ENGINEERING'S FINEST

Gannett Fleming Responds to Landslide
Developing a Culture of Teamwork
M&A Deal Activity Continues Record Pace

WSP USA HIGHLIGHTS A STELLAR LINEUP OF 2019 ENGINEERING EXCELLENCE AWARD WINNERS

MAY/JUNE 2019
It’s just good business sense

A full suite of business insurance products offered through an exclusive agreement with The Hartford

With business insurance coverage features specifically designed for ACEC members and engineering firms, insuring with the ACEC BIT is an important next step for your firm. Visit acecbit.org or contact The Hartford at 888-871-8191 and let them know you want to take full advantage of your membership.

Professional Liability Insurance is available too!

Greyling, the BIT Program Administrator, individually brokers professional liability coverage for each engineering firm. With Greyling, you’ll get an optimal balance of:

- Coverage terms
- Insurance limits
- Deductible options
- Premium to fit your budget
- Risk Management advice and resources.

GET A FREE QUOTE WITH GREYLING/EPIC TODAY.

Visit acecbit.org, call Greyling at 833.223.2248, or email acecbit@greyling.com.

ACEC Business Insurance Trust - Engineered for Peace of Mind
ACEC 2019 ENGINEERING EXCELLENCE AWARDS

196 engineering projects from around the world honored at ACEC’s annual EEA Gala in Washington, D.C.
No matter how high the traffic volume, there’s an asphalt design that can handle it. Through pavement design and material selection, asphalt pavements can be built to carry any load. Plus specialty mixes can be engineered to meet specific needs and climate conditions, all while remaining cost-effective to build and easy to maintain.

WHEN IT COMES TO FLEXIBILITY ASPHALT PERFORMS

SUSTAINABILITY  INNOVATION  VALUE  FLEXIBILITY

LEARN MORE AT WWW.DRIVEASPHALT.ORG
ACEC's award-winning bi-monthly magazine Engineering Inc. provides expert analysis on all issues affecting the overall business of engineering. Other highlights include in-depth interviews with major policy makers whose decisions impact bottom lines; updates on critical advocacy issues and industry news, best practice management trends and marketplace projections, along with member firm innovations and announcements.

This article and editorial appearing in this magazine do not represent an official ACEC position or policy unless specifically identified as doing so.

DEPARTMENTS

4 FROM ACEC TO YOU
Annual Convention is an impressive show of force.

6 MARKET WATCH
Retail sector evolves to maintain connection with consumers.

8 LEGISLATIVE ACTION
ACEC calls on lawmakers to continue with infrastructure agenda.

10 THE PRIVATE SIDE
Second wave of shale revolution forthcoming; P3s offer diverse revenue streams.

68 IN THE NEWS
Black & Veatch tests drone flight limits; Burns & McDonnell invests in STEM.

FEATURES

12 2019 ANNUAL CONVENTION RECAP
More than 1,600 ACEC members and guests attend the Annual Convention and Legislative Summit in Washington, D.C.

54 IMMEDIATE ACTION REQUIRED
Gannett Fleming leads project team to reopen PennDOT’s Route 30 only 81 days after catastrophic landslide.

62 EFFECTIVE TEAM BUILDING STRATEGIES
A culture of teamwork helps to build internal relationships while providing a competitive advantage.

70 MERGERS AND ACQUISITIONS
Torrid pace of deal activity continues in 2019.

73 MEMBERS IN THE NEWS
Cummings named president and CEO of T.Y. Lin International; Sherry named CEO of Merrick & Co.; Richards promoted to president and CEO of Strand Associates; James appointed president of KAI Enterprises.

76 BUSINESS INSIGHTS
Pathways to Executive Leadership Class 4; new publications focus on economics and engineering.
Annual Convention is an Impressive Show of Force

The recently concluded 2019 Annual Convention in Washington, D.C., was a fast-paced and energizing event reflecting the engineering marketplace that spawned record attendance at our Engineering Excellence Awards Gala. We celebrated an abundance of projects and firms that are riding a wave of prosperity, which our Member Firms hope to enjoy for years to come.

For an in-depth look at the 2019 economic trends and indicators, we encourage you to review the Q1 2019 & Annual Outlook. The economic outlook was produced by ACEC’s Business Resources and Education staff, and released during the Convention (visit www.acec.org/publications/acec-private-industry-briefs/).

As we concluded the Convention, we gave thanks to Manish D. Kothari who stepped down after an action-packed year as ACEC’s chairman. We look forward to working with new Council Chairman Mitchel W. Simpler, managing partner of Jaros, Baum & Bolles, along with the other new members of the Executive Committee.

A major Convention highlight was the hundreds of ACEC “citizen lobbyists” who visited more than 300 congressional offices to promote the Council’s legislative agenda, underscored by infrastructure investment and sustainable energy (see page 12).

The Engineering Excellence Awards Gala, hosted by Ross Shafer, was celebrated in grand style by nearly 800 attendees who honored the world’s finest engineering efforts. Congratulations to WSP USA in winning the 2019 Grand Conceptor Engineering Inc. also features a captivating chronicle on how Gannett Fleming leaders helped prevent serious injuries from a major landslide that destroyed a section of a critical Pennsylvania highway (see page 54).

Finally, after engaging with hundreds of industry leaders at the Convention—from all corners of the nation—it reminds us of the truly immense expertise, commitment and coast-to-coast contributions made by our Member Firms. Together, we are a force and a powerful catalyst for positive change.

ACEC Nation is one of a kind. Thank you for being part of it.
THERE’S NOTHING SMALL ABOUT YOUR BUSINESS

Dell Small Business Technology Advisors are committed to helping you navigate your tech needs with the right solutions, advice and dedicated one-on-one partnership.

TECH. ADVICE. PARTNERSHIP.

Dell Precision 7730 with an 8th Gen Intel® Core™ i5 processor
Starting at $1,399

Get in touch today
877-BUY-DELL
Dell.com/SmallBusinessPartner

*Offers subject to change. Taxes, shipping, and other fees apply. Dell reserves the right to cancel orders arising from pricing or other errors. Intel, the Intel Logo, Intel Inside, Intel Core, and Core Inside are trademarks of Intel Corporation or its subsidiaries in the U.S. and/or other countries. Microsoft and Windows are trademarks of Microsoft Corporation in the U.S. and/or other countries. Screens simulated, subject to change. Windows Store apps sold separately. App availability and experience may vary by market. Dell, EMC, and other trademarks are trademarks of Dell Inc. or its subsidiaries. © 2019 Dell Inc. All rights reserved. 297548
Strong Retail Sector Adapts to Connect with Customers
By Gerry Donohue

The predicted retail apocalypse due to the explosive growth of online stores never happened. Construction put-in-place in the retail sector grew by more than 11 percent annually from 2013 to 2018, outpacing most other sectors and the construction market as a whole.

“The retail sector is more fluid than most,” says Greg Steinmetz, who leads the retail practice at Dunham Associates, a mechanical and electrical consulting engineering firm in Minneapolis. “It’s quicker moving, spotting trends early and responding rapidly.”

Rather than roll over due to the onslaught of virtual shopping, the brick-and-mortar retail sector has adapted to a new market reality and changed to meet the demands of the buying public.

“Our clients are very savvy,” says Jennifer Bennett, who heads the Quad Cities office of Shive-Hattery. “They are thought leaders and are ahead of the market.”

For example, in recent years the construction focus in the sector has shifted. “Rather than new construction going up, we’re seeing a shift to remodeling,” says Jason Wollum, who leads the retail practice at Henderson Engineers in Kansas City, Missouri. “A lot of the experts say we have more retail space in the U.S. than we should have.”

The demise of several large retailers, such as Sears and Sports Authority, has opened opportunities for other companies. “We’re doing a lot of work subdividing those big-box spaces,” says Steinmetz.

The retail sector lives and dies by the national economy. When markets are growing, people are buying and retail clients are building. When the economy stumbles, so does the retail sector.

“The past three or four years have been incredibly strong,” says Wollum. “In the short term, we expect the market to continue to perform well.”

Many economic forecasters anticipate that the nation’s record economic expansion will slow—and perhaps fall into recession—at some point in the next two years. Reflecting this expectation, the management consulting firm FMI forecasts that retail construction put-in-place will continue to grow in 2019, up by 4 percent, but then decline by 3 percent in 2020 and 1 percent in 2021, before rebounding to grow by 3 percent in 2022.

FMI forecasts that retail construction put-in-place will continue to grow in 2019, up by 4 percent, but then decline by 3 percent in 2020 and 1 percent in 2021, before rebounding to grow by 3 percent in 2022.

TAPPING INTO OMNICHANNEL

“The buzzword in the industry right now is omnichannel,” says Wollum. “It describes how..."
retailers are using different ways to connect with their customers—online, mobile and physical retail.”

The omnichannel impact on store design has been significant.

To lure buyers away from their computers, retailers are creating a great customer experience, says Bennett. “They’re focusing on beautiful stores with higher end finishes and catering to the customer when they walk in the door,” she says.

As a result, says Wollum, clients are shying away from cookie-cutter designs. “Retail stores are becoming more customized with the focus on customer service. Retailers are looking to create more experiential spaces,” he says.

Store spaces are also getting smaller. “People are changing the way they shop,” says Wollum. “They go to the store to get an idea of what they want and then order it online and have it delivered to their front door. Stores don’t need to carry an extensive inventory or have a large sales floor.”

“Convenience and transaction time will continue to be a key for capturing more of the market,” adds Bennett. “One of our grocery clients is adding smaller brick-and-mortar stores throughout their service area.”

Many retailers now offer buy online, pick up in store options, allocating sections of their stores for these quick transactions.

“We’re seeing more brick-and-mortar retailers move to capture the online shopper by offering same-day curbside or home delivery,” says Bennett.

Technology is also playing a bigger role in store design. While Amazon Go, the online giant’s cashierless convenience store concept, has grabbed the headlines, many retailers are developing systems to improve their customers’ in-store experience.

Steinmetz says retailers are looking to use artificial intelligence to customize the shopping experience. “They may help a customer visualize how a product would look in their house,” he says. “Or they might track an individual as they walk through the store and shoot a coupon to their cellphone when they’re near a certain product.”

“Technology is going to drive what we see in retail in the coming years,” says Wollum, “creating interactive experiences in stores and integrating personal devices into the shopping experience.”

Gerry Donohue is ACEC’s senior communications writer. He can be reached at gdonohue@acec.org.

<table>
<thead>
<tr>
<th>Commercial Construction Put-in-Place</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change from Prior Year – Current Dollar Basis</td>
</tr>
<tr>
<td>4th Quarter 2018 Forecast (based on Q3 2018 Actuals)</td>
</tr>
<tr>
<td>2013</td>
</tr>
<tr>
<td>2014</td>
</tr>
<tr>
<td>2015</td>
</tr>
<tr>
<td>2016</td>
</tr>
<tr>
<td>2017</td>
</tr>
<tr>
<td>2018</td>
</tr>
<tr>
<td>2019</td>
</tr>
<tr>
<td>2020</td>
</tr>
<tr>
<td>2021</td>
</tr>
<tr>
<td>2022</td>
</tr>
</tbody>
</table>

Source: FMI Corporation

Wollum, “creating interactive experiences in stores and integrating personal devices into the shopping experience.”

Simplifying IT

Managed Services
Data Center & Cloud
Consulting
Security

designDATA
www.designdata.com
301-921-6696

Important news for Bentley® Users

• Prevent Quarterly and Monthly Overages
• Control all Bentley® usage, even licenses you do not own
• Give users visibility of who is using licenses now
• Warn and Terminate Idle usage

SofTrack controls Bentley® usage by Product ID code and counts (pipe, inlet, pond, and all others) and can actively block unwanted product usage
SofTrack reports and optionally controls usage of all Autodesk® products by Version, Feature Code, and Serial Number!
SofTrack reports and controls ESRI® ArcMap concurrent and single use licence activity

CONTACT US NOW:
(866) 372 8991 (USA & Canada)
(512) 372 8991 (Worldwide)
www.softwaremetering.com

© 2017 Integrity Software, Inc. Bentley is a registered trademark of Bentley Systems, Incorporated
LEGISLATIVE ACTION

New Proposed Overtime Pay Rule Released

The Department of Labor (DOL) released a new proposed rule on overtime pay under the Fair Labor Standards Act. The law gives DOL the authority to periodically update the salary threshold below which employees who work more than 40 hours in a week must be paid time and a half overtime.

In 2016, DOL approved increasing the threshold from $455 weekly/$23,660 annually to $913 weekly/$47,476 annually, which represented a 100 percent increase during a time period when cumulative inflation was 26 percent. That rule was scheduled to take effect on Dec. 1, 2016, but was overturned by a federal judge.

The new proposed rule would raise the overtime pay salary threshold to $679 weekly/$35,308 annually. DOL retained the current duties test for determining whether an employee who earns more than the salary threshold is exempt from overtime pay. These changes reflect recommendations ACEC made in response to a 2017 request for information from DOL.

ACEC submitted comments in support of the proposed rule. DOL will publish a final rule after it has reviewed all feedback.

ACEC Calls on Lawmakers to Continue Forward with Infrastructure Agenda

Despite a setback in negotiations between President Trump and congressional Democratic leaders, ACEC continues to make the case for a broad infrastructure investment initiative this year.

In a letter joined by multiple stakeholder groups, business and labor organizations, the Council called on lawmakers to come back to the table and identify revenue options for funding the bill.

“The time to act is now.”

The letter specifically highlighted the gas tax as the simplest and most effective means for funding federal transportation programs, noting that Democrat and Republican legislators in conservative, liberal and swing states have already increased their state gas tax to finance their share of infrastructure improvements.

Funding and financing a 21st century infrastructure agenda—including surface transportation, airports, water and wastewater and public buildings—was a key component of the lobbying visits with members of Congress during the ACEC Convention and Legislative Summit. The House and Senate infrastructure committees are currently developing proposals for the reauthorization of surface transportation programs under the FAST Act, a substantial increase in Clean Water and Drinking Water State Revolving Fund programs, funding for ports and waterways and other legislative initiatives.

ACEC-Backed Water Bill Introduced

House Transportation and Infrastructure Committee Chairman Peter DeFazio, D-Ore., introduced the Water Quality and Jobs Creation Act (H.R.1497), which would reauthorize and expand federal funding for wastewater projects around the country.

H.R. 1497 authorizes $20 billion over five years for the Clean Water State Revolving Fund program. The program has played an important role in helping communities pay for necessary infrastructure improvements and has provided over $126 billion in assistance since its inception in 1987.

With the focus on infrastructure this year, the bill could be included in a larger infrastructure package or be included in the next round of the Water Resources Development Act.
Legislation Introduced to Make Passthrough Deduction Permanent

Sen. Steve Daines, R-Mont., introduced the Senate version of the Main Street Tax Certainty Act, which would make the Section 199A 20 percent passthrough tax deduction permanent. Reps. Jason Smith, R-Mo., and Henry Cuellar, D-Texas, introduced identical legislation in the House.

The Tax Cuts and Jobs Act (TCJA) lowered the corporate tax rate from 35 percent to 21 percent, which provides significant tax relief for engineering firms organized as C corporations, including personal services corporations. The law also created the Section 199A 20 percent tax deduction for passthrough firms, including S corporations, partnerships and sole proprietorships.

