think everybody is realizing that 'do nothing' is not an option."

Douglas isn't discouraged. The bill drew attention to the issue and brought new groups to the table. As he said before killing the bill, "We've shaken the tree. The coconuts have fallen, and now we need to figure out how we're going to make coconut cream pie."

Angie Cooper, ACEC/A and ASPE executive director, was at the House Transportation Committee when the bill passed and was prepared to testify. The failure of the bill to move beyond that first vote was disappointing. However, she is optimistic that the task force will lead to something positive.

"It didn't become obsolete overnight," she said. "I don't think it's going to get fixed overnight. We would definitely be interested in anything that would improve our highway funding and give the highway department some long-term good financing so that they can actually plan, and not just have to Band-Aid everything."

## 'Good Samaritan bill' a session highlight

ACEC/A opposes efforts that would weaken licensure, QBS

While highway funding has been the biggest engineering-related issue during this year's busy legislative session, other bills have gotten the profession's attention.



House

Perhaps the most favorable bill for engineers was Act 534 by Rep. Doug House, R-North Little Rock. The so-called "Good Samaritan" bill, originally proposed by the

Arkansas chapter of the American Institute of Architects, protects engineers and architects from liability for unintentional acts when providing pro bono work during a disaster and 90 days afterwards. ACEC/A's efforts with the bill included making sure that engineers were properly included throughout the text and ensuring that the word "engineers" was in the title. Not a single legislator in either the House or the Senate voted against the bill.

The most concerning legislation was House Bill 1158, which would have given Arkansans the right to engage in an occupation "free from an occupational regulation that creates a substantial bur-

den" unless the government could demonstrate the regulation was needed to protect public health and safety. According to Rep. Andy Davis, R-Little Rock, a professional engineer, the practical effect would have been that the state's various licensing boards would have had the burden of proof to show that licensure was necessary.



Davis

and really the bill is so broad that there's no (end) to the imagination of how this could affect people," Davis said. "Everything we do is licensed, and truly to some extent, that may not be a good thing, but this bill really had the potential of upsetting the apple cart."

The bill did not pass. Engineers were OK – this time.

"I think that's a good example of the sorts of things that engineers have got to be on the lookout for," Davis said. "It's a good example of why we've got to be proactive in communicating with our legislators and meeting with them in the in-

"It's been opposed by anybody that requires a license. ... I know I got contacted by engineers, architects, lawyers, accountants, teachers, real estate agents,

termin and making sure they understand what goes into our licensure, why that's important to our practice and what we do."

Another bill that got a lot of attention from engineers was Senate Bill 540. In its original form, the bill required entities that receive funds from the state to use competitive sealed bidding for contracts to plan, design, build or repair drainage projects.

The ACEC/A saw that provision as a threat to qualifications-based selection processes, under which the engineering profession prefers to operate. The bill also would have required any allowable piping material to be bid side by side. Engineers currently specify which piping materials are appropriate for particular applications.

The bill's sponsor, Sen. Jake Files, R-Fort Smith, did revise the bill to remove the problem with QBS. Brad Hammond, ACEC/A president, said the association appreciated Files' willingness to work with it.

ACEC/A was neutral on the bill for a while but ultimately decided to oppose it because of the piping issue. The bill did not pass.

"I think our biggest heartburn was the fact that even though the bill in its revised form did allow engineers to use professional judgement, that we were afraid the bill itself would open the potential for bid protests and possibly even litigation disputing our judgment calls," he said.



# MKARNS gets classification, grant

## System now considered high-use; Three Rivers area to be a focus of study

The McClellan-Kerr Arkansas River Navigation System (MKARNS) has been reclassified by the Corps of Engineers from a moderate-use to a high-use system, the same classification given to the Mississippi and Ohio Rivers.

According to a March 2 press release from the Arkansas Waterways Commission, high-use waterways annually carry more than 10 million tons and more than \$3 billion ton-miles of commodities. In 2014, the MKARNS had increases of 15 percent in iron and steel, 12 percent in sand, gravel and rock, and 40 percent in soybeans based on data from the Waterborne Commerce Statistic Center.

Arkansas has the country's third highest number of river miles but is 32nd in

tonnage transported, said Gene Higginbotham, Arkansas Waterways Commission executive director.

"As far as the effect, does it give us a little more priority in Corps funding? We hope so," Higginbotham said. "When it comes to interpreting different Corps regulations with levels of service, we hope it makes a difference there."

