

July 2021

Formerly Arkansas Professional Engineer

Building Arkansas

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



Finding it, fixing it, and keeping it from happening again

ARDOT has fired the bridge inspector who repeatedly overlooked the fracture that could have collapsed the Hernando de Soto Bridge, but the agency's Steve Frisbee, P.E., says it must take other steps to prevent future potential catastrophes. For that, it's getting help from the feds and from consulting engineers.

A new year begins

For ASPE and ACEC/A, probably the most challenging year ever has just ended, and now a new year begins with some uncertainty and lots of hope.

The uncertainty is caused by the fact that, as I write this, Arkansas' COVID-19 infection rates are higher than they were.

The hope springs from the fact that those rates are far from where they were at the pandemic's peak, that vaccines are readily available, and that we've spent the past year learning how to live through this pandemic.

I'm so thankful for the professional way that Steven Beam, P.E., and Daniel George, P.E., led the ACEC/A and the ASPE during this past year. While we all missed the usual face-to-face contact that occurs at board meetings and events, we still were able to meet, conduct business, and provide professional development opportunities. We also learned important



Angie W. Cooper
Executive Director

lessons about how to use technology to replace the time and expense of traveling.

We'll carry those lessons with us when the pandemic is over, but nothing can replace seeing friends and acquaintances face to face. So as we enter a new year, we'll start meeting again in person.

Our first big in-person event is the Engineering Excellence Awards, which will

be Aug. 26 at the Governor's Mansion. Tickets are \$100 per person or \$900 for a table of 10. We had many entries, and as always we'll announce our Grand Conceptor and People's Choice Award winners at the event.

This is probably the most important event on the ACEC/A's calendar. Come celebrate our industry together.

A new year also brings with it a changing board of directors and new committee assignments. I know the ACEC/A is in good hands with Steve Pawlaczyk, P.E. Likewise, Travis Tolley, P.E., will do a great job at ASPE.

Meanwhile, committee assignments are available in both organizations. These committees cover areas including membership, finance and governmental affairs.

If you have an interest or aptitude, sign up! It's going to be a great year.

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20 Workers make repairs to the Hernando de Soto Bridge across the Mississippi River, which has been closed since Michael Baker International engineers discovered a significant fracture in a tie girder supporting the bridge. Photos on cover and inside courtesy of the Arkansas Department of Transportation.

Departments

- 2 Executive Director's Column
- 6 ACEC/A President's Column
- 7 ASPE President's Column
- 8 In the News
- 9 Advertiser Index
- 11 ACEC/A Affiliate Members
- 12 Calendar of Events

News and Features

16 **Pawlaczyk helps Walmart stay in front**
ACEC/A's new president is a Michigan native who now calls Arkansas home and helps the world's largest retailer expand its offerings.

18 **Tolley: Get other engineers involved**
ASPE's new president got involved because a boss told him he should go to a meeting. He says that kind of personal encouragement is how future members will be gained.

20 **Cover / Catastrophe(s) averted**
A fracture on a tie girder could have caused the Hernando de Soto Bridge to collapse into the Mississippi River. Now ARDOT must use the lessons learned to prevent future problems from going unnoticed.

22 **Spotlight / Jack Tyler Engineering's new site will test, train**
Jack Tyler Engineering's new location will feature Arkansas' only pump test pit capable of testing 300 horsepower pumps with a 14-inch pump discharge, as well as offer a control panel shop where cities' new hires can be trained.

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What a year it has been

Our ACEC-Arkansas fiscal year has come to an end, and what a year it has been! Most firms have completed return-to-office plans after COVID cases subsided in Arkansas. Many clients have resumed in-person meetings, and our professional societies are doing much the same. Life seems to be getting back to “normal,” and that includes our ACEC event calendar.

Thankfully, COVID didn't seem to hold our industry back in Arkansas. Reports I've heard from member firms is that clients continued projects, and business was good. Voters showed confidence in our economy and the Arkansas Department of Transportation by passing Issue 1 on Nov. 3, 2020. We have a federal government prioritizing infrastructure spending, and private industry is showing similar confidence with their capital expenditure plans. The engineering industry looks to come out of this pandemic in very good shape!

Despite the pandemic, ACEC-Arkansas had a busy year. We had a very engaged Government Affairs Committee who diligently monitored legislation on your behalf. Our Membership Committee recruited new members, and our Public Relations Committee undertook development of a new website. Our Programs & Seminars Committee continued to deal with the challenges of COVID, but we had a record year for ACEC



Steven Beam, P.E.
ACEC/A Past President

Engineering Excellence Awards submissions and have some exciting programs on the horizon!

With the end of my term as president of ACEC-Arkansas, I can't help but reflect on all of my time with ACEC. I started my involvement with ACEC-Arkansas nine years ago on the

Public Relations Committee. After time on the committee, I had the opportunity to join the board, and it's been a tremendous honor to be a part of such a great organization! ACEC-Arkansas is what it is today because of the hard work of so many before me and will become even better because of the work of all of those who come after. The volunteers who make up our board and committees are the reason ACEC-Arkansas is so well respected by officials in our state, our elected representatives in D.C., and ACEC's national organization.

Thank you for letting me serve! I'm looking forward to joining the ranks of past presidents of ACEC-Arkansas. We have an exceptional slate of officers for next year, but if you are interested in serving on one of our committees, please let us know. Committees will be getting filled soon.

Enjoy the rest of your summer! Be safe! Your continued support of ACEC-Arkansas is very much appreciated!

ACEC

**American Council of Engineering
Companies of Arkansas
Officers 2020-21**

President

Steve Pawlaczyk, P.E.
CEI Engineering Associates, Inc.
3108 SW Regency Parkway, Suite 2
Bentonville, AR 72712
800.433.4173

President-elect

Jerry Holder, P.E.
Garver
4701 Northshore Drive
North Little Rock, AR 72118
501.376.3633

Secretary

Paul Crawford, P.E., P.G.
FTN Associates
3 Innwood Circle, Suite 220
Little Rock, AR 72211
501.225.7779

Treasurer

Jerry Kelso, P.E.
Crafton Tull
10825 Financial Centre Parkway #300
Little Rock, AR 72211
501.664.3245

State Director

Mike Foster, P.E.
Pickering
317 South Church Street
Jonesboro, AR 72401
870.336.0117

State Director

Lawren Wilcox, P.E.
Garver
4701 Northshore Drive
North Little Rock, AR 72118
501.376.3633

State Director

Andy Davis, P.E.
Jack Tyler Engineering
6112 Patterson Rd.
Little Rock, AR 72209
501.562.2296

National Director

Matt Crafton, P.E.
Crafton Tull
901 N. 47th St., Suite 400
Rogers, AR 72756
479.636.4838

Immediate Past President

Steven Beam, P.E.
Burns & McDonnell
6815 Isaac's Orchard Road, Suite B3
Springdale, AR 72762
479.725.5460

Executive Director, ACEC/A & ASPE

Angie W. Cooper
ASPE and ACEC/A
P.O. Box 24902
Little Rock, AR 72221



**Arkansas Society of
Professional Engineers
Officers 2020-21**

President

Travis Tolley, P.E.
Crafton Tull
10825 Financial Centre Parkway #300
Little Rock, AR 72211
501.664.3245

President-elect

Kale Farmer, P.E., CFM
FTN Associates
124 W. Sunbridge Drive, Suite 3
Fayetteville, AR 72703
479.387.0848

Secretary-Treasurer

Tyler Avery, P.E.
Mid-South Engineering
1658 Malvern Avenue
Hot Springs, AR 71901
501.321.2276

State Director

Mary Kennedy, P.E.
Garver
4701 Northshore Drive
North Little Rock, AR 72118
501.376.3633

National Delegate

Brad Peterson, P.E., CFM, LEED AP
Crafton Tull
10825 Financial Centre Pkwy, Suite 300
Little Rock, AR 72211
501.664.3245

Past President

Daniel George, P.E.
B&F Engineering
928 Airport Road
Hot Springs, AR 71913-4618
501.767.2366

Building Arkansas

Editor & Publisher

Steve Brawner
Steve Brawner Communications
501.794.2012
brawnersteve@mac.com

Executive Editor

Angie Cooper
awcooper@arkansasengineers.org
ACEC/A - ASPE
P.O. Box 24902
Little Rock, AR 72221
Office 501.912.4099
arkansasengineers.org

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A subtle reminder

As engineers, we had a vested interest on May 11, 2021, when news broke of the Interstate 40 Hernando de Soto Bridge emergency closure. The steel-tied arch structure carries approximately 60,000 vehicles per day across the Mississippi River between West Memphis and Memphis. The “fracture critical” bridge was found to have a mechanical fracture, or crack, within the elements of a steel box beam critical to the structure. The bridge was closed as soon as possible, and a tragedy was avoided.