The 21 percent corporate rate is permanent, but the Section 199A deduction is one of many provisions in the TCJA that expire at the end of 2025. ACEC joined over 100 other organizations in sending a letter of support for the Main Street Tax Certainty Act to the leaders of the House and Senate tax-writing committees.

ACEC Leads Effort to Counter ‘Transparency’ Legislation

ACEC joined other professional services groups from the technology, cybersecurity and construction industries on an open letter to governors, state lawmakers, state IT leaders and procurement officials that outlined their shared concerns over legislation under consideration in multiple states to impose computer monitoring requirements on contractors doing work for state agencies.

The legislation, which is being pushed by a company called TransparentBusiness, has raised significant privacy and compliance concerns among members of ACEC state organizations, whose members already operate under federal and state regulations and agency policies that govern and manage contract negotiation, oversight and deliverables.

The technology mandated through this legislation would automatically collect data on all work performed by a contractor on a computer, including tracking total keystrokes and mouse event frequency and recording screenshots at least once every three minutes.

Because many services provided by A/E firms go well beyond computer keystrokes, ACEC state chapters have effectively argued that this proposed mandate has little relevance to how the industry operates. The Council has also raised serious cybersecurity concerns over the software mandates covered in the proposed legislation.

ACEC’s efforts were featured in a recent Bloomberg Law article, “States Want to Snoop on Contractors, but Plans Are Stalling,” written by Andrew Wallender and Sara Merken.

ACEC Comments on Revised Wetlands Rule

ACEC submitted written comments to the Department of the Army and the Environmental Protection Agency in April in response to a proposal to revise the definition of “waters of the United States” (WOTUS).

ACEC’s comments noted that the proposed revision favorably addresses nearly every issue it had raised previously concerning the 2015 WOTUS rule. ACEC stated that the revised definition was a positive step toward pragmatically balancing federal and state jurisdiction with economic needs and the public interest of achieving the goals of the Clean Water Act.

“America’s engineering industry is keenly aware of the need to design a sustainable built environment, consistent with responsible environmental protections,” says ACEC President and CEO Linda Bauer Darr. “The 2015 WOTUS rule went too far in expanding the definition of wetlands subject to federal jurisdiction and would have caused needless complications in the permitting process. The current revision is a welcome change and a promising course correction.”

For More News
For legislative news, visit ACEC’s Last Word blog at www.acec.org.
Remarking that “no country is an energy island,” Dr. Fatih Birol, executive director of the International Energy Agency (IEA) made his third annual visit to the U.S. Senate Energy and Natural Resources Committee in February, sharing his outlook for global energy markets, including an emphasis on the United States’ role as worldwide energy leader and No. 1 exporter.

Birol, considered the world’s leading energy economist and expert, is chairman of the World Economic Forum’s (Davos) Energy Advisory Board and a member of the U.N. Secretary-General’s High-level Group on Sustainable Energy for All.

According to IEA, the U.S. is on the path to become a net petroleum exporter by 2021. Last year, the U.S. surpassed Russia and Saudi Arabia to become the world’s largest producer of crude oil.

The global demand for energy is not slowing down and is expected to grow 25 percent by 2040, largely due to urbanization and industrial development in Asia.

“Satisfying expected gas demand growth in Asia would require additional supply equal to building one new average size U.S. liquid natural gas project every five months,” says Birol.

Although some personal vehicles are transitioning to electricity as a main power source, passenger cars only make up 18 percent of demand worldwide. The market to fuel aviation, commercial trucks and the petrochemical industry continues to grow, and oil is likely to maintain its position as the dominant energy source.

Besides the continued strength of the oil market, there were several key takeaways from Birol’s outlook.

A SECOND SHALE REVOLUTION
Natural gas and shale oil markets continue to grow “very, very strongly,” according to Birol. The markets will be driven largely by demand from China, which is the largest gas importing country in the world, particularly liquid natural gas.

“The importance of the U.S. shale industry for the global economy cannot be overemphasized,” says Birol. IEA forecasts 70 percent of the growth in world oil production to 2025 will come from the U.S. Birol explained that the first wave of the shale revolution was largely for U.S. consumption, resulting in needing less imports; the second wave will be primarily about growth in exports for worldwide consumption. According to IEA, in 2018 U.S. shale production grew faster than during the boom years of 2011 to 2014.

GEOPOLITICAL TENSIONS AND NATURAL DISASTERS
Birol expressed concerns about geopolitical tensions that may be connected to key energy countries including Russia, Iran, Venezuela, China, and the United Kingdom as it figures out its Brexit. The other leading concern is the growing occurrence of hurricanes in the U.S.

RENEWABLES CONTINUE TO GROW
Wind and solar energy infrastructure are continuing to grow on a global basis, largely because related technologies are becoming cheaper, and governments are still subsidizing advancement of these sources. Currently, wind and solar provide only 6 percent of global power generation. However, over the next two decades, they will account for half of the growth in electricity generation, according to IEA. The transmission network of renewable energy is getting much-needed attention, and a focus on bottlenecks related to energy storage should be next.
Tampa Surges to a ‘Top 10’ Market

When ACEC’s Coalition leaders visited Tampa, Florida, this past winter for meetings and roundtable discussions, local leaders were excited to discuss the city’s commercial and residential real estate market and growth.

According to the PwC/Urban Land Institute’s “Emerging Trends in Real Estate 2019” report, Tampa broke into the top 10 for the first time. According to the report, Tampa ascended more dramatically than any other city—as it ranked 35th in 2007.

Understanding the reasons behind Tampa’s rise as an emerging market is important for engineering firms who may want to drive comparable momentum in cities where they have an established presence. Engineering firms also can use Tampa’s growth as a baseline to help other cities identify specific areas of future growth.

The key elements to Tampa’s success include:
• Affordability, which is critical to luring new residents from states with higher taxes and home prices.
• Reconstructing Tampa International Airport, now considered the best in the region.
• Strong political leadership from Tampa’s growth-minded mayor, Bob Buckhorn.
• Successfully retaining young professionals, which helps create a more vibrant community and economy.
• Ensuring public support for infrastructure. Residents recently voted for a referendum that adds a 1-cent sales tax to fund regional transportation projects.
• Revitalizing waterfront areas in Tampa and St. Petersburg, resulting in the development of dynamic, mixed-use projects.

P3s Demonstrate Revenue Stream Diversity

The use of public-private partnership (P3) contracts for developing infrastructure is continuing at a steady pace in the U.S. Overall trends include P3s being used for large projects—those with total costs in excess of $125 million—as well as an increasing variety of project types beyond transportation, including social infrastructure, broadband projects and water and wastewater facilities. Social infrastructure is defined by building projects, including health care, education, housing and civic facilities.

The Husch Blackwell “Public-Private Partnership Report,” published in March 2019, details 13 major P3 projects that financially closed in 2017-2018. Of the 13 projects, three are airports, four are roadways, one is transit and the remaining five are social infrastructure.

**2017-2018 U.S. P3 FINANCIAL CLOSINGS:**
1. Los Angeles International Airport automated people mover
2. Los Angeles International Airport ConRac
3. Denver Airport (Jeppesen Terminal)
4. Colorado’s Interstate 70
5. Purdue University student housing
6. Lansing Correctional Facility, Kansas
7. Howard County, Maryland Courthouse
8. Massachusetts Bay Transit Authority Automated Fare Collection System
9. Michigan’s Interstate 75
10. Wayne State University student residences
11. Texas Woman’s University student housing
12. Virginia’s Interstate 395
13. Virginia’s “Transform 66”
More than 1,600 ACEC members attended the recent 2019 Annual Convention at the Marriott Wardman Park Hotel in Washington, D.C. Nationally renowned political experts, insights on emerging markets and best practices in business management were highlights of the four-day event, which also featured the 52nd Annual Engineering Excellence Awards Gala, attended by nearly 800 members and special guests.

Jaros, Baum & Bolles Managing Partner Mitch Simpler assumed the role of 2019-2020 ACEC chairman, succeeding Manish Kothari, CEO of Sheladia Associates, and Charles J. Gozdziewski, chairman emeritus of Hardesty & Hanover, is now chair-elect. Executive Committee members now include John Carrato, president and CEO, Benesch; Keith London, president and CEO, Kennedy/Jenks Consultants; and Kenneth Smith, president and CEO, T. Baker Smith. ACEC/Utah Executive Director Michael Smith is the NAECE Representative.
Meanwhile, the ACEC/PAC banked over $270,000 in Convention fundraising, bringing this year’s total to more than $464,000—well-positioning the Council to keep pace toward a fourth consecutive ACEC/PAC goal of $1 million.

“The Annual Convention is something I look forward to attending every year,” says Melvin Williams, vice president at S&ME. “Besides having the opportunity to hear directly from knowledgeable political pundits about what is going on inside the D.C. beltway, I am able to obtain valuable knowledge from a choice of great sessions to not only improve my firm’s bottom line but also my professional development.”

“I really enjoyed the advocacy aspect of the Annual Convention, especially because we do not get to Washington, D.C. often being based in Alaska,” says Matthew Stone, associate vice president at HDR in Anchorage, Alaska. “I thought Sunday was a great day, and I enjoyed the Leadership Breakfasts and the CEO Roundtables. I am taking over as national director, and the information from the Convention has been very helpful.”
FOX News analysts Donna Brazile and Dana Perino discussed the polarization of national politics, prospects for an infrastructure funding bill and the presidential election during the Convention.

“Too few Americans are voting,” says Brazile, a former chair of the Democratic Party. “As a result, the most passionate people on each side are raising money and raising hell. The majority in the middle are just not engaged.”

Both Brazile and Perino, former press secretary for President George W. Bush, urged Convention attendees to make their voices heard. “Go to the congressional offices and tell them about your work, your needs and the legislation you want to see passed,” says Brazile.

“Let them know that you are going to support them when they have to make a tough vote,” Perino says.

They agreed that infrastructure is one of the top issues on Capitol Hill right now but were not optimistic about passage of a major funding bill. Perino says Congress has a lot of contentious work to do in the coming months, such as raising the federal debt ceiling and infrastructure might be a bridge too far.

“I am looking to the governors and the state legislatures on infrastructure,” says Brazile. “It is not going to happen on the federal level unless they get some help at the state level.”

On the upcoming presidential election, Perino says President Trump has a better than 50 percent chance of reelection, given the strong economy and the advantages of incumbency, but “it is not a sure thing.”

Brazile expects Joe Biden, Bernie Sanders and one of the under-40-year-old candidates to make it to the final stretch.
was a hopeful consensus that the infrastructure agenda will move forward ahead of the 2020 elections.

“Infrastructure has been elevated to be part of the public discussion,” says Stephen Sandherr, CEO of the Associated General Contractors of America.

According to Mike Toohy, president and CEO of the Waterways Council, leadership is crucial to winning increased infrastructure funding. “The president has to provide cover for Congress to raise the gas tax,” he says. “He has to tell the voters that investing in infrastructure is a win for America.”

Thirty states have passed gas tax increases in the past five years, which American Association of State Highway and Transportation Officials Executive Director Jim Tymon sees as a positive sign. “The politics of gas tax increases is not falling along traditional partisan lines, and more importantly it has not cost state legislators their seats,” Tymon says. “I am hopeful Congress will look at that and get some courage.”

Thomas Kuhn, president of the Edison Electric Institute, talked about the increasing sustainability of the nation’s energy infrastructure, saying the industry has cut its emissions by 27 percent since 2005. Looking forward, he forecasts a continuing decline in the use of coal and strong growth in renewable technologies, particularly utility-scale solar. “Investing in infrastructure is green,” he says.

On transit, the disruptive forces of the sharing economy and electrification of transportation are transforming how public transit agencies operate. “Agencies are thinking of themselves in a different light,” says Paul Skoutelas, president and CEO of the American Public Transportation Association. “They are becoming the link between citizens and the broader array of services, whether that is transportation network companies, like Uber and Lyft, or car-sharing or bike-sharing or even scooters.”
FUTURIST WARNS OF EXPONENTIAL DISRUPTIONS  
TO MARKETS, SERVICES, OPERATIONS

Speaking to Convention attendees, futurist Salim Ismail was not shy in sharing his thoughts on how society and humankind will change over the coming few decades.

He forecast that within four years combustion-engine automobiles will no longer be manufactured, solar energy will be capable of powering all global electricity needs within 12 years, and channeling another futurist, the United States will no longer exist within 25 years.

“There is a doubling in the speed of progress across a dozen technologies,” says Ismail. “If you do not spot these doubling patterns, you will be left behind.”
If you can see it coming, it becomes a tremendous advantage.”

He also cautioned that progressing technologies can be destructive as the evolution of what was becomes what is and what will be, while noting how changes have occurred and continue to occur in a variety of societal institutions such as marriage, education, religion, criminal justice, health care and monetary systems.

“This is also an unbelievable opportunity for engineers if you can capitalize on many of those progressing disruptions that affect your industry, such as climate change,” Ismail says. ■

The Capitol Steps’ unique brand of political impersonations and parody drew plenty of raucous laughter, including from former ACEC Chairman Ted Williams (above left), with spoofs such as a singing President Donald Trump, with Barack Obama and Hillary Clinton as backup chorus.

SPECIAL THANKS TO OUR 2019 ANNUAL CONVENTION SPONSORS

Corporate Sustaining Sponsor
HDR

Annual Convention PREMIER Sponsors
ACEC Life/Health Trust
BST Global
Chartwell Financial Advisory

Annual Convention PATRON Sponsors
Agile Frameworks
Morrissey Goodale, LLC
Newforma, Inc.
TranSystems

Annual Convention SUPPORTING Sponsors
ACEC Business Insurance Trust
ACEC Retirement Trust
AXA XL
Victor O. Schinnerer & Co.

ACEC/PAC Sponsors
Lockton Companies (Platinum)
Pennoni Associates (Gold)
Kimley-Horn and Associates, Inc. (Silver)
McAdams (Silver)
Strand Associates (Silver)

Convention Bag Sponsor
AXA XL

Lanyard Sponsor
ACEC Life/Health Trust

Wi-Fi Sponsor
ACEC Life/Health Trust
The 2019 Engineering Excellence Awards Gala—known as the Academy Awards of the engineering industry—showcased 196 projects from across the country and throughout the world at a black-tie event on May 7.

A panel of 28 judges representing a wide spectrum of built environment disciplines had selected 36 top winners—including 20 Honor Awards, 16 Grand Awards and a Grand Conceptor Award for the year’s most outstanding engineering achievement.

Ross Shafer, a six-time Emmy Award-winning comedian, TV host and nationally recognized motivational speaker, returned to again host the Gala, which was attended by nearly 800 members, guests and dignitaries.
One of Seattle’s most seismically vulnerable highways has been replaced with a 1.7-mile underground tunnel containing a state-of-the-art double-deck highway. Situated 200 feet beneath downtown, the new tunnel has a revolutionary flexible concrete core that combines with its underground location to make it withstand a 9.0 magnitude earthquake. Pioneering ventilation and fire control systems also make the tunnel one of the safest structures of its type in the world. The project eliminates a half-century-old barrier separating downtown from its waterfront, while paving the way for 9 new acres of public-friendly space.
Governor Mario M. Cuomo Bridge  
Tarrytown, New York  
HDR  
New York, New York

The massive new 3.1-mile state-of-the-art, twin span Governor Mario M. Cuomo Bridge across the Hudson River reduces traffic congestion and frustration for motorists with eight new general traffic lanes, shoulders and bus lanes and a state-of-the-art traffic monitoring system. The $3.2 billion structure is also designed to accommodate future commuter rail. Innovative roadway lighting uses dark-sky compliant LED light fixtures to reduce light pollution. The highly efficient system requires 75 percent less energy compared with traditional bridge-lighting technology. As the largest bridge in New York State history, the project involved 1,400 companies, created thousands of jobs and used 220 million pounds of U.S.-made steel.