The announcement came a month after the Corps of Engineers announced that President Obama's 2016 budget for the Army's Civil Works program includes \$3 million to study the so-called "Three Rivers" area at the confluence of the Mississippi, White and Arkansas Rivers in south Arkansas. Half of the \$3 million study will be funded by the Corps, and half by the Arkansas Waterways Commission using state funds.

Higginbotham said the inclusion of the Three Rivers study is significant because

it was one of only 10 "starts" nationwide that were included in the budget.

The study is needed because the area is prone to flooding, and there are concerns that a major event in that area could make navigation impossible throughout the entire system for up to a year. There is a 10 percent chance of that severe a flood happening every year.

Higginbotham said a shutdown of MKARNS would be highly problematic for Arkansas' economy and transportation system. The system carried about \$4.3 billion worth of goods on the river last year. MKARNS barges carry the equivalent of 600,000 trucks and 155,000 railcars annually, he said.

Meanwhile, the Corps of Engineers has spent millions of dollars on temporary fixes in recent years, Higginbotham said.



Water Systems

Airports

Aquatic Parks

Streetscapes

Sports Parks

Roadways and Streets

Wastewater Systems

Site Design



**GRAND CONCEPTORS.** CEI was the winner of the Grand Conceptor Award for its Mercy Trailhead water quality demonstration project. The project also won in Category G – Water Resources. Pictured are Tom Oppenheim, P.E., CEI; Jacob Shy, CEI landscape architect; Delia Haak with the Illinois River Watershed Partnership, and Brent Massey, P.E., CEI principal and vice president of operations.

# Small project wins big award

Grand Conceptor goes to CEI for Rogers water quality demonstration project

By **Steve Brawner**  
Editor

CEI Engineering Associates won the Grand Conceptor Award at this year's ACEC/A Engineering Excellence Awards March 12 for a water quality demonstration project in Rogers.

The project is located at the trailhead of Rogers' Mercy Trail, which is part of the 36-mile Razorback Regional Greenway walking and biking trail that extends from Bella Vista to Fayetteville. Water flows directly downhill from a parking lot into an Illinois River watershed. Prior to the project, nothing prevented the contamination of that watershed with parking lot pollutants.

"It's meant a lot," said Barney Hayes, Rogers parks director. "It's really

enhanced this park. It does a lot for water quality and also the aesthetics and all of the park, so we're really proud to have this and to partner with the Illinois River folks to get this in."

CEI was responsible for the project's surveying, conceptual design, construction documents, permitting, public bidding, contract, and construction administration.

The project incorporated natural filtration methods to purify the runoff water. A central 100-linear-foot bioswale redirects the water nearly 90 degrees so that it flows into a 2-inch-thick natural flagstone check dam. The dam, one of a series of four, slows the water so that suspended solids can begin to be separated, so that water can infiltrate the ground, and so that plants have time to uptake the water. A bioretention basin made of topsoil collects and treats the runoff water. The basin contains a mass of plants selected for

their ability to clean water and withstand the saturation. Plants also remediate the water in each wetness zone adjacent to the bioswale and the basin. The basin is capable of containing and cleaning the entire first flush during small rain events. During large rain events, the water flows over the last check dam to another short bioswale that leads directly to the watershed. Adjacent to the bioswale and bioretention pond is a crushed stone path chosen over asphalt and concrete so that it can further slow the water, allowing it to infiltrate the ground. Data is collected at the end of the system following rain events, and an educational kiosk illustrates the benefits of sustainable design.

The entire project cost less than \$50,000. Local contractors and volunteers and locally available plants were used when possible. The volunteers, in fact, were instrumental in reducing the project's cost so that it remained within



the budget. B&A Property Maintenance was the general contractor.

CEI's Tom Oppenheim, P.E., was project manager, while landscape architect Jacob Shy was project designer. Oppenheim said this is not the first project of this kind meant to protect the Illinois River in Northwest Arkansas, but the site's topography did present challenges, and unlike previous projects, it's a retrofit.

"I think it's important just to show what can be done, just a lot of things accomplished with a small project, and they don't always have to be huge, monumental type projects," he said.

The Engineering Excellence Awards, held this year at the Heifer International headquarters in Little Rock, honor outstanding engineering accomplishments. Projects are rated in a variety of categories according to uniqueness and innovative applications; future value to the engineering profession; perception by the public; social, economic, and sustainable development considerations; complexity; and successful fulfillment of the client's needs, including schedule and budget. A panel of judges selects a winner in each category, with the Grand Conceptor considered the most outstanding of those category winners. CEI's Mercy Trailhead project also won in Category G – Water Resources, Small Projects.