Engineers hold paramount the health, safety, and welfare of the public. Decisions by engineers to fulfill their most important professional duty are not always easy or popular among the masses, but these decisions and our responsibility to the public are what make us professional engineers. According to the Arkansas Trucking Association, the increased time to cross the Mississippi River using the Interstate 55 bridge instead of the Hernando de Soto Bridge at one point was costing the trucking industry \$2.4 million more a day. A once 15-minute commute had become an hour and 15-minute endeavor. These are not complications or inconveniences anyone wants to endure, but they are a reminder of our duty as professional engineers. Kudos to those involved with the immediate closure of the bridge as well as those working around the clock to complete the repairs and reopen the bridge.



Daniel George, P.E.
ASPE Past President

Another subtle reminder to us as engineers is evident in the figures above. Infrastructure! Our designs and projects we complete as engineers are often the backbone of our country with far-reaching impacts. Bridges, roads, dams, water/wastewater treatment and distribution, power trans-

mission, public buildings, and so many more are critical to the way we live. We are vital to the maintenance and improvement of so much critical infrastructure. Infrastructure funding is a daily topic at the national level, and we as engineers are using our voices to promote and encourage the need to address aging infrastructure.

June 30 was the closure of our fiscal year for ASPE. We had a successful Annual Conference in virtual format with an attendance on par with our typical in-person event. ASPE has fulfilled all our monetary commitments for the year with a slight surplus rolling over to next year. With the closure of our fiscal year comes the conclusion of my term as your ASPE president. We will be in great hands as Travis Tolley, P.E., with Crafton Tull fulfills this role next year. I also want to recognize Jim Vetter, P.E., with Olsson as our immediate past president. Jim concludes his service to ASPE as an officer this year, and his presence will certainly be missed on the ASPE board. It has been an honor and privilege to work with the entire ASPE board and our hard-working executive director, Angie Cooper.

In the News



FTN PROJECTS. From left, an FTN landfill design and construction quality assurance project, a wetlands wastewater treatment system, and a steambank restoration project.

FTN celebrates 40 years in business

FTN Associates is celebrating its 40th year in business this July with two of its founders, Dennis Ford, Ph.D., P.E., and Kent Thornton, Ph.D., still working there. Also working there are the first two employees who were hired, the husband and wife team of Marc Johnson, P.E., CFM, and Linda Johnson, P.E., CFM.

FTN, an employee-owned company, now has 80 engineers, environmental scientists, geologists, technicians, and other experts and support staff working in its Little Rock headquarters and branch offices in Fayetteville, Baton Rouge, and Chesterfield, Missouri.

How did FTN get started? Forty years ago, Ford, Thornton, and Joseph Norton, all employees of the U.S. Army Corps of Engineers Waterways Experiment Station in Vicksburg, Mississippi, decided to start a consulting firm.

FTN's first work was as a subcontractor to other firms. It received its first prime contract from Hot Springs to perform a wasteload study on Lake Catherine.

In July 1983, the company moved its offices from Vicksburg to Little Rock.

This location was more centrally located to its clients at the time and presented more opportunities to develop clients in the private sector.

Initially, FTN specialized in providing water quality modeling and analysis services to public agencies. Services were expanded to include water resources modeling and analysis and environmental assessments in the mid-1980s. These services were directed primarily at federal agencies such as the Corps of Engineers District Offices and the EPA. The initial EPA work focused on providing research and management support for the agency's Acid Deposition (Rain) Program.

Starting in the late 1980s, an effort was made to expand into the industrial environmental regulatory market sector. Services included water quality and NPDES permitting studies, wastewater management, solid waste management, and environmental site assessments and remedial activities. FTN's industrial market sector has grown while the firm still provides extensive services to numerous state and federal agencies, municipalities, counties,

other governmental entities, nongovernment organizations, and individuals.

The firm now categorizes its services into six general categories: water resources; Clean Water Act compliance; solid waste; natural resources; site investigation and remediation; and water and wastewater management.

Dr. Ford served as president of FTN until he decided to step down in the spring of 2018, when Paul Crawford, P.E., P.G., was selected as the company's president. He has been with FTN since 1999 and has more than 35 years of experience in environmental consulting.

Two employees join FTN in Little Rock



Wacaster



Cline

Two employees have joined FTN at its Little Rock headquarters.

Samantha Wacaster is a hydrologist/water quality analyst. She graduated from the University of Mississippi with a Master of Science in Hydrology and earned her Bachelor of Science in Applied Mathematics and Environmental

Science from the University of Central Arkansas. She has a strong background in GIS, water quality, and groundwater.

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Shelley Cline is FTN's controller. She graduated from the University of Central Arkansas with a degree in accounting and has more than 20 years of experience.

FTN's Kapil Dhital passes PE exam



Dhital

professional engineer.

FTN hired Kapil to work in its water resources section two years ago. He has a Bachelor of Science in Civil Engineering from the Institute of Engineering, Tribhuvan University in Nepal, and a Master

of Engineering in Civil Engineering from Lamar University in Texas.

He enjoys hiking, camping, traveling, and being outdoors with his wife.



Bicyclists travel across the Broadway Bridge connecting Little Rock and North Little Rock.

Crafton Tull is creating greenway plan for Metroplan

Crafton Tull recently kicked off a 15-month process to create the master plan for the Central Arkansas Regional Greenway.

In February 2020, Metroplan committed \$55 million over 10 years toward the implementation of a regional pathways network connecting Pulaski, Saline, Faulkner, and Lonoke Counties.

Crafton Tull is partnered with Toole Design on the project and will identify routes, establish design criteria, and prioritize investments based on public input.

In the News continues on page 10

Advertiser Index

Garver.....	Cover
Crist Engineers.....	2
Crafton Tull.....	3
Olsson.....	5
FTN Associates.....	8
Hawkins-Weir.....	9
B & F Engineering.....	10
Burns & McDonnell.....	11
McClelland Consulting Engineers.....	13
BXS Insurance.....	15
CEI.....	17
RP Power.....	19
ETEC.....	21
Jack Tyler Engineering.....	23

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Brett Peters is a Principal at HW and has served as its President & Chief Executive Officer since 2012. Under his leadership, HW has grown from a single office in Van Buren to include offices in Little Rock, Fayetteville, and Fort Smith, expanding its services to the entire State of Arkansas and eastern Oklahoma. He received his BSCE degree from the University of Arkansas, and is a licensed Professional Engineer in Arkansas and Oklahoma. His broad range of experience includes all facets of wet infrastructure, structural design, planning, and project management. Above all in his career, Brett values the relationships he has developed with his clients and the trust they place in him and in HW.

The son of a former utility water treatment plant supervisor, Brett is a lifelong resident of Crawford County, Arkansas where he lives with his wife Audra on their family farm near Mountainburg. They have three daughters, and enjoy spending time together as a family. His hobbies revolve around the great outdoors – hunting, camping, and hiking. Brett is an avid Arkansas baseball fan and he also enjoys turkey hunting in the Spring and deer hunting in the Fall.