VMI Corps Physical Training Facility  
Lexington, Virginia  
WSP USA  
Arlington, Virginia

Cutting-edge building systems highlight the gleaming new 205,000-square-foot facility for recruit training, track and field competitions and other corps activities. Innovative technologies include a "passive downdraft" heating and cooling system, which uses evaporative cooling and buoyancy to supply outside air to the interior without the use of fans, cutting energy costs by nearly half. Air is induced into the building’s four supply airshafts by cooling outside air with a chilled water spray application at the top of a vertical column. Underground cisterns collect rainwater from the roof, providing a renewable water source for irrigation, flush toilets and mechanical system rehydration. In use for over a year, the facility has exceeded expectations in both energy savings and user experience.
Innovative design has provided more spillway capacity at the Lake Peachtree Dam while setting a new benchmark for hydraulic design in the U.S. The replacement structure, called a multi-staged nonlinear Piano Key Weir, has a unique nonlinear geometry that provides significant higher water capacity in constrained spaces compared with more conventional weirs, yet with lower construction costs and maintenance. The first known application of a multistage Piano Key Weir in the world, the Lake Peachtree project features a new golf cart bridge that offers a vantage point for visitors to admire the new spillway to further enhance Lake Peachtree’s status as a community centerpiece.
New London Embassy
London, United Kingdom
Arup
New York, New York

The new U.S. Embassy in London replaces an outdated structure with a modern, welcoming, secure facility featuring state-of-the-art energy efficiency. The design includes a visually appealing structurally glazed facade that screens solar gain while ensuring a uniform distribution of daylight to the building interior. Also included are a sophisticated water conservation system, high optimization of daylighting and occupant control systems and a network of photovoltaic panels that generate on-site electricity. Embassy visitors seeking passports and visas now take advantage of much larger waiting rooms, privacy booths, comfortable seating and a beautiful view of the Thames River.

Linking Lookout: U.S. 6th and 19th Street Interchange
Golden, Colorado
Muller Engineering Company
Lakewood, Colorado

Colorado’s first “lid” interchange ends decadeslong safety nightmares for pedestrians seeking to cross U.S. Route 6 amid heavy traffic. After the previous intersection could no longer accommodate the growing multimodal mix of crossing traffic, the project team incorporated an innovative cut and cover lid feature over the lowered highway. The new covered highway, berms and reduced vehicular speeds have since significantly cut noise and emissions from pre-project conditions. The interchange improves safety, and features structural aesthetics and park amenities, which echo the feel of the nearby mountains.
Resourceful engineering eradicated a toxic threat to groundwater by realigning a natural stream away from the contamination danger. For more than a century, ore processing at a nearby smelter had sent tons of slag and waste products into the Prickly Pear Creek floodplain, causing widespread contamination and major threats to the groundwater. To restore the area’s environmental health, the project team removed a nearby dam and lake complex replacing it with a “natural” stream channel that diverts the creek away from a contaminated slag pile. Groundwater levels below the most contaminated soils were permanently lowered, which reduced the extent and magnitude of the groundwater plumes, restored fish passage through the site and reestablished more than 140 acres of wetlands.
Crooked River Wetlands  
Prineville, Oregon  
Anderson Perry & Associates  
La Grande, Oregon

Constructed for a fraction of the cost of a conventional wastewater treatment facility, the groundbreaking wetlands complex uses natural processes to remove contaminants from reclaimed water. The system provides as much as 2 million gallons per day of clean, cool water that will aid in the reintroduction of steelhead and salmon, as well as offering habitat for numerous plants, wildlife, waterfowl and insects that support a healthy ecosystem. Plant microorganisms in the wetland polish the water, which is cooled as it flows underground into the Crooked River. Since its installation, the system has exceeded stringent permit requirements and has helped pioneer a new, nontraditional approach to address wastewater treatment needs.

Infinity Loop  
Portland, Oregon  
HDR  
Portland, Oregon

A decades-old dilemma regarding how to load and unload freight trains at a higher rate without affecting freight traffic has been solved and cuts processing time in half. While present unit-train loop tracks can accommodate a single unit train, they cannot efficiently process multiple trains at high rates. The new design wraps outer loop staging tracks, each capable of holding one train, around an interior balloon track. This space-saving layout creates an “infinity” symbol, which allows multiple trains to enter the facility and be loaded or unloaded in quicker succession without conflicting with other trains.
Visionary design revitalized a once sacred creek with inspired art, splendid paseos, native plantings and unique plazas—to create an attractive area of respite and cultural reflection. The project team replaced the original concrete streambed with cobble and natural materials to further enhance aquatic habitat and restore the ecosystem that once propagated the creek. State-of-the-art crest gates at a downstream dam control the creek’s water surface area and depth. An automated submersible pump speeds the flow of water through the area following major storms to minimize flooding. The resulting creek restoration has also fueled a development renaissance in downtown San Antonio.
Zoo Interchange Core and Adjacent Arterials
Milwaukee, Wauwatosa and West Allis, Wisconsin
Forward 45
Milwaukee, Wisconsin
The new multimodal intersection is the result of a six-year effort to assure Wisconsin's busiest interchange can effectively handle 21st century mobility demands. The previous intersection had become deteriorated and could no longer accommodate the 350,000 vehicles per day that pass through the interchange. The new design includes 9 miles of freeway and 4 miles of local roads, in addition to pedestrian, transit, car-pooling and bicycle facilities—making it the largest multimodal project in the state's history. Critical to the project's success was maintaining access to a major regional medical center, which serves 1 million patients annually, employs 14,000 and serves as the region's only Level 1 trauma center.
Groundbreaking engineering has created the nation’s largest, most efficient and sophisticated nanotechnology research facility. The 214,000-square-foot building replaces a previous 30-year-old complex that could not support future nano-scale fabrication and imaging research. The new facility houses chemistry and prototyping labs, a two-story virtual-reality and visualization area, an ultra-stable basement level dedicated to electron microscopes and other sensitive imaging tools and two large floors of connected cleanroom spaces. The new facility will support more than 2,000 faculty and researchers every year.

Sarah Mildred
Long Bridge
Portsmouth,
New Hampshire
Hardesty & Hanover/
FIGG Bridge Engineers
New York, New York

The new lift bridge creates a more direct passage for large vessels accessing the nearby port and Portsmouth Naval Yard. The project overcame the challenging Piscataqua River, featuring tidal flows among the highest velocities in the U.S. The design incorporates precast post-tensioned segmental concrete towers, the first such use for a lift bridge. While retaining the two-level concept of the previous structure’s approach spans, the center lift span now features rail and roadway on the same level with tracks embedded into the median. The new single-level lift span increases vertical clearance above the river to 56 feet and reduces the number of required bridge openings by more than two-thirds.
Imaginative planning research has produced a solution to renovate one of New York City’s largest and most congested subway stations. The Times Square Shuttle Station in Manhattan serves over 200,000 passengers daily, but its configuration has long been known to create passenger confusion and congestion, while its curved track alignment results in large platform gaps that preclude this key station from being Americans with Disabilities Act (ADA) compliant. The project team proposed reconfiguring the station to include expanding the station 350 feet further into the existing rail tunnels. It also includes construction of a new 28-foot-wide center platform that provides full access to all riders and the removal of 122 columns along platform edges. The proposed modifications would help the station meet growing passenger demand while dramatically improving service and providing ADA access.
Enhanced Nutrient Recovery Upgrades
Baltimore, Maryland

Whitman Requardt and Associates
Baltimore, Maryland

One of the world’s largest applications of denitrification technology has substantially lowered levels of nitrogen and phosphorous discharged into the Chesapeake Bay. The process involved integration of 52 specially designed denitrification filter cells—among the world’s largest—into the existing Back River Water Resource Recovery Plant. Results show the technology reduced the nitrogen and phosphorus load discharged to the Chesapeake Bay by nearly 2 million pounds in the first year of operation. The restoration effort provides an integrated approach to improving water quality in the Chesapeake Bay watershed.

Salesforce Tower
San Francisco, California

Magnusson Klemencic Associates
Seattle, Washington

At 1,070-feet tall, the Salesforce Tower is a structural marvel in having the highest occupied floor of any building in a seismic zone in the Western Hemisphere. It is the tallest building in the world to use only its central core to resist wind and earthquake forces, even though it resides in one of the most volatile seismic hazard locations. All elevators, emergency stairs, restrooms and mechanical systems are encased in a core of high-strength concrete, creating an extremely strong structural spine. The project team’s structural design allows for fewer exterior columns to carry the weight of floors to the foundation. Already a commercial success, the new tower will enhance the San Francisco skyline for generations to come.
Barrington Road at I-90 Interchange & Park-n-Ride
Hoffman Estates, Illinois
Crawford, Murphy & Tilly
Aurora, Illinois

Expansion of the Illinois Tollway combined with a dedicated transit component and express bus service created a full access, multimodal interchange. Complementing the multimodal hub is a direct connection with an adjacent 170-space Park-n-Ride Lot, in addition to sidewalks and paths to facilitate accessibility by both pedestrians and cyclists. Coinciding with the ongoing widening of I-90, the interchange eliminates a local traffic choke point and reduces emergency response times to nearby St. Alexius Hospital. The new interchange illustrates how transit and other alternative modes of transportation can be effectively integrated to enhance mobility for all.

The Promenade of Wayzata
Wayzata, Minnesota
LHB/American Engineering and Testing/Ericksen Roed and Associates/KFI Engineers
Duluth, Minnesota

A declining ’60s-era mall built over a native wetland has been replaced with a striking new 1.5-million-square-foot mixed-use community that features six distinctive blocks including senior living facilities, apartments, retail, offices, restaurants and a hotel as well as a large community park. Long-term foundation concerns due to a thick underlying swamp and shallow water table were overcome using a cutting-edge “land bridge” design with the buildings, walks, streets and utilities all supported by deep foundations, many of which provide double-duty as “energy piles” that use geothermal energy for heating. The result is a massive network of heated streets and walks, which virtually eliminate cold-season salt use at the site.
**Swan Lake Reservoir Expansion Project**

*North of Ketchikan, Alaska*

*McMillen Jacobs Associates*

*Boise, Idaho*

Accessible only by boat, plane or helicopter, Swan Lake Reservoir's capacity was still increased allowing for more storage from spillway flows. Located in proximity to the 25-megawatt Swan Lake Hydroelectric facility—a major power provider for southeast Alaska—the reservoir capacity level was raised from a normal full pool elevation of 330 feet to 345 feet. The project's design included a 23-foot-wide vertical operating gate, a 30-foot-tall concrete pier and a 78-foot-long flashboard gate system across the spillway. The modifications significantly lower energy costs and increase energy security for power users, clients and the community.

---

**Minnesota 210 Design-Build Flood Repair**

*Carlton, Minnesota*

*Barr Engineering Company*

*Minneapolis, Minnesota*

A scenic section of Highway 210 is once again being enjoyed by travelers after historic rainfall in 2012 caused major slope failures and extensive roadway damage. The project team restored 74 slopes along a 3.5-mile stretch of the highway while overcoming steep terrain accommodating the area's unique geologic and groundwater characteristics. Innovative measures and vegetation were used to conceal many slope repairs to reclaim the route's natural appearance. Monitoring instrumentation invented specifically for the project provides real-time erosion analysis while advancing the practice of slope monitoring in remote project locations.

---

**Fred & Pamela Buffett Cancer Center**

*Omaha, Nebraska*

*HDR*

*Omaha, Nebraska*

The dazzling $323 million center is highlighted by a 10-story, 98-laboratory research tower in addition to an eight-story, 108-bed inpatient treatment center. The project team overcame site constraints to creatively design building infrastructure that meets stringent energy efficiency mandates while still optimizing operational efficiency, quality of care and patient experience. Additional innovations include high-efficiency boilers that will save nearly $1 million in energy costs, a centralized uninterruptible power supply, and a distributed network-based lighting control system that adjusts illumination levels according to occupancy, time scheduling and daylight harvesting.
Aquifer Storage and Recovery Wells
Woodland, California
Carollo Engineers
Sacramento, California

Creative engineering is helping a water-challenged city transition from sole dependence on groundwater to higher quality treated surface water from the Sacramento River. With groundwater supply challenged by stringent water quality requirements and drought conditions, the project team designed two aquifer storage and recovery wells capable of accommodating 325 million gallons of drinking water. Treated surface water is injected into the wells when demand is low, then extracted during higher demand periods. The cutting-edge process eliminates the risk of overusing wells while also improving water quality and lowering costs to residents. The project is the fastest of its type ever implemented in the U.S.

53 West 53rd Street Tower
New York, New York
WSP USA
New York, New York

The eye-catching yet strikingly slender 1,050-foot-tall tower also features cutting-edge structural innovation. The pyramidal-appearing form incorporates an imaginative yet resilient structural diagrid system to support its uniquely intricate exterior. While the building’s north and south facades taper at gently shifting inclines, the envelope to the east and west are vertical. The design results in the diagrids “meandering” along the facades and creates distinctive views for occupants. The complex also houses 728,000 square feet of ultraluxury residential condominium apartments with amenities such as a 65-foot-long lap pool, wellness center, wine vaults and 65,000 square feet of additional gallery space for the Museum of Modern Art.
I-70 Mountain Corridor Eastbound Express Lane
Idaho Springs, Colorado
HDR
Denver, Colorado

A new express lane delivers much-needed congestion relief, improves travel reliability and dramatically reduces times to clear emergencies. Located between U.S. Route 40 at Empire Junction and the Veterans Memorial Tunnels, the project required the complete overhaul of two major interchanges critical to the economic viability of Idaho Springs, with a mandate of minimal disruption to motorists. An innovative accelerated bridge design cut construction time in half on one interchange, while the second interchange required a full reconstruction but remained in use. A complete parallel bridge replacement and ramps were constructed before taking the existing interchange offline for upgrades.

Allison Creek Hydroelectric Design-Build Project
Valdez, Alaska
McMillen Jacobs Associates
Boise, Idaho

The new 6.7-megawatt hydroelectric facility significantly reduces Valdez’s reliance on diesel fuel generators. The project team’s design overcame a host of environmental, safety and public health concerns, including impact on operations at the nearby Valdez Marine Terminal, the terminus of the Alaska Pipeline System. The project includes an innovative concrete gravity dam with a penstock system that delivers water 1.25 miles to a power generation plant. Because of a 1,200-foot elevation drop in the penstock system, the design was refined to accommodate changes in water pressure. Sections of the penstock were buried to protect from freezing and avalanches and to minimize impacts to wildlife. The project reduces diesel fuel costs annually by $2.4 million and eliminates 12,000 tons of carbon dioxide emissions.