The project entry boards were displayed at the State Capitol during the NSPE's National Engineers Week to promote public awareness of the engineering community's contributions.

The other major award, the BancorpSouth People's Choice Award selected by a vote of

*Continued on next page*



**BANCORPSOUTH PEOPLE'S CHOICE AWARD WINNER.** Garver won the BancorpSouth People's Choice Award for its design work on the Don Tyson Parkway interchange. Pictured from left are Springdale Mayor Doug Sprouse; Patsy Christie, Springdale planning and community development director; Jeff Webb, P.E., Garver project manager; Ron Petrie, P.E., Garver senior project manager; and Mason Atkinson, P.E., Garver bridge project manager.

## Traffic fix is People's Choice

This year's BancorpSouth People's Choice Award winner improved traffic flow in Springdale while paving the way for increased commercial development.

Garver won the award, which was selected by a vote of Engineering Excellence Awards banquet attendees, for its design work on Springdale's Don Tyson Parkway interchange.

The interchange connected the parkway to I-49, creating a badly needed second east-west passage to complement U.S. Highway 412 in an area near Tyson Foods headquarters and Arvest Ballpark. According to Patsy Christie, Springdale planning and community development director, the Highway 412/I-49 interchange has been one of the state's busiest, with traffic backed up half a mile on Friday evenings.

The project was an engineering challenge because the interchange had to be built across a closed landfill with 20-40 feet of uncompacted material, said Ron Petrie, P.E., Garver senior project manager and transportation team leader. Petrie said Garver's engineers worked with Terracon to avoid the landfill where possible and otherwise to use

a dynamic compaction process to address the problem. A 16-ton weight was dropped onto the earthen area, with gravel filling the resulting indentation. This was done until the ground was flat and compact – in effect, he said, creating stone pillars rather than having to compact the entire landfill. Next, a geotextile grid was laid atop those pillars to support the interchange.

The project involved significant work with federal and state agencies. According to Christie, Garver did an excellent job of analyzing traffic patterns and dealing with environmental issues.

The project, a longtime vision of the city's, relieves traffic congestion and will lead to increased commercial development to the west of the interstate and surrounding the ballpark. Since it was completed, a new Sam's Club has been announced at a location between the two interchanges. Christie said that the construction probably would not have happened without the interchange.

"I think we'll see in the next few years major development in that area because the accessibility is so much better," she said.

the banquet's attendees, was won by Garver for its work on the Don Tyson Parkway interchange. The project also won in Category H – Transportation, Large Projects. (See accompanying story.)

Other award winners were the following.

**Category A – Studies, Research and Consulting Engineering Services:** Brown Engineers, for its work on a generator monitoring system for the city of Hot Springs. After Brown Engineers had introduced automated generator monitoring at the city's Ouachita Water Treatment Plant and Music Mountain Pump Station, staff members had noted substantial improvement in reliability, operational conditions, and reporting functionality. The project expanded those benefits to all the utility's generator systems. Brown procured, configured, and field-tested generator monitoring units. It also implemented a single, unified alert management system to continuously store, sort and transmit the collected data. The resulting generator monitoring system lets city staff check the status, maintenance record, and performance history of any generator at any time using internet-capable devices.

**Category B – Building/Technology Systems, Small Projects:** Brown Engineers, for its Clarksville Light & Water SCADA (supervisory control and data acquisition) upgrade. Brown configured, programmed, tested, and integrated new radio telemetry unit sites within 30 days after Clarksville Light & Water tasked it with the project. The assignment included design of a new human-machine interface (HMI), HMI application programming to add several



**BROWN ENGINEERS.** Brown Engineers received two awards at the Engineering Excellence Awards. Top photo, Brown was the winner in Category A – Studies, Research and Consulting Engineering Services for its work on the Hot Springs generator monitoring system. Pictured are Sam Vandiver, P.E., Brown Engineers; Hot Springs City Manager David Watkins; Gary Carnahan, P.E., Hot Springs city engineer; and Dee Brown, P.E., Brown Engineers principal. Bottom photo, Brown Engineers also was the winner in Category B – Building/Technology Systems, Small Projects, for its work on a Clarksville Light and Water project. Pictured are John Lester, Clarksville Light & Water general manager; Chris Gelé, CAP, Brown Engineers; and Brown.