Brett D. Peters, P.E.
President & CEO

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In the News (Cont'd)



Crafton Tull's LR projects for Amazon reaching final phase

Construction began in June on the final phase of \$11 million in projects at the Little Rock Port to accommodate increased traffic produced by the new Amazon fulfillment center and other companies planning to locate there.

Crafton Tull designed the widening and reconstruction of Zeuber Road, the widening of Fourche Dam Pike, and the extension of Pratt Rammel Road, pictured above.

The projects were carefully planned around grant funding limits and Amazon's aggressive construction schedule.

The Zeuber Road project was funded by the U.S. Economic Development Administration (EDA), Arkansas Economic Development Commission, the City of Little Rock, and Pulaski County. In 2019, the port hired Crafton Tull to complete a conceptual plan, preliminary engineering report, environmental narrative, and cost estimate for the EDA grant application. Pulaski County then hired Crafton Tull for the design of Zeuber Road, which was completed in December 2020.

The other projects were funded in part by EDA and Delta Regional Author-

ity grants. Crafton Tull worked with Pulaski County, the City of Little Rock, the Port of Little Rock, Little Rock Regional Chamber, and Central Arkansas Planning & Development District to apply for grant funding.

The design of Fourche Dam Pike and Pratt Rammel Road started in April 2020. Construction will start in June with an anticipated completion of early fall 2021.



NEWBIES. Pictured are, from left, Harrison Davis, Parker Coleman, Rachel Koehler, Cooper Stanley, Morgan Dulin, Isaiah DeVoss, Celestene Sebag, Ryan Fancher, and Faith Wilkerson. Not pictured are Ethan Drummond and Reed Waters.

Crafton Tull hires seven grads and four student interns

Crafton Tull has hired seven recent graduates and four student interns.

New hires are Parker Coleman, University of Mississippi; Isaiah DeVoss, University of Alberta; Cooper Stanley, Oklahoma State University; and Morgan Dulin, Ryan Fancher, Rachel Koehler, and Faith Wilkerson, University of Arkansas.

Coleman and Fancher joined the transportation team in Rogers, Dulin and Koehler joined the infrastructure team in

Rogers, DeVoss and Wilkerson joined the infrastructure team in Fayetteville, and Stanley joined the infrastructure team in Oklahoma City.

Student interns include Harrison Davis, Celestene Sebag, and Reed Waters, University of Arkansas; and Ethan Drummond, University of Arkansas Fort Smith.

Crafton Tull's Reed earns P.E. license



Hill

Crafton Tull's Reed Hill has earned his Arkansas Professional Engineering license.

Reed is a 2017 graduate of the University of Arkansas' biological engineering program. He has been a part of the design team for several large commercial site developments, including much of the uptown Rogers area.



B&F celebrates 50 years with office facelift

B&F Engineering, Inc. is celebrating 50 years in 2022 with a remodel of its nearly 40-year office facility.

The B&F office located at 928 Airport Road in Hot Springs was originally constructed and occupied by B&F in 1982. With only minor remodels, flooring replacements, and various painting projects over the years, the nearly 40-year-old office was showing its age and date of initial construction. In September 2020, B&F embarked on a comprehensive remodel of its office with every wall, floor, ceiling, light fixture, doorknob, door

JOB OPPORTUNITY

B & F Engineering, Inc. is seeking two professional engineers to join our Hot Springs office. Our civil and structural engineering groups want to add one licensed professional engineer within each area of expertise. The ideal candidate would possess an Arkansas P.E. license and have 6 – 10 years of experience.

Responsibilities: Perform civil or structural planning and design in conjunction with a senior professional engineer for commercial and industrial projects. Preparation of construc-

tion plans, technical specifications, bidding documents, and applicable reports should be anticipated. Knowledge of AutoCAD, Civil3D, Revit, Risa, or STAAD, as applicable, would be beneficial. Attend field inspections. Nominal travel 1-2 times every two months for site inspections.

Education: Bachelor's Degree in Civil Engineering or closely-related field.

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hinge, cabinet, etc., getting a makeover.

All 6,900 square feet of existing office space was overhauled. An additional 800 square feet of office space was added. The exterior workshop was reconfigured to provide optimum storage for surveying equipment and supplies. This freed up floor area within the existing conditioned space for office use rather than storage. The overall office count of the floor plan was increased by two for a total of 27 offices. Offices were equipped with new furniture throughout to match the modern décor.

The crown jewels of the remodel are the lobby and conference room. Moving existing walls and removing columns altogether created an open and inviting entry and lobby. The conference room not only received a modern look, but it also received modern technology. An interactive monitor paired with a state-of-the-art video conference setup will allow B&F to effectively collaborate with clients in person and virtually.

The remote work experiences gained at the beginning of the COVID-19 pandemic proved invaluable during the remodel process. Remodel work was completed in phases with some employees shuffling inside the office while others worked from home. The remodel began in September 2020 with an aggressive schedule, and B&F returned to normal operations in January 2021.

Olsson moves up on ENR list of top firms

Olsson moved up 18 spots to No. 76 on Engineering News-Record's Top 500 Design Firms list, the publication announced earlier this year.

This is the fourth consecutive year Olsson was ranked in the top 100. Olsson was ranked No. 94 in 2020.

ENR bases its rankings on revenue for design services performed during the previous year.

"The COVID-19 pandemic affected communities worldwide, but we were

In the News continues on page 12

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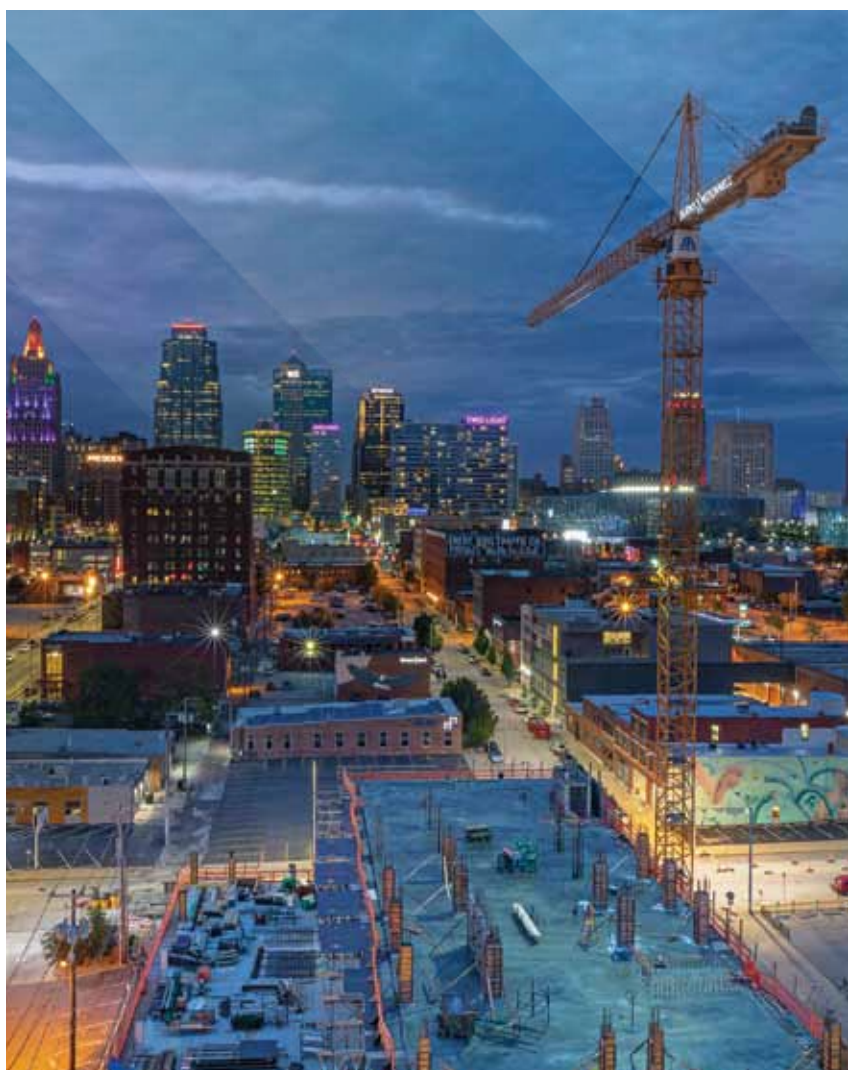
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In the News (Cont'd)

still able to work closely with our clients to keep projects on track,” said Brad Strittmatter, P.E., CEO of Olsson. “I can’t thank our valued clients and our amazing staff enough for partnering together to adapt during these difficult times. We feel very fortunate to have been successful in 2020.”