Automated People Mover and ConRAC
Tampa, Florida

Walter P Moore/Gresham Smith/
Master Consulting Engineers
Tampa, Florida

Known as SkyConnect, the 1.4-mile, three-station Automated People Mover (APM) provides fast, safe and sustainable transportation for Tampa International Airport’s steadily increasing passenger volume. Similarly, the 2.44-million-square-foot consolidated rental car facility (ConRAC) offers state-of-the-art rental car operations, which previously had been operating in cramped, near-capacity facilities. Effective combinations of precast and cast-in-place concrete, and structural steel solved challenges such as the APM’s horizontally curving rail spans of more than 250 feet long and stations located 120 feet above existing roads. Together, the APM and ConRAC will eliminate nearly 3 million vehicle trips on airport roads and 1,600 tons of carbon emissions each year.
American Center for Mobility
Ypsilanti, Michigan
WSP Michigan/HNTB Michigan/Mannik & Smith Group/NTH Consultants
Detroit, Michigan

The new center is a first-of-its-kind nonprofit testing, education and product development center for connected and automated vehicles. An innovative slab foundation system for bridge abutments and superstructures minimized excavation needs for the 330-acre center. Advanced intelligent lighting and traffic signals, along with flexible urban environment configurations, help provide researchers with unlimited options to test and validate automated vehicle system performance. The new center will play a key role in ensuring that connected and automated vehicles can be safely integrated into the nation’s transportation network.

Niagara Falls State Park Transformation Initiative
Niagara Falls, New York
T.Y. Lin International
Rochester, New York

Years of disrepair, undersized overlooks, antiquated systems and inadequate pedestrian circulation have all been remedied with a new park worthy of its international renowned name as a premier tourist attraction. Everything—attractions, infrastructure, buildings, parking facilities, lighting systems, pedestrian and vehicle circulation routes, and behind the scenes utility, mechanical, electrical, irrigation and stormwater systems—has been upgraded with state-of-the-art technology. Spanning across more than 400 acres, the $65 million transformation initiative succeeds in improving public access and experience to the wonderment of Niagara Falls.

American Center for Mobility
Ypsilanti, Michigan
WSP Michigan/HNTB Michigan/Mannik & Smith Group/NTH Consultants
Detroit, Michigan

The new center is a first-of-its-kind nonprofit testing, education and product development center for connected and automated vehicles. An innovative slab foundation system for bridge abutments and superstructures minimized excavation needs for the 330-acre center. Advanced intelligent lighting and traffic signals, along with flexible urban environment configurations, help provide researchers with unlimited options to test and validate automated vehicle system performance. The new center will play a key role in ensuring that connected and automated vehicles can be safely integrated into the nation's transportation network.
Delaware River Bridge Emergency Response
Bristol, Pennsylvania
Michael Baker International
Harrisburg, Pennsylvania

The discovery in January 2017 of a full-depth fracture in a truss unit on the Delaware River Bridge's Pennsylvania approach forced an immediate closure of a critical crossing in the local and regional transportation network. Tasked with engineering a fast-track fix, the project team used innovative ultrasonic material testing to evaluate the condition of other trusses and bridge components with similar design and load characteristics. No additional problems were revealed. This innovative testing approach, the largest ever application for a steel bridge in the U.S., helped expedite repairs and certify the structure's overall safety. The bridge was reopened just under two months later and illustrates how advanced testing technology and practices can aid in the rapid evaluation and restoration of key infrastructure.

Delaware Memorial Bridge Cable Dehumidification
New Castle, Delaware
AECOM
Wilmington, Delaware

An innovative dehumidification system is helping preserve massive steel cables supporting the Delaware Memorial Bridge's main spans and help prevent loss of structural integrity. After corrosion on support cables was discovered on the twin 3,650-foot-long suspension bridges, the project team designed an innovative dehumidification system specifically tailored for the bridge's cables to reduce effects of relative humidity and extend component service life. This is only the second application of this technology in the U.S., although five more major U.S. suspension bridges are expected to have dehumidification systems for cables within the next few years.

eBART to Antioch: East Contra Costa Extension
Pittsburg, California
PGH Wong/AECOM/Ghirardelli/MNS/SAMJV
Oakland, California

A new eBART extension helps bring much-needed relief to a highly congested highway corridor. The new rail service in East Contra Costa County (California) now connects Pittsburg to Antioch and eases common bottlenecks on State Route 4 (SR-4). The project included 10 miles of tracks extending east in the median of SR-4, two new stations, a parking lot and a train maintenance and operations facility. Built in conjunction with a SR-4 widening project, the combined projects represent approximately $1 billion invested specifically in that corridor. The eBART trains meet strict emissions standards by using renewable diesel, an advanced biofuel produced from sources such as vegetable oil. Ridership on the new eBART extension is already more than double agency projections.
In preparation for a large-scale, $400 million park along the Arkansas River, the city of Tulsa first needed to overcome several infrastructure challenges, including stormwater flooding, aging water and sewer lines and safety issues with Riverside Drive. The project team incorporated an accelerated design effort that delivered numerous infrastructure upgrades, including all utility relocations and right of way acquisitions, resulting in the site being ready for construction in less than a year. Within three years, the old undeveloped floodplain had successfully morphed into land bridges, skate parks, landscaped greenways and other amenities that provide Tulsa with a new source of community pride.

Creative incorporation of a new wet weather facility has eliminated prevalent combined sewer overflows after severe weather. Major rain events had frequently overwhelmed the 60-year-old Murray Avenue Pump Station, often resulting in untreated overflows of combined storm and sanitary sewage flowing untreated into Puget Sound. The design solution featured a unique circular 1 million gallon storage tank that stores excess sewage when storm events exceed the pump station’s capacity. Afterward, the stored stormwater is gradually released to the pump station to be conveyed to a treatment plant. Located on a steep slope overlooking Puget Sound, the mostly underground tank successfully blends into the surroundings.
permanent sheet pile wall, pennsylvania turnpike
west deer/indiana, hampton townships, pennsylvania
earth, inc.
pittsburgh, pennsylvania
resourceful engineering design has created a new sheet pile retaining wall system that results in significant cost and time savings compared with current retaining wall options. the 1,573-foot-long, permanent sheet pile retaining wall system was first used during embankment widening for the pennsylvania turnpike. the new wall system includes nearly 2,000 tons of steel to construct the exposed wall face and its underlying network of resistance sheets. in addition to being less costly than conventional retaining wall systems, the alternative design is also easier to build. the turnpike’s entire sheet pile system was completed in six months, almost half the time for a mechanically stabilized earth retaining wall and without the need for temporary shoring.

vancouver waterfront park
vancouver, washington
bergerabam
portland, oregon
the main jewel of a $1 billion waterfront revitalization program, the new 7.3-acre park, replaces a century-old brownfield site that for years separated the community from the scenic columbia river. the project required extensive shoreline restoration, and environmental planning and permitting. the new park features plazas, terraces, open lawns, playground and picnic areas and an urban beach. a unique one-sided, cable-stayed structure called the grant street pier carries visitors over the columbia river nearly 100 feet with no in-water elements. the park is expected to fuel a revitalized waterfront, with 3,000 new residential units and 1 million square feet of mixed-use space already planned.

westminster station park
westminster, colorado
muller engineering company
lakewood, colorado
a badly neglected creek corridor has been transformed into an enticing 40-acre oasis with a shimmering pond, green play lawns, mammoth boulders and trails winding beside a flowing creek bordered with trees. the project team fulfilled the vision of local officials in creating a mountainlike open space park in an urban area while at the same time providing a hub for a 75-acre transit-oriented development where a transit station, residences, businesses, entertainment and other services are all within easy walking distance. new park facilities include an arts center, amphitheater, boating pond, treehouses, multiple picnic areas and playgrounds crafted out of natural materials.
<table>
<thead>
<tr>
<th>FIRM NAME</th>
<th>PROJECT NAME</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ACEC/ALABAMA</strong></td>
<td></td>
</tr>
<tr>
<td>Building &amp; Earth Sciences</td>
<td>The Vesta Apartments Geotechnical Engineering</td>
</tr>
<tr>
<td>Sain Associates</td>
<td>Dunnavan Square Pedestrian Tunnel</td>
</tr>
<tr>
<td><strong>ACEC/CALIFORNIA</strong></td>
<td></td>
</tr>
<tr>
<td>BKF Engineers</td>
<td>San Pablo Avenue Bike and Pedestrian Improvements</td>
</tr>
<tr>
<td>Carollo Engineers</td>
<td>Aquifer Storage and Recovery Wells</td>
</tr>
<tr>
<td>Carollo Engineers</td>
<td>Southeast Surface Water Treatment Facility</td>
</tr>
<tr>
<td>GHD</td>
<td>Redwood Business Park and Talmage Interchange</td>
</tr>
<tr>
<td>Kjeldsen, Sinnock &amp; Neudeck</td>
<td>Wallace Weir Fish Rescue Facility</td>
</tr>
<tr>
<td>PGH Wong/AECOM/</td>
<td>San Pablo Avenue Bike and Pedestrian Improvements</td>
</tr>
<tr>
<td>Ghirardelli/MNS/SAMJV</td>
<td>Wallace Weir Fish Rescue Facility</td>
</tr>
<tr>
<td>San Diego Gas &amp; Electric/NV5</td>
<td>Sycamore to Peñasquitos 230kV Transmission Line</td>
</tr>
<tr>
<td>Syska Hennessy Group</td>
<td>Maintenance &amp; Operation Facility</td>
</tr>
<tr>
<td>Towill</td>
<td>San Andreas Pipeline No. 2</td>
</tr>
<tr>
<td><strong>ACEC/COLORADO</strong></td>
<td></td>
</tr>
<tr>
<td>Felsburg Holt &amp; Ullevig</td>
<td>State Highway 9 Iron Springs</td>
</tr>
<tr>
<td>HDR</td>
<td>1-70 Mountain Corridor Eastbound Express Lane</td>
</tr>
<tr>
<td>Martin/Martin</td>
<td>Canvas Stadium</td>
</tr>
<tr>
<td>Martin/Martin</td>
<td>Linking Lookout: U.S. 6th and 19th Street Interchange</td>
</tr>
<tr>
<td>Muller Engineering Co.</td>
<td>Westminster Station Park</td>
</tr>
<tr>
<td>Muller Engineering Co.</td>
<td>I-25/Cimarron Interchange—The Gateway Project</td>
</tr>
<tr>
<td>Wilson &amp; Co.</td>
<td></td>
</tr>
<tr>
<td><strong>ACEC/CONNECTICUT</strong></td>
<td></td>
</tr>
<tr>
<td>Michael Baker International</td>
<td>Hartford Line Station Design</td>
</tr>
<tr>
<td>RACE Coastal Engineering</td>
<td>Fort Nathan Hale Pier Project</td>
</tr>
<tr>
<td>WSP USA/STV</td>
<td>New Haven-Hartford-Springfield Rail Program</td>
</tr>
<tr>
<td><strong>ACEC/DELAWARE</strong></td>
<td></td>
</tr>
<tr>
<td>AECOM</td>
<td>Delaware Memorial Bridge</td>
</tr>
<tr>
<td>Rummel, Klepper &amp; Kahl</td>
<td>Cable Dehumidification</td>
</tr>
<tr>
<td>Ulteig Engineers</td>
<td>Lane Extension Results in Major Improvements</td>
</tr>
<tr>
<td><strong>ACEC/FLORIDA</strong></td>
<td></td>
</tr>
<tr>
<td>RADISE International/</td>
<td>Tamiami Trail Bridge</td>
</tr>
<tr>
<td>Smart Structures</td>
<td>Life Cycle Monitoring</td>
</tr>
<tr>
<td>Walt Disney Imagineering</td>
<td>Pandora - The World of Avatar</td>
</tr>
<tr>
<td>Walter P Moore</td>
<td>Automated People Mover and ConRAC</td>
</tr>
<tr>
<td>Master Consulting Engineers</td>
<td></td>
</tr>
<tr>
<td><strong>ACEC/GEORGIA</strong></td>
<td></td>
</tr>
<tr>
<td>NOVA Engineering &amp; Environment/</td>
<td>Sweetwater Ruins at Sweetwater Creek State Park</td>
</tr>
<tr>
<td>Stevens &amp; Wilkinson</td>
<td>Northwest Corridor Express Lanes</td>
</tr>
<tr>
<td>Parsons Corp.</td>
<td>Lake Peachtree Spillway Replacement</td>
</tr>
<tr>
<td>Schnabel Engineering</td>
<td></td>
</tr>
<tr>
<td><strong>ACEC/HAWAII</strong></td>
<td></td>
</tr>
<tr>
<td>Fukunaga &amp; Associates</td>
<td>Ala Moana Wastewater Pump</td>
</tr>
<tr>
<td></td>
<td>Station Force Mains 3 &amp; 4</td>
</tr>
<tr>
<td><strong>ACEC/IDAHO</strong></td>
<td></td>
</tr>
<tr>
<td>McMillen Jacobs Associates</td>
<td>Allison Creek Hydroelectric Design-Build Project</td>
</tr>
<tr>
<td>McMillen Jacobs Associates</td>
<td>Esther Simplot Park</td>
</tr>
<tr>
<td>McMillen Jacobs Associates</td>
<td>Swan Lake Reservoir</td>
</tr>
<tr>
<td>POWER Engineers</td>
<td>Kizildere-3 Geothermal Power Plant</td>
</tr>
<tr>
<td>Stanley Consultants</td>
<td>Boise River Greenbelt</td>
</tr>
<tr>
<td><strong>ACEC/ILLINOIS</strong></td>
<td></td>
</tr>
<tr>
<td>Clark Dietz</td>
<td>MCCORE - Transforming the Core of the Community</td>
</tr>
<tr>
<td>Crawford, Murphy &amp; Tilly</td>
<td>Barrington Road at I-90 Interchange &amp; Park-n-Ride</td>
</tr>
<tr>
<td>Crawford, Murphy &amp; Tilly</td>
<td>Sugar Creek Wastewater Treatment Plant</td>
</tr>
<tr>
<td>HNTB</td>
<td>Wilson Transfer Station</td>
</tr>
<tr>
<td>OMEGA</td>
<td>Inbound I-55 at U.S. 41 (Lake Shore Drive) Interchange</td>
</tr>
<tr>
<td>Stantec/WSP USA</td>
<td>Albany Park Stormwater Diversion Tunnel</td>
</tr>
<tr>
<td><strong>ACEC/INDIANA</strong></td>
<td></td>
</tr>
<tr>
<td>Strand Associates</td>
<td>City of Columbus People Trail Extension</td>
</tr>
<tr>
<td><strong>ACEC/IOWA</strong></td>
<td></td>
</tr>
<tr>
<td>HNTB</td>
<td>Iowa City Gateway - Park Road</td>
</tr>
<tr>
<td>IFW</td>
<td>Bridge &amp; Dubuque Street</td>
</tr>
<tr>
<td>Ulteig Engineers</td>
<td>Upper Bee Branch</td>
</tr>
<tr>
<td></td>
<td>Creek Restoration</td>
</tr>
<tr>
<td></td>
<td>GITS Application Solution for Energy Distribution</td>
</tr>
<tr>
<td><strong>ACEC/KANSAS</strong></td>
<td></td>
</tr>
<tr>
<td>Burns &amp; McDonnell</td>
<td>Bridge Raising in Sumner and Sedgwick Counties</td>
</tr>
<tr>
<td>George Butler Associates</td>
<td>I-1-35 Canal Route Bridge Repair - Phase I</td>
</tr>
<tr>
<td>HNTB</td>
<td>Kansa Turnpike Open Road Tolling Conversion</td>
</tr>
<tr>
<td><strong>ACEC/KENTUCKY</strong></td>
<td></td>
</tr>
<tr>
<td>American Engineers</td>
<td>Mammoth Cave Echo River Trail</td>
</tr>
<tr>
<td>Bacon Farmer Workman Engineering &amp; Testing</td>
<td>Reconstruct I-24/I-69 Interchange</td>
</tr>
<tr>
<td>EA Partners</td>
<td>A Safer Path</td>
</tr>
<tr>
<td>Michael Baker International</td>
<td>The Lake Bridges</td>
</tr>
<tr>
<td>QK4</td>
<td>Churchill Downs - Sustainable Water Quality Infrastructure</td>
</tr>
<tr>
<td>QK4</td>
<td>Kentucky’s Touchstone Energy Cooperative - PowerVision</td>
</tr>
<tr>
<td><strong>ACEC/MARYLAND</strong></td>
<td></td>
</tr>
<tr>
<td>Gannett Fleming</td>
<td>Bel Air Impoundment</td>
</tr>
<tr>
<td>Whitman, Requardt and Associates</td>
<td>Back River Water Resource Recovery Facility</td>
</tr>
</tbody>
</table>