SCADA nodes, and system documentation. Brown exceeded those expectations by also adding control functionality, remote monitoring, alert management, and historical data management. Phase 2

replaced obsolete controls at Clarksville's water treatment plant with hardware that better accommodates the new HMI's unlimited potential for data points and view clients. Now, one flat license fee

allows the city to poll and collect as much data and connect as many pumps, generators, computers, tablets and smartphones as desired.

**Category C – Structural Systems:** B & F Engineering,





**OTHER EEA WINNERS.** Top photo, B & F Engineering was the winner in Category C – Structural Systems, for its work on the First Security Amphitheater roof. Pictured are Daniel George, P.E., B&F Engineering; and Cindy Duffy, associate, SCM Architects. Bottom photo, Garver won the award in Category F – Water and Wastewater, Small Project, for its 23rd Street pump station improvements project. Pictured are Steve Mallett, Jr., P.E., City Corporation general manager; Lance Bartlett, P.E., City Corporation utility engineering manager; Aaron Stallmann, P.E., Garver project manager; and Paul Strickland, P.E., Garver water team leader.

Inc., which worked with SCM Architects to replace the First Security Amphitheater roof in Little Rock. A project

to replace the Riverfest Amphitheater was in the planning stages when a storm resulting from Hurricane Isaac in 2012

damaged the venue's existing stretched fabric covering, which escalated the sense of urgency to construct the new roof structure. SCM Architects developed a design for the new roof structure, while B & F Engineering was tasked with preparing structural engineering plans for construction of the design.

**Category F – Water and Wastewater, Small Projects:** Garver, for improvements made to the 23rd Street pump station operated by Russellville's City Corporation. The station had become a daily maintenance item, demanding more and more staff time and money to keep it operational. Garver evaluated the situation and determined the lift station could be eliminated and replaced with excavation and a gravity line. Garver worked with local land owners and an area business to ensure everyone's needs were met. The client received a more reliable wastewater collection system, dramatically reducing the risk of sanitary sewer overflows. City Corporation will be spending no more man-hours performing maintenance on the lift station, and the financial costs associated with the lift station have been eliminated.

**Category G – Water Resources, Large Projects:** FTN Associates, for a project stabilizing the Pleasant Ridge Road bank for the city of Rogers. Approximately 700 linear feet of Pleasant Ridge Road was experiencing or was near failure. Several drivers had lost control of vehicles that landed in the adjacent stream channel. Among other project accomplishments, FTN evaluated stream incision/erosion and provided a baseline for design to include reduced velocities and additional capacity for up to the 50-year, 24-hour storm. FTN designed and constructed the project for public safety, long-term stability, and aesthetics.

**Category I – Special Projects:** Crafton Tull, for the Rogers Aquatics Park for the city of Rogers. Crafton Tull worked with aquatics designer Counsilman-Hunsaker to prepare a master plan and A-E designs for a park and aquatics center to replace a 70-year-old municipal swimming pool. The city wanted the venue to appeal to a wide range of patrons. The Rogers Aquatics Center enables the city to compete for attendance with surrounding

*Continued on next page*



**OTHER WINNERS.** Top photo, FTN Associates won in Category G – Water Resources, Large Projects, for stabilizing the Pleasant Ridge Road bank for the city of Rogers. Pictured are Kale Farmer, P.E., CFM®, project engineer, FTN; Travis B. Scott, P.E., CFM®, project manager, FTN; and Lance Jobe, P.E., CFM®, city engineer, city of Rogers. Bottom picture, Crafton Tull won in Category I – Special Projects, for the Rogers Aquatics Park. Pictured are Daniel Ellis, P.E., LEED AP, Crafton Tull vice president, civil; Greg Lindley, Rogers Park Commission chairman; Jim Swearingen, A.I.A., senior project manager; and Matt Crafton, P.E., LEED AP, Crafton Tull president & CEO.

municipally-owned aquatics facilities. The completed project has become a regional destination as the premier

outdoor municipal aquatics venue in Northwest Arkansas.