Olsson has been a fixture on ENR’s Top 500 Design Firms list since 1996 and first cracked the top 100 in 2018 at No. 98.

Olsson is based in Lincoln, Nebraska, has an office in Fayetteville, and does work throughout the United States. Since opening its doors in 1956, Olsson has continued to grow, employing nearly 1,500 people and serving thousands of clients across the firm’s geographic footprint.



Garver-led Southwest Trail moves closer to starting construction

A major recreation opportunity and economic driver in Central Arkansas has taken a big step toward becoming a reality. In March, the Federal Highway Administration issued a Finding of No Significant Impact (FONSI) for the Garver-led Southwest Trail project, a multi-use path connecting Pulaski, Saline, and Garland counties in Central Arkansas.

“It’s been a pleasure working with Pulaski, Saline, and Garland counties throughout this project so far, and we can’t wait to take the next big step,” said Garver Director of Federal Services Wallace Smith, P.E.

For more than a year, Garver, which is also leading design, public involvement, surveying, and other services for the project, analyzed options for the trail



route that will cover 60 miles through the three counties.

Garver reaches best ever rankings in ENR list of top firms

Over the past several years, Garver has become a fixture in the Top Design Firm lists released by both the regional and national editions of Engineering News-Record. This past spring, it reached company bests in both, ranking #106 nationally and #16 regionally.



Hoskins

CEO Brock Hoskins, P.E., explained that the rise is largely thanks to the company’s people.

“Our people have a passion for excellence, are driven by the willingness to perform and want to earn and maintain the role of being each client’s most trusted advisor,” Hoskins told the magazine.

MCE’s Krishnan in Arkansas Business’ Forty under 40 class

McClelland Consulting Engineers’ Maneesh Krishnan, P.E., M.ASCE, re-



Krishnan

cently was named to Arkansas Business’ 2021 Forty Under 40 class of honorees.

Krishnan has been employed by MCE for 13 years after earning his Master’s Degree in Civil Engineering with

an emphasis in transportation from the University of Arkansas at Fayetteville. He has quickly advanced within the firm. As assistant transportation department manager, he serves as a technical expert in transportation engineering and leads the design team for key transportation infrastructure projects.

Additionally, Krishnan holds a national role with the American Society of Civil Engineers and serves on three committees of the American Council of Engineering Companies.

MCE assists with solar project, designs Texarkana airport

McClelland Consulting Engineers was selected by Entergy Arkansas to assist with the construction surveying, geotechnical engineering, and materials testing services (density testing, concrete testing, and clean fill testing) for an 800-acre solar energy site in Searcy. The site will produce 100 megawatts of power and produce 10 megawatts of battery storage, making it the largest utility-owned solar project in the state.

MCE also is providing full engineering, planning, and design services for the Texarkana Regional Airport’s new taxiway and apron projects. The development is estimated to be completed in 2024 at a total cost of approximately \$41 million. The funding for this project is provided by the Federal Aviation Association, Arkansas Division of Aeronautics, the Texas Department of Transportation, and the Texarkana Regional Airport Authority.

A groundbreaking ceremony was held June 12.

On June 19th a ribbon-cutting ceremony was held for Phase One of the newly constructed Pine Bluff Downtown

Streetscape that runs on Main Street between Fourth Avenue and Barraque Street.

The city of Pine Bluff entrusted MCE to provide surveying, sidewalks, landscaping and irrigation. Phase One is estimated to be completed this summer at a cost of approximately \$1.9 million. The entire streetscape is estimated to be completed in the fall of 2022. The funding for this project is provided by the city of Pine Bluff, Arkansas Department of Transportation, and other sources.

MCE's Zach Hixson earns P.E. licensure

McClelland Consulting Engineers' Zach Hixson, P.E., has earned his professional engineering license by passing the Principles and Practice of Engineering exam.

He is a project engineer in MCE's Fayetteville office where he focuses on land development projects for municipalities and private entities in Northwest and Central

Arkansas. He earned his Bachelor of Science Degree in Civil Engineering from the University of Arkansas at Fayetteville in 2016 and joined MCE in 2017 after gaining a year of project management experience in commercial construction.



Hixson

MCE's Traywick earns geologist credentials

McClelland Consulting Engineers' geotechnical supervisor and project manager Cody Traywick, P.G., recently became a licensed professional geologist after passing the National Association of State Boards of Geology examination.

Traywick works out of the company's Fayetteville office coordinating and supervising geotechnical drilling operations company-wide. He also helps prepare fee proposals and reports relevant to

geotechnical investigations, and he plays an integral part in the oversight and coordination of operations related to Phase I Environmental Site Assessments.



Traywick

Traywick graduated from Arkansas Tech University in 2009 with bachelor's degree in geology. He joined the MCE team in 2017 with five years of experience in the geotechnical/geological field.

His expertise includes environmental site assessments, geotechnical evaluations/consultations, and laboratory analysis of soils. He has worked on numerous University of Arkansas projects including the Track High Performance Center and the Civil Engineering Research and Education Center, as well as projects like Texarkana Regional Airport's new terminal facility, parallel taxiway and apron; and Saracen Casino in Pine Bluff.

In the News continues on page 14



Award winning engineering firm looking for additional talent

MCE provides civil engineering, geotechnical engineering, survey, landscape architecture, water and materials laboratory testing from our offices in Fayetteville, Fort Smith, and Little Rock, Ark. and Tulsa, Okla.

Please see our open positions on our web page under Careers @ mce.us.com

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"This is very exciting news and we are happy for Cody and his accomplishment. The addition of his professional geologist license to our department will continue to allow growth and advancement of our capabilities and services provided," said Steven Head, P.E., who leads the company's Geotechnical Engineering Department.

Halff Associates' Short, Lentz join Little Rock office

Senior Transportation Technical Leader Van Short, P.E., and Principal Planner Christian Lentz, AICP, CNU-A, are relocating from Halff's Austin location to join the Little Rock office.



Short

Short is a project manager with more than 36 years of experience in highway design and transportation studies, including feasibility studies; design and reconstruction; plans, specifications and estimates; design-build; and utility coordination. He worked for the Texas Department of Transportation for six years in the Tyler and Dallas districts and has experience designing projects according to TxDOT standards. His project management experience includes roadway schematics, off-system bridges, multi-level interchanges, and multi-lane freeways.

Short earned his Bachelor of Science in Civil Engineering degree from Texas Tech University and is a licensed professional engineer in Arkansas, Texas, Oklahoma and Florida.

Transportation Team Leader James Barr, P.E., said "We are thrilled to have Van join our Little Rock office. He brings with him invaluable experience in all aspects of transportation design. He is a great addition to our growing Arkansas offices."

Having served as both a municipal and regional planning director, Lentz brings more than 25 years of public and private sector experience to the Little Rock office.



Lentz

multiple award-winning comprehensive, neighborhood, corridor and community design, urban redevelopment and code development initiatives.

Lentz earned a Bachelor of Arts in Political Science from the University of Central Florida and a Master of City and Regional Planning from Clemson University.

Little Rock Operations Manager James Arbuckle said, "Christian's national experience on major planning projects in communities of all sizes and character, and first-hand knowledge of the needs of local governments, make him a perfect fit for our office."



Halff helps history, Hot Springs baseball complex come to life

Halff Associates is helping plan Hot Springs' new five-field baseball complex with an eye to celebrating the city's rich baseball history as "the birthplace of Major League Baseball spring training."