The Jeremiah Morrow Bridge, located in Oregonia, Ohio, was designed by HNTB, Chicago, and is a 2019 National Recognition Award winner.
<table>
<thead>
<tr>
<th>FIRM NAME</th>
<th>PROJECT NAME</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACEC/MASSACHUSETTS</td>
<td></td>
</tr>
<tr>
<td>BR+A Consulting Engineers</td>
<td>MIT.nano</td>
</tr>
<tr>
<td>GZA</td>
<td>Upper Roberts Meadow</td>
</tr>
<tr>
<td>Jacobs Engineering Group</td>
<td>Reservoir Dam Breach and Stream Restoration</td>
</tr>
<tr>
<td>Nitsch Engineering Group</td>
<td>New Airport Taxiway with CAT III Landing System</td>
</tr>
<tr>
<td>Parsons Corp.</td>
<td>MIT North Corridor</td>
</tr>
<tr>
<td>Simpson Gumpertz &amp; Hegner</td>
<td>Fore River Bridge</td>
</tr>
<tr>
<td>STV</td>
<td>Underground Transmission Line</td>
</tr>
<tr>
<td>Tetra Tech</td>
<td>Longfellow Bridge Rehabilitation</td>
</tr>
<tr>
<td></td>
<td>Lberita Municipal Water Program</td>
</tr>
<tr>
<td>ACEC/METRO WASHINGTON</td>
<td></td>
</tr>
<tr>
<td>Alpha Corp.</td>
<td>Gateway Arch National Park Program Management</td>
</tr>
<tr>
<td>A. Morton Thomas and Associates</td>
<td>The Wharf - Phase I</td>
</tr>
<tr>
<td>Arup</td>
<td>New London Embassy</td>
</tr>
<tr>
<td>M.C. Dean</td>
<td>&quot;Rain&quot; - M Street Underpass</td>
</tr>
<tr>
<td>Nitsch Engineering</td>
<td>Kennedy Street Green</td>
</tr>
<tr>
<td>Sheladia Associates</td>
<td>WMATA Paint Booth at Landover Bus Garage</td>
</tr>
<tr>
<td>WSP USA</td>
<td>Virginia Military Institute Corps</td>
</tr>
<tr>
<td></td>
<td>Physical Training Facility</td>
</tr>
<tr>
<td>ACEC/MICHIGAN</td>
<td></td>
</tr>
<tr>
<td>Beam, Longest and Neff</td>
<td>GHIB Acquisition + D4 Engineering Consulting</td>
</tr>
<tr>
<td>Benesch</td>
<td>1-75 over the Rouge River</td>
</tr>
<tr>
<td>NTH Consultants</td>
<td>Using Horizontal Directional Dilling to Mitigate Sthole Risks</td>
</tr>
<tr>
<td>Ruby + Associates</td>
<td>New GM Truck Manufacturing Facility</td>
</tr>
<tr>
<td>WSP Michigan/HNTB/Mannik and</td>
<td>American Center for Mobility</td>
</tr>
<tr>
<td>Smith Group / NTH Consultants</td>
<td></td>
</tr>
<tr>
<td>ACEC/MINNESOTA</td>
<td></td>
</tr>
<tr>
<td>AKF Group</td>
<td>Westminster Presbyterian</td>
</tr>
<tr>
<td>Barr Engineering Co.</td>
<td>Church Renovation</td>
</tr>
<tr>
<td>LHB/american Engineering Testing</td>
<td>Minnesota 210 Design-Build Flood Repair</td>
</tr>
<tr>
<td>Erickson Roed and Associates /</td>
<td>The Promenade of Wayzata</td>
</tr>
<tr>
<td>KFI Engineers</td>
<td></td>
</tr>
<tr>
<td>Matison Macdonald Young</td>
<td>Minneapolis Armory Renovation</td>
</tr>
<tr>
<td>Short Elliott Hendrickson</td>
<td>Nine Mile Creek Regional Trail</td>
</tr>
<tr>
<td>Short Elliott Hendrickson /</td>
<td>St. Anthony Parkway Bridge Over BNSF Northtown Yard</td>
</tr>
<tr>
<td>Parsons Corp.</td>
<td></td>
</tr>
<tr>
<td>ACEC/MISSOURI</td>
<td></td>
</tr>
<tr>
<td>Anderson Engineering</td>
<td>Casville School Flood</td>
</tr>
<tr>
<td>Burns &amp; McDonnell</td>
<td>Mitigation Project</td>
</tr>
<tr>
<td>Civil Design</td>
<td>US-169/I-70 North Loop PEL Study</td>
</tr>
<tr>
<td>IMEG</td>
<td>Remapping Data Collection</td>
</tr>
<tr>
<td></td>
<td>The Museum at the Gateway Arch</td>
</tr>
<tr>
<td>ACEC/MONTANA</td>
<td></td>
</tr>
<tr>
<td>DJ&amp;K</td>
<td>Willow Creek Reservoir Emergency</td>
</tr>
<tr>
<td>HDR</td>
<td>Survey &amp; Mapping</td>
</tr>
<tr>
<td>HDR</td>
<td>Columbus Rapeje - Nye 115kV Transmission Line</td>
</tr>
<tr>
<td>Pioneer Technical Services</td>
<td>Prickly Pear Creek Realignment</td>
</tr>
<tr>
<td>ACEC/NEBRASKA</td>
<td></td>
</tr>
<tr>
<td>HDR</td>
<td>Flanagan Lake</td>
</tr>
<tr>
<td>HDR</td>
<td>Fred &amp; Pamela Buffet Cancer Center</td>
</tr>
<tr>
<td>HDR</td>
<td>Minne Lusa Pump Station</td>
</tr>
<tr>
<td>ACEC/NEW HAMPSHIRE</td>
<td></td>
</tr>
<tr>
<td>Hardesty &amp; Hanover/ Figg Bridge</td>
<td>Sarah Mildred Long Bridge</td>
</tr>
<tr>
<td>Engineers</td>
<td></td>
</tr>
<tr>
<td>ACEC/NEW JERSEY</td>
<td></td>
</tr>
<tr>
<td>AmerCom</td>
<td>U.S. Route 206 Bridge Replacement in 9 Days</td>
</tr>
<tr>
<td>Control Point Associates</td>
<td>Burlington-Bristol Bridge Scan and Model</td>
</tr>
<tr>
<td>Dewberry Engineers</td>
<td>Interchange 163 Improvements</td>
</tr>
<tr>
<td>Gannett Fleming</td>
<td>N.J. Turnpike Interchange</td>
</tr>
<tr>
<td>HNTB</td>
<td>Open Road Tolling</td>
</tr>
<tr>
<td>Jacobs Engineering Group</td>
<td>Conrail Penns Grove Sidig Track</td>
</tr>
<tr>
<td>Langan Engineering and</td>
<td>700 Jackson Redevelopment and Resiliency Park</td>
</tr>
<tr>
<td>Environmental Services</td>
<td></td>
</tr>
<tr>
<td>T&amp;M Associates</td>
<td>Berkeley Island County Park</td>
</tr>
<tr>
<td>WSP USA</td>
<td>Cedar Bonnet Island Habitat</td>
</tr>
<tr>
<td></td>
<td>Restoration Plan</td>
</tr>
<tr>
<td>ACEC/NEW MEXICO</td>
<td></td>
</tr>
<tr>
<td>NorthGeoEngineering Services</td>
<td>Excavation Support Design/ I-25 Bridge Widening</td>
</tr>
<tr>
<td>ACEC/NEW YORK</td>
<td></td>
</tr>
<tr>
<td>AKRF</td>
<td>American Copper Buildings</td>
</tr>
<tr>
<td>Arcadis U.S.</td>
<td>Stormwater Detention</td>
</tr>
<tr>
<td>Arup</td>
<td>Polyfluoroalkyl Substances</td>
</tr>
<tr>
<td>Arup</td>
<td>Treatment Plant</td>
</tr>
<tr>
<td>C.T. Male Associates /</td>
<td>Precise Interior/Exterior Control</td>
</tr>
<tr>
<td>Landscape Architecture &amp; Geology</td>
<td>Clean &amp; Green Biosolids</td>
</tr>
<tr>
<td>Cameron Engineering &amp; Associates</td>
<td>Processing Facility</td>
</tr>
<tr>
<td>Cameron Engineering &amp; Associates</td>
<td>Reclamation Project</td>
</tr>
<tr>
<td>CDM Smith</td>
<td>Queen Ditch Restoration Project</td>
</tr>
<tr>
<td>Dowberry</td>
<td>NYC Climate Resiliency</td>
</tr>
<tr>
<td>Ecology and Environment</td>
<td>Design Guidelines</td>
</tr>
<tr>
<td>Engineering and Geology</td>
<td>Radiological Soil Sorting</td>
</tr>
<tr>
<td>Hardesty &amp; Hanover</td>
<td>Pilot Study</td>
</tr>
<tr>
<td>Hardesty &amp; Hanover</td>
<td>Grand Central Parkway</td>
</tr>
<tr>
<td>Jaros, Baum &amp; Bolles</td>
<td>Interchange Reconstruction</td>
</tr>
<tr>
<td>LaBella Associates</td>
<td>Johnson Street Bridge</td>
</tr>
<tr>
<td>LERA Consulting Structural</td>
<td>Governor Mario M. Cuomo Bridge</td>
</tr>
<tr>
<td>Engineers</td>
<td>Helen L. and Martin S. Kimmel Pavilion</td>
</tr>
<tr>
<td>Parsons Corp.</td>
<td>Rochester Train Station</td>
</tr>
<tr>
<td></td>
<td>N.J. Turnpike Interchange</td>
</tr>
<tr>
<td></td>
<td>Bridge</td>
</tr>
<tr>
<td></td>
<td>Replacement Project</td>
</tr>
<tr>
<td></td>
<td>Legacy West Campus</td>
</tr>
<tr>
<td></td>
<td>Niagara Falls State Park</td>
</tr>
<tr>
<td></td>
<td>Transformation Initiative</td>
</tr>
<tr>
<td></td>
<td>Stavros Niarchos Foundation</td>
</tr>
<tr>
<td></td>
<td>Cinder Bed Road Bus</td>
</tr>
<tr>
<td></td>
<td>Maintenance Facility</td>
</tr>
<tr>
<td></td>
<td>53 West 53rd Street Tower</td>
</tr>
<tr>
<td></td>
<td>Times Square Shuttle Station</td>
</tr>
<tr>
<td></td>
<td>Reconstruction Study</td>
</tr>
<tr>
<td>ACEC/NORTH CAROLINA</td>
<td></td>
</tr>
<tr>
<td>McKim &amp; Creed</td>
<td>Melinda K. Knoerter Adaptive Ecosystem Reclamation</td>
</tr>
<tr>
<td>S&amp;ME</td>
<td>Novo Nordisk Surcharge Program</td>
</tr>
<tr>
<td>STV</td>
<td>LYNX Blue Line Extension</td>
</tr>
<tr>
<td>ACEC/NORTH DAKOTA</td>
<td></td>
</tr>
<tr>
<td>KLI</td>
<td>Sheyenne Street Corridor Study</td>
</tr>
</tbody>
</table>
# ACEC 2019 Engineering Excellence Awards
## National Recognition Award Winners