ACEC/A President Brad Hammond, P.E., McGoodwin,

Williams and Yates, presented the awards. Sponsors included BancorpSouth, which sponsored the People's Choice

Award; Environmental Technical Sales; and ACEC Health Trust. Garver's marketing team provided in-kind marketing support, while FTN Associates provided table centerpiece floral arrangements. EEA Committee members were Andy Dibble, P.E., of Mickle Wagner Coleman, Laura Nick of Garver, and Travis Tolley, P.E., of Crafton Tull. Judges were Stephen Haralson, P.E., Arkansas State Board of Licensure for Professional Engineers and Professional Surveyors; Richard Hedgecock, Associated General Contractors; Sandra Otto, P.E., Federal Highway Administration; Dr. Eric Sandgren, UALR College of Engineering and Information Technology; Jim Chidester, P.E., U.S. Green Building Council; Keith Jacks, CHC, CHFM, vice president of Kinco Contractors; Dustin Davis, AIA, LEED Fellow, Polk Stanley Wilcox.

### Talking politics

Prior to the awards presentations, political consultant Bill Vickery discussed a range of topics, including Gov. Asa Hutchinson's first months in office and the presidential election process. Vickery, who managed former Sen. Tim Hutchinson's 1996 campaign along with numerous campaigns in other states, now owns a lobbying firm that works for Republican clients out of offices in Little Rock and Washington, D.C. His other clients have included former Palestinian President Yasser Arafat, former Pakistani Prime Minister Benazir Bhutto, and the nation of Bulgaria. He frequently appears as a commentator on national political television shows.

Vickery said Hutchinson "has had a spectacular, successful legislative session." He





**“ We have a responsibility to invest in what happens with our government. America on the global stage is advanced citizenship. ”**

**- Bill Vickery**

praised how the governor handled the difficult issue of funding the Medicaid private option – by proposing in a widely praised speech a legislative task force to study overall Medicaid reform for two years. Vickery said he had advised Hutchinson instead to “fix it in the back room.” He also praised state legislators. “Overall, it is an A-plus for the governor and for the Legislature – very cohesive, not a lot of bickering, ‘course we’re not done yet, but I’d say an A for both the House and the Senate, too. A lot of people can be very proud of the work they’ve done,” he said.

“Cohesive” would not describe the state of American politics. Vickery said that the country is divided in a number of ways. Presidential campaigns are no longer national efforts but instead are highly targeted, data-driven processes where campaigns target specific houses knowing household members’ political inclinations. Cable news networks, the internet and social media have further divided Americans and made it possible to analyze a candidate’s words immediately after he or she says them. Viewers seek news providers who confirm their own

**POLITICAL CONSULTANT** Bill Vickery offered his thoughts on national and state politics.

*Continued on next page*

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Category B:  
Building Systems & Technology

**Hot Springs  
Generator Monitoring**

Category A:  
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biases. Moderates in both parties do exist and try to work with each other, he said, but they don't make good TV and don't get as much attention as more combative public officials on the left and right. Efforts at compromise are painted as selling out. Presidential campaigns are focused on a few battleground industrial states and largely ignore the South, where the Republican candidate is largely assured of victory. "There can't be a candidate now who sweeps across the nation and helps to unify because we worry about the number of electoral votes in Ohio," he said.

But, he said, "There has also never been a time in American politics where one individual can have more of an impact than right at this very moment." As an example, he said an energetic volunteer in Cleveland for Sen. John Kerry's 2004 presidential campaign was hospitalized a month before the election. The volunteer was such a go-getter that her absence led the Kerry campaign to underperform in the Cleveland area, contributing to his losing Ohio and therefore the election.

"We have a responsibility to invest in what happens with our government," Vickery said. "America on the global stage is advanced citizenship. And it is interesting. Traveling overseas and working with foreign governments and seeing things, I can tell you this. I'm a pretty simple person, but it is awe-inspiring to see the reverence with which foreigners hold the United States, especially in Eastern Europe. They see it as that it truly still is the land of opportunity."

## Engineering Marketplace —

### Improved Construction Methods is subject of U.S. Builders Review story

Improved Construction Methods was the subject of a feature story in the Winter 2015 edition of U.S. Builders Review magazine.

The article describes the various services offered by the Jacksonville-based company, which is celebrating its 45-year anniversary under founder Bruce McFadden. Among those services is one ICM has been



offering since it was founded in 1970: manhole rehabilitation and construction. As the story pointed out, the company also rehabilitates sewer and water treatment plant structures as well as concrete and earthen dams.

Through the years, ICM has continually added to its repertoire. It was one of the first to sell pipe lasers for sewer work and now sells surveying equipment. It has become a top distributor of trench product brands.

The focus on technology helped the company survive the recession, McFadden told the publication. "We're Improved Construction Methods and that's exactly how we survived; we got a little creative and went after some new ideas," McFadden said in the story.

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