Hot Springs served as the spring training facility for the Chicago White Stockings (now the Cubs), Boston Red Sox, Cincinnati Reds, Brooklyn (now Los Angeles) Dodgers and St. Louis Browns (now the Baltimore Orioles). The city's thermal waters and many fields played host to an estimated 134 future Hall of Famers such as Babe Ruth, Hank Aaron, Ty Cobb and Jackie Robinson.

When Halff Associates was hired to prepare a master plan and work alongside

At Halff, he has helped sustain and expand the firm's parks and recreation, trails and active transportation planning practices while overseeing a wide range of special plans and studies. These include

B&F Engineering on the construction documents for the artificial turf baseball complex, the company knew the importance of incorporating this rich history. Halff also provided landscape architecture and athletic field design services.

The park includes four Little League fields, one college-sized field with a grandstand, terraced seating areas featuring custom shade structures, and other amenities. Challenges included the small property size and overhead utility easement that runs along the park's entire east side, creating the need for the thoughtful placement of sports lighting poles. Since the site is located within the floodplain, careful planning of field elevations in conjunction with projected flood modeling was needed to provide a no-rise impact on the site. Questionable soils required a bridging subbase for the fields, and a steep hillside had to be manipulated to fit the program's needs on-site.

Completion is planned for September 2021.

Crow's Baker named ABC's top safety pro

The Crow Group's Brandon Baker has received the Associated Builders and Contractors (ABC) Safety Professional of the Year Award as part of its 2021 Excellence in Construction Awards. Baker was recognized during a virtual celebration hosted April 29.

This award is part of ABC Arkansas' Hall of Fame Awards and is designed to recognize an outstanding individual employed by an ABC member company who shows expertise and dedication to safety and health in the construction industry.

Crow Group President Brian Rohlman, P.E., said, "There is no one I can think of that is more deserving of this honor. Brandon has made an extremely positive impact on the safety culture of our company over the past three years. We are lucky to have him on our team."

Project Manager John Beck and Superintendent Craig Chambers were also recognized during the event for their work on the Delta Heritage Trail Phase V Construction with an Excellence in Construction Eagle Award.

Crow Group was the general contractor completing a 9.4-mile section of

the Delta Heritage Trail development in Southeast Arkansas for the Arkansas Department of Parks and Tourism. The project was located between Rohwer and Watson and included the construction of two trailheads, asphalt parking areas, concrete sidewalks, picnic areas, restroom facilities, pavilion, bike and walking trails, and the replacement of six railroad timber bridges with steel truss and concrete bridges.



CEI helped design the Razorback Regional Greenway trail, shown here in Rogers.

CEI forms Parks and Rec Department led by Jacob Shy

Bentonville-based CEI Engineering Associates has formed a Parks, Trails, and Recreation Department to meet the growing demand for outdoor recreation facilities and pathways across the region.

Jacob Shy has been promoted to lead the team as department manager. A Fay Jones School, University of Arkansas

landscape architect graduate, Shy has more than 15 years of experience focused on the development of new parks and trails peppered throughout Northwest Arkansas.



Shy

Over the last 15 years, Shy and CEI staff members have completed more than 100 miles of trails running from Fayetteville to Bella Vista, the area surrounding Siloam Springs, and multiple hard surface trails in Dallas. Recent notable local projects include the Crystal Bridges Museum of American Art Elevator/Tower and Trail, Centennial Park in Fayetteville, City of Van Buren master planning, and multiple recreational projects for the Arkansas Department of Parks and Tourism as its on-call engineers and landscape architects.

The Parks, Trails, and Recreation team members are all avid cyclists and use the trail system frequently.

Jeffrey Geurian, P.E., FASCE, CEI's president and CEO, stated, "In order to meet the multifaceted needs of existing and future clients, CEI has moved forward with establishing a team dedicated to the record growth and development of our region and other areas of the country desiring to provide their citizens with state-of-the-art recreational facilities. CEI is enthusiastically launching and is

committed to the growth and success of the Parks, Trails, and Recreation Department and its team members. Jacob and his team have the experience and tenacity necessary to drive the department and its projects forward."

ETEC hires Rigby for Arkansas sales

Environmental Technical Sales has hired Todd Rigby to assist Chad Cooley with sales in its Arkansas territory.

Rigby will focus on municipal and industrial projects while working with design engineers, end users and contractors. The company sells about 80 water and wastewater products in Arkansas including clarifiers and pumps.



Rigby

The Baton Rouge native earned a Bachelor's Degree in Civil Engineering from Louisiana State University and has experience in both engineering and manufacturing.

He previously worked for URS as a project manager, then worked for a representative firm and then as a manufacturers' representative for Boerger. ETEC was one of his clients there, leading to his current employment.

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Pawlaczyk helps Walmart stay in front

ACEC/A's new president is a Michigan native who now calls Arkansas home and helps the world's largest retailer expand its offerings.

When Walmart is planning a new offering or service, CEI's Steve Pawlaczyk, P.E., sometimes knows about it sooner than most people – including his co-workers and his wife.

Pawlaczyk, 49, has been in charge of CEI's Walmart program since 2010, when he came to Arkansas from his home state of Michigan. He also manages CEI's office in Fresno, California.

Pawlaczyk has helped design at least 20 of Walmart's pickup areas in recent years. He helped design the first, a standalone location on Walton and J Streets. Buildings must be reconfigured and parking lots redesigned to ensure enough parking spaces are available. The COVID-19 pandemic accelerated that work.

"At the beginning, we were kind of wondering, are we going to stay busy? Are clients going to put things on hold? But it never really slowed down for us," he said.

CEI is helping Walmart design its new corporate campus in Bentonville. That work includes designing stormwater pollution prevention plans. It's also helping the prime contractor, Walter P. Moore, navigate the company and the community.

Other recent projects he's been involved with have included Walmart's health clinic in Springdale and a drone launching pad at the Pea Ridge store.

When he arrived at CEI, he managed Walmart's Arkansas projects such as new parking lots. After about a year, he started doing site selection, design and construction work for new stores in Arkansas, including Neighborhood Market grocery stores. CEI is helping the retailer as it backfills new fuel stations at existing stores.

"We're kind of their protoengineer, meaning if they're doing a program, they'll have us help write the guidelines, do the prototype plans, what they want the ideal site to look like," he said.



Asked about the privacy expected when working with the world's largest retailer, Pawlaczyk said, "There's things I can't even talk to people here at CEI and let them know what's going on. ... Once it goes public or once we submit to the city, that sort of thing, and it becomes public knowledge, I can share that stuff, but no, I don't even share it with my wife."

Pawlaczyk said he enjoys working with Walmart because "They give us a lot of responsibility, and they pretty much let us do our job."

"The nice thing about them is, they may slow down like they are from a new store program, but they're always doing something," he later said. "They're always trying to tweak and change and stay relevant, and stay ahead of Amazon in terms of total dollars and revenue and sales."

As this year's ACEC/A chairman, Pawlaczyk said his top goal during this

nonlegislative year is gaining membership. The best way to do that is for firms to reach out to other firms. CEI subcontracts geotechnical work to Building and Earth Sciences. Pawlaczyk encouraged branch manager Joe Vistad, P.E., to join ACEC/A, which it did after Executive Director Angie W. Cooper closed the deal.

"[Engineering firms] are competitors like you say, but trying to get people to recognize if we join together, we'll advance our industry that much more," he said. "Instead of cannibalizing each other, fighting each other, undercutting each other pricewise, we'll do better if we promote our industry rather than tear each other down."

Pawlaczyk grew up in Oxford, Michigan, a small town about an hour north of Detroit. His dad was a surveyor who had worked his way up to executive vice president in a company that was similar to

CEI. Pawlaczyk would help him do survey work on the weekend. Between the eighth and ninth grades, he started doing hand drafting, and he would work for the company as a summer intern.

"So I pretty much knew going into high school and into college what I was going to do," he said. "I loved what I did there, and so I just pursued a civil engineering degree."