<table>
<thead>
<tr>
<th>Firm Name</th>
<th>Project Name</th>
<th>Firm Name</th>
<th>Project Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACEC/OHIO</td>
<td>HDR</td>
<td>JQ Engineering</td>
<td>Corrosion Study of Alternative Water Source</td>
</tr>
<tr>
<td>ACEC/OHIO</td>
<td>HDR</td>
<td>JQ Engineering</td>
<td>Education Complex</td>
</tr>
<tr>
<td>ACEC/OHIO</td>
<td>HDR</td>
<td>Lockwood, Andrews &amp; Newman</td>
<td>University Boulevard Extension</td>
</tr>
<tr>
<td>ACEC/OHIO</td>
<td>HDR</td>
<td>Lockwood, Andrews &amp; Newman</td>
<td>Repair &amp; Revitalization of Washburn Tunnel</td>
</tr>
<tr>
<td>ACEC/OHIO</td>
<td>HDR</td>
<td>Walter P Moore</td>
<td>Hurricane Harvey Emergency</td>
</tr>
<tr>
<td>ACEC/OHIO</td>
<td>HDR</td>
<td>Walter P Moore</td>
<td>Flood Modeling</td>
</tr>
<tr>
<td>ACEC/OKLAHOMA</td>
<td>CP&amp;Y</td>
<td>A. Morton Thomas and Associates</td>
<td>Southgate Drive/ U.S. 460 Bypass Interchange</td>
</tr>
<tr>
<td>ACEC/OKLAHOMA</td>
<td>Garver</td>
<td>Clark Nexsen</td>
<td>Central Vehicle Wash Facility and TEMF Complex</td>
</tr>
<tr>
<td>ACEC/OKLAHOMA</td>
<td>HNTB</td>
<td>HDR</td>
<td>Bridge Street Pump Station</td>
</tr>
<tr>
<td>ACEC/OKLAHOMA</td>
<td>HNTB</td>
<td>HDR</td>
<td>Weight Restricted Bridge Crossings</td>
</tr>
<tr>
<td>ACEC/OKLAHOMA</td>
<td>HNTB</td>
<td>HDR</td>
<td>New U.S. Embassy</td>
</tr>
<tr>
<td>ACEC/OKLAHOMA</td>
<td>HNTB</td>
<td>HDR</td>
<td>Pulse Bus Rapid Transit</td>
</tr>
<tr>
<td>ACEC/OKLAHOMA</td>
<td>HNTB</td>
<td>HDR</td>
<td>Carter's Grove Plantation</td>
</tr>
<tr>
<td>ACEC/OREGON</td>
<td>Anderson Perry &amp; Associates</td>
<td>BergerABAM</td>
<td>Vancouver Waterfront Park</td>
</tr>
<tr>
<td>ACEC/OREGON</td>
<td>HDR</td>
<td>David Evans and Associates</td>
<td>East Link Extension - Spring District 120th Station</td>
</tr>
<tr>
<td>ACEC/OREGON</td>
<td>HDR</td>
<td>David Evans and Associates</td>
<td>Restoration of the Mariposa Grove of Giant Sequoias</td>
</tr>
<tr>
<td>ACEC/OREGON</td>
<td>HDR</td>
<td>HDR</td>
<td>Henderson Combined Sewer</td>
</tr>
<tr>
<td>ACEC/OREGON</td>
<td>HDR</td>
<td>HDR</td>
<td>Overflow Reduction</td>
</tr>
<tr>
<td>ACEC/OREGON</td>
<td>HDR</td>
<td>HDR</td>
<td>Wildfire Transmission Line Risk Assessment</td>
</tr>
<tr>
<td>ACEC/OREGON</td>
<td>HDR</td>
<td>HDR</td>
<td>Yeater Way Bridge Reconstruction</td>
</tr>
<tr>
<td>ACEC/OREGON</td>
<td>HDR</td>
<td>HDR/Johnson, Mirmiran &amp; Thompson</td>
<td>SR 520 West Approach Bridge North</td>
</tr>
<tr>
<td>ACEC/OREGON</td>
<td>HDR</td>
<td>Mason &amp; Hanger</td>
<td>Vicksburg 115kV Improvement Project</td>
</tr>
<tr>
<td>ACEC/OREGON</td>
<td>HDR</td>
<td>STV</td>
<td>Alaskan Way Viaduct Replacement Program</td>
</tr>
<tr>
<td>ACEC/OREGON</td>
<td>HDR</td>
<td>VHB</td>
<td>Carter’s Grove Plantation</td>
</tr>
<tr>
<td>ACEC/SOUTH CAROLINA</td>
<td>Civil Engineering Consulting Services</td>
<td>ACEC/WASHINGTON</td>
<td>Wastewater Treatment Plant Upgrade</td>
</tr>
<tr>
<td>ACEC/SOUTH CAROLINA</td>
<td>Mead &amp; Hunt</td>
<td>ACEC/WASHINGTON</td>
<td>Wastewater Treatment Plant Upgrade</td>
</tr>
<tr>
<td>ACEC/SOUTH CAROLINA</td>
<td>Mead &amp; Hunt</td>
<td>ACEC/WASHINGTON</td>
<td>Wastewater Treatment Plant Upgrade</td>
</tr>
<tr>
<td>ACEC/SOUTH CAROLINA</td>
<td>Mead &amp; Hunt</td>
<td>ACEC/WASHINGTON</td>
<td>Wastewater Treatment Plant Upgrade</td>
</tr>
<tr>
<td>ACEC/SOUTH CAROLINA</td>
<td>Michael Baker International</td>
<td>ACEC/WASHINGTON</td>
<td>Wastewater Treatment Plant Upgrade</td>
</tr>
<tr>
<td>ACEC/SOUTH CAROLINA</td>
<td>Thomas &amp; Hutton</td>
<td>ACEC/WISCONSIN</td>
<td>Zoo Interchange Core and Adjacent Arterials</td>
</tr>
<tr>
<td>ACEC/SOUTH CAROLINA</td>
<td>Thomas &amp; Hutton</td>
<td>ACEC/WISCONSIN</td>
<td>Lower Yahara River Trail Construction</td>
</tr>
<tr>
<td>ACEC/SOUTH CAROLINA</td>
<td>TranSystems</td>
<td>ACEC/WISCONSIN</td>
<td>Wastewater Treatment Plant Improvement</td>
</tr>
<tr>
<td>ACEC/TENNESSEE</td>
<td>AECOM</td>
<td>ACEC/WISCONSIN</td>
<td>Zoo Interchange Core and Adjacent Arterials</td>
</tr>
<tr>
<td>ACEC/TENNESSEE</td>
<td>Brown and Caldwell</td>
<td>ACEC/WISCONSIN</td>
<td>Lower Yahara River Trail Construction</td>
</tr>
<tr>
<td>ACEC/TENNESSEE</td>
<td>CDM Smith</td>
<td>ACEC/WISCONSIN</td>
<td>Wastewater Treatment Plant Improvement</td>
</tr>
<tr>
<td>ACEC/TENNESSEE</td>
<td>Fisher Arnold</td>
<td>ACEC/WISCONSIN</td>
<td>Zoo Interchange Core and Adjacent Arterials</td>
</tr>
<tr>
<td>ACEC/TENNESSEE</td>
<td>McMillen Jacobs Associates</td>
<td>ACEC/WISCONSIN</td>
<td>Lower Yahara River Trail Construction</td>
</tr>
<tr>
<td>ACEC/TENNESSEE</td>
<td>OGC</td>
<td>ACEC/WISCONSIN</td>
<td>Wastewater Treatment Plant Improvement</td>
</tr>
<tr>
<td>ACEC/TENNESSEE</td>
<td>Power Consulting Associates</td>
<td>ACEC/WISCONSIN</td>
<td>Lower Yahara River Trail Construction</td>
</tr>
<tr>
<td>ACEC/TENNESSEE</td>
<td>Vaughn &amp; Melton</td>
<td>ACEC/WISCONSIN</td>
<td>Wastewater Treatment Plant Improvement</td>
</tr>
<tr>
<td>ACEC/TENNESSEE</td>
<td>Freese and Nichols</td>
<td>ACEC/TENNESSEE</td>
<td>Upper Brushy Creek Dam 7 Modernization Project</td>
</tr>
<tr>
<td>ACEC/TENNESSEE</td>
<td>Freese and Nichols</td>
<td>ACEC/TENNESSEE</td>
<td>Upper Brushy Creek Dam 7 Modernization Project</td>
</tr>
<tr>
<td>ACEC/TENNESSEE</td>
<td>HDR/Pape-Dawson Engineers</td>
<td>ACEC/TENNESSEE</td>
<td>Upper Brushy Creek Dam 7 Modernization Project</td>
</tr>
<tr>
<td>ACEC/TENNESSEE</td>
<td>HDR/Pape-Dawson Engineers</td>
<td>ACEC/TENNESSEE</td>
<td>Upper Brushy Creek Dam 7 Modernization Project</td>
</tr>
</tbody>
</table>
ACEC thanks the 2019 Engineering Excellence Awards (EEA) Judges and EEA Committee members for their time and dedication to this year’s competition.

**2019 EEA Judges**

- **Mary J.S. Roth**  
  Chief Judge  
  Lafayette College  
  Easton, Pennsylvania

- **Fiona M. Allen**  
  Trinity River Authority of Texas  
  Arlington, Texas

- **Kerry Averyt**  
  San Antonio River Authority  
  San Antonio, Texas

- **Gabriel Bolas II**  
  Knoxville Utilities Board  
  Knoxville, Tennessee

- **James Cashwell**  
  Olin Corp.  
  Cleveland, Tennessee

- **Lawrence Chiarelli**  
  New York University Tandon  
  School of Engineering  
  Brooklyn, New York

- **Fred Coleman III**  
  Professional Services Selection Committee  
  Illinois Department of Transportation  
  Champaign, Illinois

- **Col. Richard W. Dean II (Ret.)**  
  National Defense University  
  Washington, D.C.

- **Paul DeGges**  
  Tennessee Department of Transportation  
  Nashville, Tennessee

- **Lisa E. DeMeo**  
  Salisbury Department of Public Works  
  Salisbury, Massachusetts

- **Maria E. Moreyra Garlock**  
  Princeton University  
  Princeton, New Jersey

- **Cheryl Gomez**  
  University of Virginia  
  Charlottesville, Virginia

- **Glenn Gottardo**  
  Metropolitan Water Reclamation District of Greater Chicago  
  Chicago, Illinois

- **Nenad Gucunski**  
  Rutgers University  
  Piscataway, New Jersey

- **Adrian T. Hanson**  
  University of Minnesota-Duluth  
  Duluth, Minnesota

- **Moujalli C. Hourani**  
  Manhattan College  
  Riverdale, New York

- **Marcus Jensen**  
  Southern Nevada Water Authority  
  Logandale, Nevada

- **Greg Kernohan**  
  Ducks Unlimited, Inc.  
  Fort Collins, Colorado

- **Csaba Kertesz**  
  The Port Authority of New York & New Jersey  
  Jersey City, New Jersey

- **Ryan Kuss**  
  San Francisco International Airport  
  San Francisco, California

- **Clarita Lao**  
  Illinois Tollway  
  Downers Grove, Illinois

- **Tom McCarthy**  
  Lindsey Manufacturing  
  Sierra Madre, California

- **W. Todd Minnix**  
  Fairfax County Department of Transportation  
  Fairfax, Virginia

- **Spencer Moore**  
  University of Texas MD Anderson Cancer Center  
  Houston, Texas

- **Harry W. (Tripp) Shenton III**  
  University of Delaware  
  Newark, Delaware

- **Michael C. Wallace**  
  The Port Authority of New York & New Jersey  
  Jersey City, New Jersey

- **John Yonan**  
  Cook County Department of Transportation and Highways  
  Chicago, Illinois

- **Scott Young**  
  Glasgow Water Co.  
  Glasgow, Kentucky

**2019 EEA Committee**

- **Andrew J. Ciancia**  
  Chairman  
  Langan Engineering & Environmental Services, Inc.  
  New York, New York

- **Jeffrey Druckman**  
  Vice Chairman  
  Bowman Consulting Group Ltd.  
  Chicago, Illinois

- **Kasey Anderson**  
  ACEC/Tennessee  
  Nashville, Tennessee

- **Herbert Berg**  
  M & H Design Associates, LLC  
  Chicago, Illinois

- **W. Harold Cannon Jr.**  
  Cannon & Cannon, Inc.  
  Knoxville, Tennessee

- **Nancy A. Gruwell**  
  HDR  
  Omaha, Nebraska

- **Judy L. Hricak**  
  Gannett Fleming  
  Camp Hill, Pennsylvania

- **Michael T. Levar**  
  Chicago, Illinois

**2019 EEA Gala Sponsors**

ACEC wishes to thank the following companies for their generous sponsorship and support of the 2019 Engineering Excellence Awards Gala:

**Diamond Sponsors**

- HDR
- Michael Baker International
- Muller Engineering Co.
- STV
- WSP

**Emerald Sponsors**

- ACEC Retirement Trust
- Agile Frameworks
- FIGG Bridge Engineers
- Gannett Fleming
- Hardesty & Hanover
- HNTB
- Jaros, Baum & Bolles
- Parsons

- Pioneer Technical Services
- Schnabel Engineering
- Syska Hennessy Group
- T&M Associates
- T. Y. Lin International
- Walter P Moore

**Reception Sponsor**

- WRA

**After Party Sponsor**

- AECOM
As general engineering consultant, we are honored to receive the Grand Conceptor Award for the Alaskan Way Viaduct Replacement Program, on behalf of the Washington State Department of Transportation.
Reaching the century mark isn’t easy – you have to be quality-driven, client-focused, and have a vision for the future. At 100 years, STV is looking ahead. As an employee-owned firm, our planners, architects, engineers and construction managers have a stake in the business, and are committed to quality performance. We provide personal attention and timely solutions, with an eye toward sustainability. And with more than 40 offices, we are a local firm with national resources.

When it comes to getting your project delivered right, choose the firm that has the drive and vision to be the best.
LINKING LOOKOUT: US 6 AND 19TH STREET INTERCHANGE

City of Golden and Colorado Department of Transportation

WESTMINSTER STATION PARK

City of Westminster and Urban Drainage and Flood Control District

Transportation Facilities Design
Traffic/Intelligent Transportation Systems (ITS)
Stream Design
Stormwater Management
Water and Wastewater Utilities
Bridge and Structure Design
Trail Design
Program Management
Providing a full continuum of innovative services to restore and enhance our nation’s infrastructure

Congratulations to the 2019 ACEC/EEA Award Winners for Engineering Excellence
HNTB would like to congratulate all of the ACEC New York 2019 Engineering Excellence Award Winners.

We’re proud to be recognized for our work.

Award-Winning Infrastructure Projects

HNTB congratulates our colleagues and partners on the Grand Award-winning Milwaukee Zoo Interchange and Honor Award-winning Riverside Drive and Gathering Place and American Center for Mobility.
Promoting the advancement of our clients with reliable and creative engineering solutions!

T&M’s team of engineers, consultants and environmental scientists provide in-depth technical and regulatory expertise to empower clients to accurately assess opportunities and implement practical, cost-effective solutions to meet all your engineering and environmental challenges.

tandmassociates.com | 800.323.3647

When Innovation Matters, We Deliver.

Excellence Delivered As Promised

800.233.1055 • gannettfleming.com • Offices Worldwide
Congratulations Maine & New Hampshire Departments of Transportation on receiving the 2019 ACEC NATIONAL ENGINEERING EXCELLENCE GRAND AWARD for the SARAH MILDRED LONG BRIDGE

Kittery, Maine/Portsmouth, New Hampshire | Designed by FIGG/Hardesty & Hanover Joint Venture | Opened 3.30.18

Integrated dam, geotechnical, and tunnel engineering solutions ranging from subsurface explorations and soil testing to project risk management, engineering analysis, design, and construction support.

schnabel-eng.com
AGILE FRAMEWORKS PROVIDES TOOLS THAT ALLOW YOU TO SOLVE YOUR INEFFICIENT PROCESSES AND UNLOCK LOST OR WASTED DOLLARS IN YOUR BUSINESS

LEARN MORE | 800.779.1196 | www.agileframeworks.com

Innovative Designs at Iconic Destinations

Niagara Falls Transformation Initiative - Niagara Falls, NY
ACEC Engineering Excellence Honor Award
ACEC New York Diamond Award
2018 ENR Best of the Best Renovation/Restoration Award

www.tylin.com
Pioneer and METG
Winners of the ACEC
2019 Grand Award for
the Prickly Pear Creek
Realignment Project

Water Resource Management
Environmental Remediation
Civil Engineering
www.pioneer-technical.com

H&H proudly supports the American Council of Engineering Companies.
Congratulations to all of this year’s awardees.
NYNJ Link is part of The Port Authority of New York and New Jersey Goethals Bridge Replacement Public-Private Partnership (P3). Kiewit-Weeks-Massman, AJV, is a design-build joint venture team for NYNJ Link, LLC. For information on the Goethals Bridge Replacement and the P3 visit: www.panynj.gov/GoethalsBridgeReplacement

Knowledge. Expertise. Resources.
Goethals Bridge Replacement
Staten Island, NY to Elizabeth, NJ

CONGRATULATES
all of the
2019 ACEC EEA Award Winners!

WWW.JBB.COM
Tampa International Airport
ConRAC Facility and APM System
An award-winning project with
Gresham Smith and Master Consulting Engineers

Featured Project Photo:
2019 ACEC National Award Winner
Hefner Water Treatment Plant
Sludge Handling Facility
Client: City of Oklahoma City
Location: Oklahoma

Full-Service Engineering and Architecture
• Water/Wastewater Planning
• Raw Water Supply, Storage, & Conveyance
• Wastewater Collection, CMOM, & Pumping
• Water/Wastewater Treatment
• Potable Water Distribution, Storage, & Pumping
• Wastewater Reuse Conveyance, Storage, & Pumping
• Electrical/Instruments & Control

800.364.7300 / walterpmoore.com
Incredible projects delivered by incredible people since 1923.