Pawlaczyk believes the engineering industry will continue to grow. The challenge will be finding people to fill all the roles. Current engineers can help recruit future engineers to the profession.

"When I was in high school and kids were talking about what they're going to do, I'd say, 'I'm going to be a civil engineer,' and most kids had no idea what that was," he said. "Trying to educate that next generation into understanding what we do and why it's important and how we do things. ..."

"People don't necessarily think much about civil engineers unless there's a

problem. There's potholes in the road, or drainage isn't working, cars are flooded because the parking lot flooded, that type of thing. Getting them to understand that this is a worthwhile career, and it's something that can help make the country and the planet better."

He graduated from Lawrence Technological University with a Bachelor's Degree in Civil Engineering. His future wife, Nikki, was a year behind him in high school and graduated with an electrical engineering degree from the same university on the same scholarship. They married after his senior year. He worked for a couple of engineering firms and then spent 11 years doing mostly retail site development at what is now Atwell, becoming an office manager and branch manager.

Work in Michigan was slowing. The auto industry was struggling, land development had shut down, and they figured they would have to move out of state. A recruiter called and asked what he

thought of Arkansas. He hadn't thought much about the state, but he came here for a couple of interviews at CEI.

"That was a good fit for me because Walmart's kind of like the Holy Grail for land development engineers because they get us involved right from the beginning," he said.

There were some adjustments to be made. After playing high school and college hockey in Michigan, he figured his playing days were over after he moved to Arkansas. One day he was having dinner with his boss and his wife when she mentioned that the Jones Center in Springdale had an ice rink. That's when he got back into the sport. He played defense when he was younger but now is a forward, and he coached his son's team.

He and Nikki have three children: Nathan, 18; David, 16; and Karlie, 14. Nathan and Karlie share a birthday on Dec. 14. Nikki owns Capture Me Photography by Nicole and takes wedding, real estate and sports team photos.

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Tolley: Get other engineers involved

ASPE's new president got involved because a boss told him he should go to a meeting. He says that kind of encouragement is how future members will be gained.

Travis Tolley, P.E., got involved in ASPE because one of his bosses encouraged him to do so, and that's how he believes other engineers will get involved.

"I wouldn't have sought that out probably on my own, but I had a project manager, a supervisor, that said, 'Hey, we're going to go to the ASPE meeting today. I think it would be good for you to get involved,'" he said. "And at that point, that was it. I mean, I went. I said, 'This is someone who has authority over me, and he thinks that this is beneficial, and so I'm going to go to this.' And that's ultimately what it's going to take."

Tolley, a project manager at Crafton Tull, has been with the firm's Little Rock office since he graduated from the University of Arkansas in 2005 with a Bach-

elor's Degree in Civil Engineering. He earned his professional engineering license in 2009.

He has designed apartment projects in Arkansas, Oklahoma, Mississippi, Louisiana and Missouri. Major clients have included Lindsey Management and Rich-Smith Development. He's also done some industrial work and rail projects, including a rail spur with the Southwest Arkansas Intermodal Authority and warehouse expansions in Jonesboro and at the port in North Little Rock. He said he's guilty of pointing out his projects to his wife and two children as he drives through town.

"I really enjoy the details," he said. "I really like getting down in the weeds on some of the details associated with the site – grading particularly. Just taking it from paver to certificate of occupancy. Making it a successful project for the owner, for the developer, just getting them to their end goal, and getting down in the weeds of the plans and making sure that we've got a successful project."

The new ASPE president said some firms encourage their engineers to get

involved by paying membership fees, but they'll only want to do so if engineers are willing to participate. And he has been willing. Among his activities has been the Emerging Leaders program, a joint APSE-ACEC/A effort that trains engineering and design professionals in communication and other soft skills. He became an ASPE officer after having served in all the officer positions with the ASPE Central Chapter.

Engineers have society's trust

Tolley takes the ASPE's helm at a time when engineering's importance has been in the news a lot lately – specifically, the crack in the Hernando de Soto bridge spanning the Mississippi River that was discovered by Michael Baker International inspectors, and the collapse of the Miami condo whose structural problems had been identified years earlier by an engineer.

"One thing that we have as engineers is trust," he said. "Like in surveys upon surveys, trust in engineers is so high, and engineers and (the American Society of

Civil Engineers) to their credit for years now have been stating we've got some infrastructure deficiencies that need to be addressed. ... I think people are listening, and it's terrible that it has taken some of these events to, I think, really magnify what ASCE specifically has been identifying lately as some issues."

He also takes over leadership of ASPE during the second year of the COVID-19 pandemic, which he sees as "a great chance to kind of start anew." ASPE and its chapters didn't meet and then met virtually.

There were positive aspects to those changes in terms of time efficiency and finding speakers, but the personal connections were lost.

"Just the interaction and just talking to people from other firms. Hey, what do you guys got going on? What's keeping you busy? A lot of that stuff, you're not able to do in those Zooms and Microsoft Team meetings, and so ... I think it's a chance to kind of refresh and get back

into those meetings and kind of interact with the folks," he said.

The pandemic affected Tolley in another way: He gained what he called a "COVID 10 to 15." He wasn't feeling his best, so his doctor encouraged him to lose weight. He more than lost what he had gained. He's lost 50 pounds since October using intermittent fasting – basically skipping breakfast and eating a late lunch – along with increasing his water consumption, cutting back on sodas, and working out in the office gym.

"I was having to eat Tums almost daily, and since kind of getting in better shape and everything, I don't have to deal with that anymore, which is really nice," he said.

Tolley wasn't necessarily destined to become a civil engineer, but the signs pointed in that direction. He enjoyed math and science growing up, and his father, Steve, was a commercial carpenter. He started college as a mechanical engineering student but only lasted about

a semester. He called his mother, Ellen, questioning if he could make it and noting that friends in business school were not working as hard as he was. A friend who was majoring in civil engineering encouraged him to go that route. It was a better fit for the son of a commercial carpenter.

Tolley grew up in Perryville and always intended to come back after graduating from college, which he did. He's committed to staying there. His wife, Kelly, is a counselor at the high school. He and his family are very involved in Perryville Second Baptist Church, and he is president of the Perryville Youth Association, which is active in youth sports.

His children, Ella, 12, and Carter, 10, play sports. When Building Arkansas interviewed him June 29, he was looking forward to a couple of weeks in July when baseball and softball season would be over, and the family would have its only opportunity of the year to have some time off.

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WORKERS make repairs to the Hernando de Soto Bridge, which has been closed since May 11 after Michael Baker International inspectors discovered a significant fracture in one of the bridge's two supporting tie girders.

Catastrophe(s) averted

A fracture on a tie girder could have caused the Hernando de Soto Bridge to collapse into the Mississippi River. Now ARDOT must use the lessons learned to prevent future problems from going unnoticed.

A potential collapse of the Hernando de Soto Bridge was averted when Michael Baker International engineers discovered a fracture in a tie girder May 11, and now the Arkansas Department of Transportation is working to ensure the mistakes that could have led to a catastrophe aren't repeated.

Steve Frisbee, P.E., assistant chief engineer for operations, said ARDOT is still researching how it failed to identify the fracture, which closed the bridge connecting Arkansas and Tennessee across the Mississippi River. It has asked the U.S. Office of Inspector General to investigate and the Federal Highway Administration to perform a special assessment. The FHWA has interviewed staff members; researched documentation, policies and

procedures; and is performing random bridge inspections. It will return with recommended areas of improvement for the department.

Also, Frisbee said, "We have already put out requests for interest for consultant engineering firms to basically look at our program and give us recommendations on how to make us the best of the best."

Soon after the fracture was discovered, the department discovered a bridge inspector in charge of that area of the bridge had failed to adhere to basic standards of inspecting the tie girder at an arm's length distance. He was promptly fired.

"We believe he was not being careful and not doing his job of inspecting 100%," Frisbee said. "And these guys are trained. I've been through the training. The key part of the NBIS, National Bridge Inspection [Standards] program training, is what we call hands-on, foot by foot, every part of the bridge. That is what makes the program a success, and he was not following the training that he was given."

But the fact that the crack went undiscovered for so long, despite it being clear-

ly visible in 2019 drone footage and apparently visible since at least 2016, means ARDOT must make bigger changes. Hence, the assessments by the inspector general and the FHWA.

One change the department will make will be ensuring the same inspector or team doesn't check the same part of a bridge two inspections in a row, Frisbee said. Bridges are inspected every two years, and in the interim year a special inspection is performed of fracture critical members such as tie girders and cables. That change will allow a second set of eyes to see a particular part of a bridge. The fired bridge inspector had been inspecting that location for years.

The department inspects 16,000 bridges with 27 teams of bridge inspectors. Frisbee said the department will be looking to beef up its bridge inspection program. While it hopes to grow the program in house and improve its quality control/quality assurance (QCQA), it also in the interim will rely on consultants. He said some other state Departments of Transportation rely entirely on consultants for their inspection programs.

“To be able to do more QCQA, we’re going to have to grow this part of the program, so yes, we’re already looking at that within the budget that we have,” he said. “And it’s just, you take money from one part of the budget, you’ve got to take it from another part, so this may result in less overlays in certain areas or less bridgework in certain areas, and the needs are great. But yes, I can say that we’re waiting to hear from the feds, but we are confident that we’re going to have to grow the bridge inspection program to adequately provide the QCQA that we would like to provide.”

No one will ever know how close the bridge came to collapsing, but it could have happened. The 1,800-foot tie girder is one of two spanning the length of the bridge, and it’s a fracture critical piece, meaning its failure could cause the bridge to collapse. The pieces along the top and outside of the box-shaped tie girder were completely fractured. Michael Baker International engineers were doing a special inspection of the trusses and cables above the bridge deck when they discovered it. They immediately called ARDOT and 911 to alert authorities to shut down the bridge.

Frisbee compared the bridge to a compound bow, with the tie girder serving as the string. Cutting the string even partially would cause it to snap and the bow to open. In the case of the bridge, the arches would expand and push against the piers, leading to a collapse.

“It was definitely a serious issue, and there have been bridge collapses in the past. ... The engineers don’t really understand at this point how it didn’t fall,” he said. “We definitely were blessed.”

Maintenance responsibilities for the bridge are shared by ARDOT and the Tennessee Department of Transportation, with Arkansas in charge of inspections and Tennessee in charge of repairs. The expenses are split between the states. Kiewit Corporation is the contractor.

Frisbee said repairs are costing the two departments \$10 million to \$30 million total, which is well within the cost of a small bridge. The cost to the motoring public caused by congestion and delays is far higher. For a time, the Arkansas Trucking Association was estimating delays were costing that industry \$2.4 million per day. A new bridge would cost \$1.5 to \$2 billion.

Frisbee said the fracture was mostly repaired by the end of the July 4 weekend, and the repair process was moving into Phase 3. Post-tensioning techniques were being applied to squeeze the tie girder back together, and 2-3-inch steel plates were being bolted onto both sides to support the bridge’s weight.

The fracture occurred at a location welded when the tie girder was fabricated in the mid- to late-1960s. Welds are more prone to separating than bolts are. The lack of fusion may have been present from the day it was welded.

Every weld – more than 500 locations – on the two tie girders subsequently was tested ultrasonically. Nine additional locations initially were identified as places where steel plating needed to be added. That number grew to 16. In all of those locations, the weakness would not have been visible to the naked eye, but core samples analyzed in a laboratory found at least two had microscopic cracks within the metal, Frisbee said.

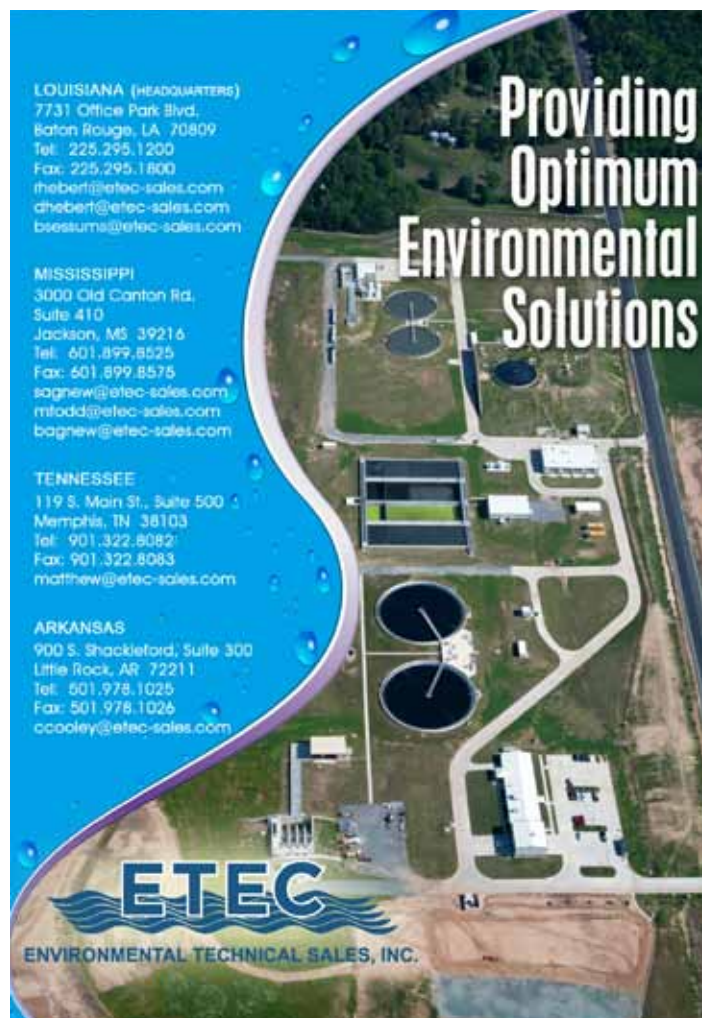
Meanwhile, the department is pursuing other leads. Photos snapped in 2016 by a kayaker show what appears to be the frac-

ture stretching across most of the outside of the beam. Frisbee said ARDOT has provided the evidence to the U.S. Office of Inspector General but is assuming it accurately depicts the growing crack. A week or two after the bridge was closed, a Facebook video taken by a man in a fishing boat showed what appeared to be another crack. Upon inspection, it was a harmless marking caused by a cable that had been wrapped around the beam during a retrofit, construction, or maintenance job. There are other places on the bridge where scuff marks have been caused by long antennas attached to boats passing underneath.

Had the fracture not been discovered, the bridge could have collapsed, sending motorists plunging 100 feet to the Mississippi River in a scene similar to the collapse of the Interstate 35W bridge in Minneapolis in 2007.

Thankfully, that didn’t happen. This time, nobody had to die in order to remind Americans and policymakers of infrastructure’s importance. Meanwhile, lessons can be learned about how to keep bridges healthy, and how to find out sooner when they’re not.

“We count our blessings every day that it was (discovered), and tragedy was averted, and what we’ve been telling a lot of people is this is the best news that you can receive from a worst case,” Frisbee said. “It’s like a cancer diagnosis that was caught early, and everybody’s going to learn from this, from us to the entire nation because we really believe we’re not in much different shape than many other states.”



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Fax: 901.322.8083
matthew@etec-sales.com

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ACEC/A Member Spotlight

Jack Tyler's new site will test, train

Facility will be able to submerge 300-hp pumps, train city hires on control panels

Jack Tyler Engineering's new location will feature Arkansas' only pump test pit capable of testing 300 horsepower pumps with a 14-inch pump discharge, as well as offer a control panel shop where cities' new hires can be trained.

The remodeled building at 6301 South University in Little Rock is expected to open in the fourth quarter, said Stephen Eoff, the water and wastewater equipment distributor's vice president. It will quadruple its shop and service space at the current headquarters built in 1968.