Proud to be honored with a 2019 ACEC Engineering Excellence Award

CREATIVE solutions
Responsive PEOPLE

Congratulations
Anderson Engineering, Inc.
2019 Engineering Excellence Awards
National Recognition Award

HORRy COUNTY ENERGY POSITIVE SCHOOLS · HORRy COUNTY, SC
At Thomas & Hutton, we create solutions with thoughtful design to create places, communities, foundations, life.

ENGINEERING | SURVEYING | PLANNING | GIS | CONSULTING
LANDSLIDE FORCES IMMEDIATE ACTION
The afternoon before the landslide, engineers were on-site investigating roadway subsidence. The team pulled crews off the site and initiated the evacuation after noticing accelerating slope movement. The decision likely saved lives.

It started with an urgent phone call from a geotechnical engineer at the Pennsylvania Department of Transportation's (PennDOT) office: “Could you investigate some subsidence issues on U.S. Route 30?”
Less than three months later, the damage stemming from those issues, and a subsequent landslide that destroyed three buildings, will have already been remediated—designed, executed and delivered ahead of schedule.

But when, Brian Heinzl, project manager at Gannett Fleming’s Pittsburgh office, arrived on the scene April 4, 2018, after the call from District 11, the stretch of U.S. Route 30 east of Pittsburgh had about 1 foot of displacement.

“There was a sewer crossing there, so we thought the pipe had broken and was piping soil away from the road,” Heinzl says.

Based on that assumption, PennDOT closed the westbound lanes of Route 30 but kept the eastbound lanes open.

The next day, PennDOT and Gannett Fleming tried to determine whether a broken pipe was indeed the source of the problem. A PennDOT contractor guided a video camera through the pipe, but the search hit a roadblock when Heinzl realized the drawings in utilities records were from 1934 and no longer accurate.

Meanwhile, the road surface continued to buckle. When Heinzl returned to the site on April 6, he found it had subsided by 2 to 3 feet in places. What’s more, the retaining wall on the slope below the road was displacing. When Heinzl inspected it two days earlier the wall had been solid.

“It was broken in a spot, rotated about the top and some adjacent remnant building foundations had started breaking,” he says. “I realized the slope was moving at an alarming rate, and failure of the wall was imminent.”

Heinzl alerted PennDOT engineers who immediately closed Route 30 in both directions and evacuated 31 residents from apartment buildings and other structures downslope from the retaining wall.

“Our intention was to excavate material from the road surface and unload the wall that was failing,” says Heinzl, “but we did not get that far.”

PennDOT District 11, which encompasses Allegheny, Beaver and Lawrence counties in Western Pennsylvania, is prone to landslides. Straddling the Appalachian Mountains, it is characterized by steep slopes and deep valleys. The sedimentary rock formations, including weak claystone units, are prone to weathering and loss...
of strength. Making matters worse, the region had record amounts of rainfall in 2018.

Gannett Fleming’s familiarity with the local terrain and its more than 25 years of work with PennDOT would prove critical on the morning of April 7 when the retaining wall catastrophically failed. Three hundred feet of roadway and thousands of tons of soil plummeted 90 feet down the steep hillside, destroying two apartment buildings and a single-family home.

DESIGNING THE NEW WALL

Route 30, which winds east-west through the district, is a critical commuter route for Pittsburgh. On an average day, 30,000 vehicles would cross the location of the landslide. With no easy detours, having the road out of commission majorly inconvenienced the entire region.

Gov. Tom Wolf toured the site soon after the slide and emphasized the need to open the road as soon as possible. At the time of the governor’s visit, Gannett Fleming engineers were already well into the initial phase of project design.

Immediately following the landslide, PennDOT, Gannett Fleming and other contractors were on-site to ensure the slope was not going to move any farther and that everyone had been evacuated from the buildings below. Once the site and surrounding areas were secure, excavation started immediately.

“First, we had to determine how much we could safely excavate,” says Heinzl. “We ascertained the slide was in a confined ravine, so we could move most of the debris and soil without impacting adjacent properties.”

Because it was necessary to clear the site right away, Gannett Fleming engineers could not wait for the approximately 35,000 cubic yards of debris to be removed before beginning geotechnical investigations and analysis. Furthermore, they could not wait to complete the analysis before designing the new retaining wall.

Heinzl and his team used available LiDAR imaging to determine the surface contours of the site and utilized a drone to provide 3D aerial photogrammetry. The preliminary design and location of the new wall were based on this information.

At the direction of the engineer, excavators removed debris from specific areas in order to allow drill rigs to access critical core sample borings along the anticipated alignment of the wall.

“We had to make educated design assumptions that turned out

Typically for a job like this, even under emergency conditions, three months of design would be more in the realm of possibility.”

BRIAN HEINZL
PROJECT MANAGER
GANNETT FLEMING

BUSINESS SOFTWARE FIT FOR YOUR FIRM.

BIG OR SMALL, OUR BST10 SOLUTIONS HELP AEC FIRMS TACKLE PROJECTS OF ALL SIZES.

BST10 PROFESSIONAL
An out of the box, no frills, cloud-based ERP solution for emerging AEC firms.

BST10 WORK MANAGEMENT
A professional services automation solution that integrates seamlessly with your existing financial solution.

BST10 ENTERPRISE
A comprehensive, yet flexible ERP solution for mid-sized to large firms.

BSTGLOBAL.COM/PRODUCTS
ENGINEERING INC.    MAY / JUNE 2019

“to be pretty close,” says Heinzl. “We came up with a model, and then when drilling crews brought up soil and rock samples, our inspectors took photos and texted them to the office to confirm actual subsurface conditions, and we made changes on the fly.”

**DESIGN PACKAGE DELIVERY**

On April 16, just 10 days after the landslide, Gannett Fleming delivered the design package to PennDOT. The package included design-build plans for the roadway surface and drainage repairs; details for excavation and benching to remove the landslide material and replace it with a durable rock embankment; final structure plans for a 400-foot-long, 20-foot-high anchored soldier pile and lagging retaining wall; and special provisions for PennDOT to advertise the project for bid.

“That’s the fastest we’ve ever done it,” says Heinzl. “Typically for a job like this, even under emergency conditions, three months of design would be more in the realm of possibility.”

The project budget was $6.5 million, and the scheduled completion date was June 30.

“Gannett Fleming was utterly incredible,” says Cheryl Moon-Sirianni, a district executive for PennDOT. “They had to make a lot of assumptions, but they’ve worked on a lot of our remediation projects and have a really good handle on the geology in the region.”

Concurrent with the design process, Golden Triangle Construction—one of PennDOT’s primary contractors in the district—jumped in without hesitation. Based upon preliminary contacts made by Gannett Fleming, the contractor found a supplier that had the 51 support beams required for the retaining wall.

“The contractor understood the importance of the project, so they took a gamble and locked up the steel prior to getting the bid,” says Moon-Sirianni.

Over the next two weeks, the steel beams were transported from Richmond, Virginia, to a fabrication shop 25 miles north of Pittsburgh and then to Columbus, Ohio, to be galvanized. Moon-Sirianni estimates the contractor’s initiative significantly reduced the procurement process.

**ROUTE 30 REOPENED**

Because of their assumptions, Heinzl and his team had to adapt the plans for Route 30 as new information and data became available. When data from the final boring showed

“It was a very aggressive construction schedule, getting that amount of work done in such a confined space.”

JOHN KOVACS
EXECUTIVE VICE PRESIDENT
GANNETT FLEMING
JOIN THE MOVEMENT!

Our vision is to establish consulting engineering as the healthiest industry in the United States by:

• Offering solutions traditionally reserved for larger firms to small and midsized firms
• Providing rewarding wellness programs to everyone
• Guiding members to the highest-quality providers
• Offering a comprehensive portfolio of products and funding alternatives

When we succeed, we all benefit with:

• Lower health care costs
• Increased productivity

JOIN US!
For more information, visit acelifehealthtrust.com or call (844) 259-0325.
The reopening of Route 30 in less than three months after the landslide restored mobility to the region as quickly as possible. Residents and commuters dreaded the idea of a yearlong closure of the highway—the typical timeline for similar projects. The roadway is a key travel artery, connecting Allegheny County Communities to the Parkway East, which leads to downtown Pittsburgh. It has an estimated 30,000 daily traffic count in the area.

On June 27, only 81 days following the landslide and three days ahead of schedule, Route 30 was reopened. “If this had been a ‘normal’ slide, without the emergency approval process, it would have taken two years to get the road reopened,” says Moon-Sirianni.

In addition to completing the entire project scope in a short window of time, final cost for the project was within 1 percent of the budget. "It was a great example of the value of a strong partnership among the engineer, owner and contractor," says Kovacs. "Everyone was unified and worked really well together." —

Gerry Donohue is ACEC’s senior communications writer. He can be reached at gdonohue@acec.org.

“it was a very aggressive construction schedule, getting that amount of work done in such a confined space,” says John Kovacs, executive vice president for Gannett Fleming. “PennDOT, Gannett Fleming and the contractor were there around the clock. By Mother’s Day, we were testing anchors.”

an unexpected absence of the targeted foundation sandstone, the team redesigned a 75-foot section of the wall within a few hours, lengthening the support beams by 10 feet and specifying the replacement of existing landslide-prone soils with granular material that would lighten the lateral forces on this section of the wall.

Newforma’s Project Information Management software enables architects, engineers, contractors and owners to reduce time spent on administrative tasks, streamline project workflows and powers real-time collaboration for project teams.

To Learn More, Request A Demo Today!
answers@newforma.com

The Great Lie: The Paperless Office Myth
e-arc.com
Student Loan Repayment on your mind? Ours, too.
Relief coming soon from ACEC RT.
Interested in joining the ACEC RT, contact Lydia Zabrycki at Lydia.Zabrycki@acecrteducation or (559) 284.0370

ACEC Retirement Trust
A retirement plan for engineers… by engineers.

AEC MANAGEMENT SOLUTIONS TO TRANSFORM YOUR BUSINESS
• Strategic Business Planning
• Mergers & Acquisitions Advisory
• Executive Search
• Marketing & Business Development
• Valuation & Ownership Transition
• Leadership Development & Executive Coaching
• Lean Project Delivery & Consulting

FIND OUT MORE: www.brayn.com

FREE NO OBLIGATION ASSESSMENT OF TAX OPPORTUNITIES!

179D Energy Efficient Building Deduction

FIND OUT MORE: www.brayn.com
Teamwork is an essential building block of society—communities, by definition, are built around people working together for the common good. Without communication, collaboration and trust that teamwork goes nowhere.

This certainly applies to engineering firms where long-term success depends on how well its employees work together—whether it is building a bridge or creating a marketing campaign. That is why there are a plethora of companies and consultants that offer team building events, workshops and tools. It also is why team building should be a core responsibility for management.
FIRMS ARE DEVELOPING A NEW CULTURE OF TEAMWORK TO GAIN COMPETITIVE ADVANTAGE
“Team building is more impactful when it is driven from the top down with a consistent message that we support and encourage it,” says Connie Taggart, director of human resources at Wright-Pierce.

The team concept is especially relevant in the A/E industry—not only for organizational cohesion but also as the best way to unite individuals with varying skills into multidisciplinary groups to design, implement and complete projects.

“We have a model based around teamwork and collaboration, where you coordinate with other disciplines on a regular basis,” says Taggart. “The knowledge and valuable experience gained from being a part of those multidisciplinary design teams truly makes you a better engineer and in turn helps produce better projects for clients.”

GROUP DYNAMICS
Team building requires that managers have a keen understanding of each individual’s professional strengths, areas where they could use improvement and what gets them excited to work with others. They also have to recognize different types of personalities and how they impact group dynamics.

Wright-Pierce focuses on a multilevel approach for team building, according to Taggart. “First, we focus on multidiscipline teams specific to service lines and expertise in distinct practice areas. Then we train across each of our eight offices for cross-discipline, in-person team building and education.”

In order to stay competitive, engineering firms need a team environment in order to develop innovative and better solutions, and that means facilitating communication, according to Paul Chinowsky, director of the Program in Environmental Design at the University of California, Berkeley. “Because A/E projects require so many skill sets, that tendency, ‘We create the best team for a given project, which can include employees from any of our offices,’ she explains. "They may be interacting with people they’re not sitting next to, but there has to be a consistent message.”

Building project teams requires people who can look at the entire supply chain and take the view of the various stakeholders, according to Angela Stopper, chief learning officer and director of learning and development at the University of California, Berkeley. “Because A/E projects require so many skill sets, that forces a diversity of thought that you try to get when putting together a good team,” she says.

At the same time, Stopper adds, an engineering firm needs to have strong governance of a team, making sure roles and expertise are respected. “If the lead engineer takes the point of view as the final voice of authority, other voices can get outvoted,” says Stopper. “You need a team leader, but you also need a shared leadership structure where people can raise their voices.”

“Team building is vital for successful project work, but it also benefits the organization in the long run, according to Chinowsky. “If people feel connected, then two things happen. One, employees tend to stay longer and feel more invested in the company. Two, employees feel more comfortable offering ideas on improving the company,” he says.

Team building is an art and a science, and engineering firms that consistently balance the two disciplines can maximize their chances for continuous success.

MAINTAINING BALANCE
But building and maintaining teams can be tough. One common problem among firms whatever their size, is siloing, according to Chinowsky. “The typical situation in the engineering industry, because it is separated into specialties, is that you often have a small group of people at the top who talk to each other, but from the mid-range down, people tend to stay in their own areas. Add in administrative and IT people, and you have even more islands.”

The difficulty in having many different islands, or silos, is that people come up with ideas and solutions that are optimized only for their individual specialty. “They are not bringing together all of the different perspectives,” says Chinowsky.

Taggart agrees that engineers have a reputation for being task-oriented, seeing what is in front of them rather than what is around them. Having specialists spread out among Wright-Pierce’s multiple offices exacerbates that tendency. “We create the best team for a given project, which can include employees from any of our offices,” she explains. “They may be interacting with people they’re not sitting next to, but there has to be a consistent message.”

Engineering firms need a team environment in order to develop innovative and better solutions, and that means facilitating communication.
TEAM TRUST
To appreciate other people’s opinions and ideas, team members must trust one another. Chinowsky suggests that managers can instill trust through collaboration. Engineering firms are inclined to create very surface connections and not focus enough on underlying activities that build professional trust and reasons for working together.

“It may be easier to manage a project by breaking tasks down into individual pieces and making sure someone is responsible for each one,” says Chinowsky. “But that relieves people of the obligation of working together.”

Instead, managers should look at what parts of a project foster more interactions versus individual actions. “If you can build trust and open communications, that builds collaboration and makes people more invested in the solutions,” he says.

To help nurture collaboration, Wright-Pierce incorporated Skype for Business, enterprise software that provides real-time instant messaging, Voice over Internet Protocol, video conferencing and other shared services. “These tools have brought great value to people, so they bring team members together virtually and allowing for greater productivity,” says Taggart.