The pump test pit will allow repairs and tests of any kind of submersible pump. The owner will be able to watch the test online. The company will be able to show the pump has been repaired back to the original manufacturers' specs.

The control panel shop will help train cities' new hires in pumps, fluids and controls.

"The talent gap in the industry is significant, and I think everybody is facing that challenge of, hey, how do we find good people?" Eoff said. "So we want to help the cities shorten their learning curves of their team members to be able to send them over here, and we can teach them what a pump control panel is and how it works and how they can troubleshoot it in the field."

Jack Tyler Engineering distributes and services water and wastewater equipment, including pumps, controls and compressed air. Municipalities are its biggest customers, followed by industrial and then commercial clients. It works closely with consulting engineers at design firms. It services Arkansas, Oklahoma, northeast Texas, western Tennessee, and northern Mississippi.

The company now has 44 employees and has grown in recent years through acquisitions. In 2017, it added BT Environmental's three employees. Last year it bought New Water Systems, a water and wastewater processing distributor. That merger came about as a result of a



JACK TYLER PROJECTS. Top left, Jack Tyler Engineering commissioned the first Triton 2.0 from Aeration Industries at Wynne Water Utilities in April. This bridge-mounted unit offers superior mixing and a large reduction in energy usage. The oxidation ditch it serves achieved a dissolved oxygen level of 3.5 from 1 in 35 minutes, while the ditch containing existing aerators took 3.5 hours to achieve the same results. Top right, an AWI stainless steel backwash trough Jack Tyler provided the Russellville City Corporation water treatment plant. Left, Jack Tyler provided equipment for the Fairwood lift station in Hot Springs.

week Eoff spent at a business conference in Nashville with New Water Systems' owner, Andy Davis, P.E.

"He was primarily process, and I was primarily pumps, and we just kind of looked at it and said, 'Well, can we be stronger together?'" Eoff said.

Jack Tyler, P.E., founded his company June 3, 1963, in his living room. Tyler had studied mechanical engineering at the University of Texas at Austin, paused his studies to serve in the Navy during World War II, and earned his degree when he returned. He had been impressed by Flygt pumps while working at a New Mexico mine site. While in Stillwater, Oklahoma, he concluded Little Rock was an untapped market, so he set up shop there and started selling the pumps, which the company still sells and services.

Tyler's son-in-law, Sherman Eoff, joined the company in 1975 after graduating from the University of Arkansas. His wife, Cindy, Tyler's daughter, was active in the company in its office operations until she retired in 2011.

Stephen Eoff joined the company in 2013. After earning a computer engineering degree in 2003, he had acted on his

dad's and grandfather's advice and spent 10 years gaining real-world experience. He earned a mechanical engineering degree through the University of Alabama's online degree program and is in the process of earning his professional engineer's license.

He will take over leadership of the company on Feb. 2, 2023, the day his dad turns 70.

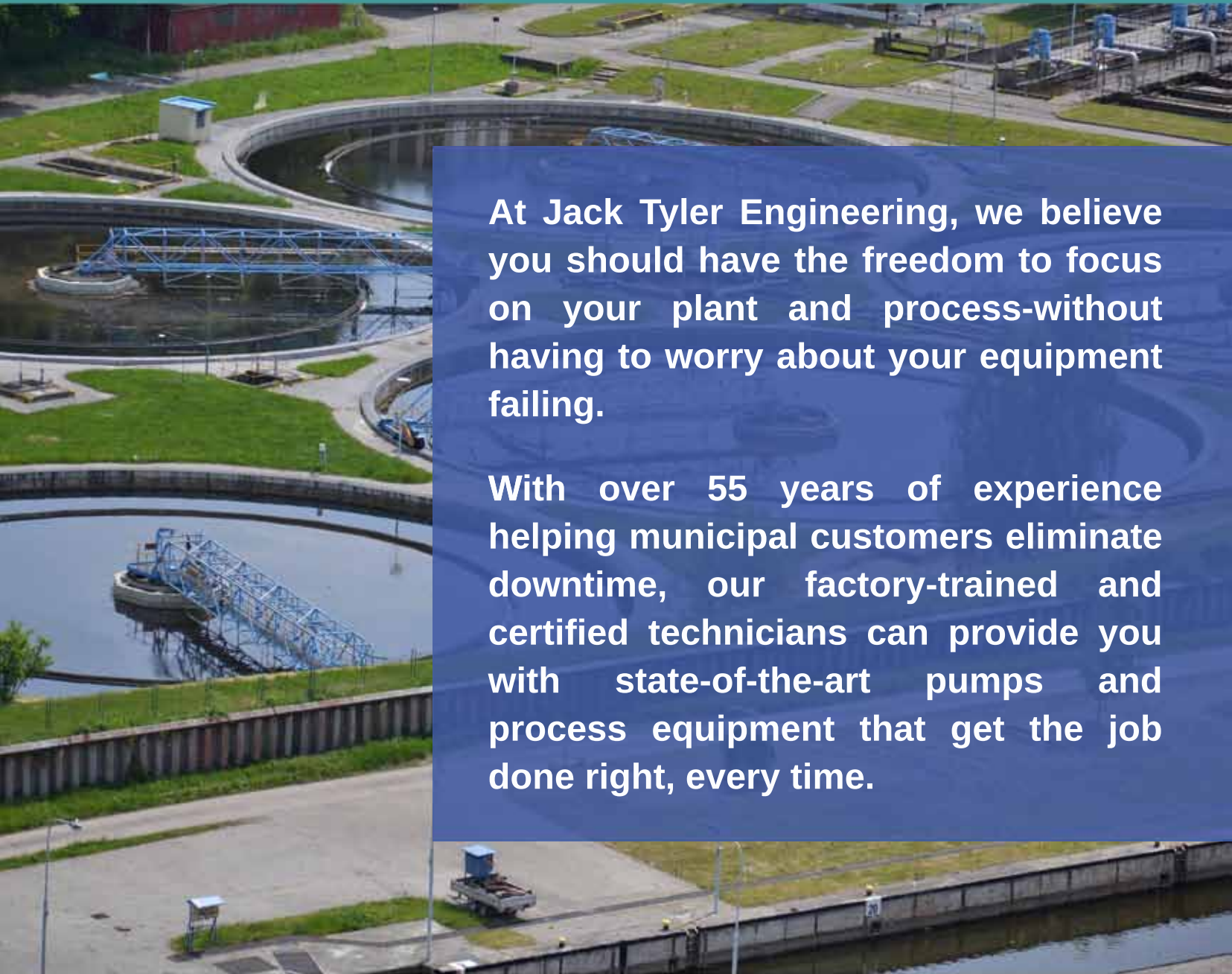
During the dot-com years of the late 1990s, Sherman Eoff decided the company should offer what customers could not otherwise purchase online, which was service. That emphasis continues.

"My dad has just drilled into everybody here competency; know what you're doing; make sure that when you leave the job site that it's done correctly the first time," Stephen Eoff said. "Take care of the customers. Don't walk away until it's right. Don't leave someone in a bind. Be easy to do business with. Work with excellence."

"That's just so much of our culture is that we want to take care of our customers, and we want to serve them. We're in it for a career, not a year, and it's not about one project, but it's about taking care of our customers for generations."



THE BEST PUMPS, PROCESS EQUIPMENT & REPAIR SERVICES ON THE MARKET

An aerial photograph of a wastewater treatment plant. The image shows several large, circular clarifiers with metal skimmers on top. There are also rectangular aeration tanks and various pipes and structures throughout the facility. The surrounding area is green with grass and some trees.

At Jack Tyler Engineering, we believe you should have the freedom to focus on your plant and process-without having to worry about your equipment failing.

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Beyond the design.

At Garver, we go beyond conference calls and project designs—our experts team up to help communities realize their long-term potential. Urban Planner Juliet Richey and a team of professionals work to solve the issues Northwest Arkansas faces today, and the challenges they'll face tomorrow.