Stopper, who manages a 10-person team of trainers for campus initiatives at the University of California, Berkeley, advocates Ken Blanchard’s Building Trust program for managers, often referred to as the ABCD Trust Model as one of the models groups can use when thinking about trust in their organization. It comprises four elements that, Blanchard’s research shows, help leaders and team members learn how to build trust in the workplace and how to repair it when it has been broken:

1. Able: demonstrates confidence
2. Believable: acts with integrity
3. Connected: cares about others
4. Dependable: honors commitments

“Own your expertise; seek out, value and respect the insight of others; say what you are going to do, and then you do it,” says Stopper, summarizing the Building Trust program’s essence. Employees see that others follow through, or not, on everything from hitting deadlines to arriving at a meeting prepared and on time. “Not following through can really hurt team trust and cause animosity,” she says. By adhering to the ABCD Trust Model, employees are able to understand the impact of their behaviors on building or eroding trust and can identify those aspects that need attention to build and maintain trusting relationships.

Wade Trim focuses on team building through its Young Professionals Group, a networking program that offers networking and career-development opportunities.

Now in its third year, the program features monthly webinars during which employees exchange ideas and best practices, as well as off-site activities such as playing Pictionary over lunch or impromptu Skype sessions.

“These are great ways to strengthen relationships,” Forney says.

TEAM BUILDING EVENTS
Even in the most successful engineering firms, the team concept and its motivators—communication, collaboration, trust and respect—need to be reinforced. While that is the domain of management, often with assistance from the human resources
department, many engineering firms turn to outside providers and consultants to stage team building activities and events. Typically held outside the workplace, they can range from friendly sports outings to an organized team-building event, such as a scavenger hunt or community service activity.

The trick for managers is having a team building goal and finding the right activity to achieve that goal. “Do not just do what the boss likes,” says Lisa Jennings, chief experience officer at Wildly Different, a team-building event planning company. “For example, if the boss likes to play golf, others may not. Think of your group as a whole, and make sure the event is inclusive.”

Jennings favors fun, out-of-the-ordinary events that emphasize camaraderie and connecting with colleagues. “Today, when people work in cubicles or remotely from home or different offices, they do not get to connect with and know one another,” she says. “Team building events help people know who they are working with and come away with a new appreciation for individuals.”

Additionally, Chinowsky recommends a three-step sequence for planning team-building events:

1. **If you have a problem, where is it within the firm?**
   “Do not fix something without understanding the situation,” he says.
   “We bring staff together from across our 20 different offices to collaborate on different projects, so working well together is integral for success.”

   TAMMY FORNEY
   PEOPLE SERVICES MANAGER
   WADE TRIM ASSOCIATES

2. **Why do you have a problem or issue?**
   “It could be people doing the wrong jobs or that you have the wrong expectations,” he says. “Or, it may be that you do not have proper collaboration or communication.”

3. **Hire the right company or consultant.**
   “Interview five or six companies to find one that matches what you are focusing on. While I am not an advocate of needlessly spending on outside people, this is one instance where it is about the long-term health and success of your firm,” says Chinowsky.

Regardless of the pathway, building and maintaining effective teams remains a critical, if elusive goal.

“There is vast wisdom in the collective,” Stopper says. “If you can bring diverse people together to tackle a project or challenge, it is amazing how much more successful the outcome can be.”

**Bob Woods** is a technology and business writer based in Madison, Connecticut.
Ready to streamline and improve cash flow? Field Services Suite provides your teams online access to data to improve scheduling and workflow. Electronic Invoicing reduces Time to Invoice (TTI) and Days Sales Outstanding (DSO). With integration to Deltek Vision and Vantagepoint, EleVia Solutions will connect your teams like never before.

Learn how your peers have streamlined at eleviasoftware.com/streamline

STREAMLINE INVOICING BY CONNECTING YOUR FIELD TEAMS, PROJECT MANAGEMENT AND ACCOUNTING

Improve Workflow and Cash Flow with Field Services Suite and Electronic Invoicing

SEE ELEVIA’S SUITE OF CASH FLOW SOFTWARE AT: eleviasoftware.com
Black & Veatch (B&V) began examining opportunities in unmanned aerial systems (UAS) in 2015 when the firm saw its potential for infrastructure inspections.

“We wanted to determine how drones fit with current business practices and into the future,” says Jamare Bates, director of B&V’s UAS operations. “We looked among our clients for those who were willing to move beyond the traditional model and recognize that drones are a safer and more effective inspection tool than manned flights and climbing the towers.”

In conjunction with the St. Louis-based utility Ameren, B&V embarked on a two-year project under multiple special permits from the Federal Aviation Administration to conduct beyond visual line of sight (BVLOS) test flights. Over the course of the project, B&V tested BVLOS flight ranging from 10 miles to a 60-mile proof-of-concept flight. Within three to five years, limited, rural BVLOS are expected to become routine.

Black & Veatch in conjunction with the St. Louis-based utility Ameren, embarked on a two-year project under multiple special permits from the Federal Aviation Administration to conduct beyond visual line of sight (BVLOS) test flights. The test flights ranged from 10 miles to a 60-mile proof-of-concept flight. Within three to five years, limited, rural BVLOS are expected to become routine.

For the test, B&V used a gas-powered hybrid unmanned aerial vehicle (UAV) with battery-powered rotors for vertical takeoffs and landings, fixed wings and a gas-powered propeller. “It wasn’t the toy you see the neighborhood kid flying,” says Bates. “It’s much closer to the types of drones used by the military.”

B&V designed and engineered the stand-alone telecommunications network along the flight path for the tests. For safety, a chase plane followed the UAV throughout the test flight, which was conducted in rural Illinois.

The FAA has taken a go-slow approach to UAS, but Bates says this project and others, such as the FAA’s own UAS Integration Pilot Program, demonstrate the agency’s willingness to expand their use.

“This is how the FAA works,” Bates says. “They look to the market to keep pushing the envelope in a safe and effective manner.”

Bates predicts that limited, rural BVLOS flights will become routine within three to five years. “We need more flights,” he says. “We’re going to stay at the forefront of this market and this technology. It works well with our customer base and will help us expand to other customers.”

If your firm has an item to submit to In the News, please contact Gerry Donohue at gdonohue@acec.org.
Through its foundation and numerous outreach programs, Burns & McDonnell is investing big in science, technology, engineering and math (STEM) education.

The Burns & McDonnell Foundation focuses 50 percent of its charitable giving on STEM, and over the last year, firm employees have volunteered nearly 10,000 hours to support STEM education through schools and nonprofits.

“We have so many employees who are passionate about connecting students to STEM,” says Julee Koncak, foundation director. “It’s just been a matter of honing in on that.”

A centerpiece of the firm’s efforts has been the biennial Burns & McDonnell Battle of the Brains competition.

“We developed it in conjunction with Science City in Kansas City,” says Emily Rhoden, Burns & McDonnell’s K-12 Outreach specialist. “We send out an RFP to students throughout the region to come up with the next idea for a permanent, $1 million exhibit that we build at Science City.”

The firm and Science City, which is an interactive science center inside Kansas City, Missouri’s, Union Station, completed the fifth Battle of the Brains competition in 2017.

“We had more than 800 proposals,” says Koncak. “Four hundred of our employees read through the proposals and conducted several rounds of judging.” Entrants were divided into two groups—grades K-6 and 7-12—and the judges worked their way down to the 20 best entries, from which the winning proposal was selected.

“The top 20 entrants received grants of between $2,500 and $50,000,” says Koncak.

The winning proposal was from the Grandview C-4 FOCUS students in Grandview, Missouri. Their proposal, “The Amazing Brain,” was a 14-part exhibit explaining various functions of the brain.

“Since the first Battle of the Brains in 2011, more than 18,000 students have participated in the program, and Burns & McDonnell has given more than $500,000 in grants for STEM education,” says Koncak.

Rhoden has initiated several other outreach programs at the firm. “Thousands of students have participated in our job shadowing,” she says. “We also have Career Jumping, which is like speed dating for careers. It’s awesome for younger kids because they can see all of the different career paths that we have here.”

Five years ago, Burns & McDonnell started a summer camp. “Now we have three camps each summer, and one is just for girls,” says Rhoden. “It’s a three-day event that delves into what it’s like to be an engineer.”

The firm also works with educators. “One teacher influences hundreds of kids, so we started an educators summit,” says Koncak. “In each session, we work with nearly 300 educators for a half-day, breaking down the stereotypes about engineering and giving them a realistic approach to getting students excited about STEM.”
Torrid Pace of Deal Activity Continues in 2019

BY NICK BELITZ

Coming off a record year of industry deal-making in 2018, the first quarter of 2019 saw a continuation of the torrid pace of merger and acquisition (M&A) activity. Overall, buyers struck 81 deals involving a U.S.-based seller in the first quarter of 2019. That level of activity almost matches deal-making in the first quarter of 2018 when buyers announced 82 deals. While the number of global deals made during the first three months of 2019 declined slightly from the previous year, both global and domestic industry transactions in the first quarter of 2019 represent notable increases in the number of deals announced over the same time periods in 2015, 2016 and 2017. This would indicate we have another year of robust—possibly record-setting—deal-making ahead.

Looking back to transaction volume over the last 12 months, the industry tallied 382 deals globally, up 7.3 percent from the 12-month period ending Q1 2018. Deal-making has been particularly strong in the U.S., with the 289 deals consummated over the last four quarters, representing a 15.1 percent increase over the preceding 12-month period. Truly, the appetite for M&A for firms in this industry has never been stronger. Below are additional takeaways from the latest data:

1. **We have robust M&A across a variety of industry sectors.** ACEC members have made acquisitions across a range of markets and corresponding services. Multiple deals targeting geotechnical services took place during the quarter, including Gannett Fleming’s (Camp Hill, Pa.) acquisition of geotechnical firm SAGE Engineers (Roseville, Calif.) and RESPEC’s (Rapid City, S.D.) purchase of Mine Development Associates (Reno, Nev.). In addition, both vertical engineering and horizontal infrastructure have continued to be of high interest to buyers, with notable deals including Thornton Tomasetti’s (New York) acquisition of Becker Structural Engineers (Portland, Maine) and DLZ’s (Columbus, Ohio) purchase of Johnson & Anderson (Waterford Township, Mich.). Continuing a theme from 2018, demand for nontraditional services remains elevated. Notably, in March, NV5 (Hollywood, Fla.) announced the acquisition of The Sextant Group (Pittsburgh), a provider of audiovisual, information and communications technology, acoustics consulting and related design services.

2. **Private equity buyers continue to outpace public buyers.** Private equity firms continued their aggressive push into the industry in Q1 2019, further widening their lead over publicly traded industry firms in terms of the number of deals. Nearly one-fifth, or 19 percent, of deals struck during the quarter were PE-backed while just 9 percent of deals were made by publicly traded buyers. Of interest is the fact that this gap has widened substantially over the last year—in the first quarter of 2018, private equity buyers notched 23 percent of deals compared with 19 percent for publicly traded buyers.

3. **Recent PE activity presents a case study of buy-and-build in the Southeast and Southern U.S.** Two examples of acquirers using the “buy-and-build” strategy employed by many private equity firms are CONSOR Engineers and Ardurra-King. Earlier this year, CONSOR Engineers announced the creation of a national transportation and infrastructure engineering brand via the consolidation of four regional leaders: Target Engineering Group (Coral Gables, Fla.), Infrastructure Engineers (St. Cloud, Fla.), Johnson-Adams & Associates (Plant City, Fla.) and AIA Engineers (Houston). The move echoed that of Ardurra-King, which formed in 2017 when King Engineering (Tampa, Fla.) merged with Ardurra Group (Metairie, La.). In November of last year, the engineering company, which by then included eight firms, rebranded as Ardurra Group and has since acquired another firm. Critically, we note that both CONSOR and Ardurra are backed by private equity firms. With so many types of buyers—private equity, publicly traded and strategic—active in the marketplace in 2019 and...
acquiring so many different types of firms, the stage is set for another strong and exciting year of deal-making for ACEC firms.

**ACEC DEAL-MAKERS**

**APRIL 2019**

Thornton Tomasetti (New York) acquired Becker Structural Engineers, Inc. (Portland, Maine), a structural engineering firm with specializations in mass timber, parking structures and highway bridge projects. Both firms are ACEC members.

Engineering and architecture firm Gannett Fleming (Camp Hill, Pa.) expanded its presence in the West with the acquisition of SAGE Engineers (Roseville, Calif.), a geotechnical firm. Both firms are ACEC members.

**MARCH 2019**

ACEC member SmithGroup (Detroit) merged with Paulien & Associates (Denver), a higher education planning firm.

ACEC member WSP (Montreal) announced its intent to acquire Indigo Planning Ltd. (London), an independent town planning consultancy that provides specialist planning advice to the residential, retail, commercial, industrial, leisure, tourism, infrastructure and energy markets.

ACEC member NV5 (Hollywood, Fla.) announced the acquisition of The Sextant Group (Pittsburgh), a provider of audiovisual, information and communications technology, acoustics consulting and design services. The Sextant Group is known for creating integrated technology solutions for a wide range of public and private sector clients.

Consulting and engineering firm Arduroa Group (Tampa, Fla.) acquired Design South Professionals, Inc. (Anderson, S.C.), an ACEC member. Design South is an engineering consulting firm serving the water and wastewater market.

ACEC member Crawford, Murphy & Tilly, Inc. (Springfield, Ill.) acquired Stone Engineering Group (SEG) (Jacksonville, Fla.). SEG provides transportation, water, stormwater, site design and construction inspection services to state, municipal and private clients.

ACEC member Hardesty & Hanover (New York) acquired Frederick P. Clark Associates, Inc. (Rye, N.Y.), a community planning, development, environmental and transportation consulting firm. Hardesty & Hanover is a bridge engineering services firm.

VHB (Watertown, Mass.) acquired The Johnson Co. (Montpelier, Vt.), a 30-person environmental science and engineering firm. VHB provides transportation planning and design, land development and environmental services. Both firms are ACEC members.

ACEC member CBS Squared, Inc. (Chippewa Falls, Wis.) acquired Fleming, Andre and Associates, Inc. (Eau Claire, Wis.), a design and construction engineering architecture and surveying firm.

ACEC member CHA Consulting, Inc. (Albany, N.Y.) acquired Daedalus Projects, Inc. (Boston), a project and construction management firm. CHA is a full-service engineering consulting firm that provides a wide range of technology-enhanced planning and design services to public, private and institutional clients.

ACEC member DLZ (Columbus, Ohio) acquired Johnson & Anderson (Waterford Township, Mich.), a municipal, water and wastewater engineering firm. DLZ provides architectural, engineering and surveying services.

Harley Ellis Devereaux (HED) (Southfield, Mich.), an ACEC member, merged with Integrated Design Group, Inc. (Boston), a data center designer. The merger allows HED to reach new audiences in the data center market sector.

Full-service engineering and architecture firm, Thompson & Litton (Wise, Va.), announced the acquisition of two engineering firms, Stafford Consultants, Inc. (Princeton, W. Va.), and Beeson Lusk & Street (Johnson City, Tenn.). Thompson & Litton and Stafford Consultants are ACEC members.

**FEBRUARY 2019**

Nishkian (San Francisco), a structural engineering firm, joined IMEG Corp. (Rock Island, Ill.), a design and consulting firm. Both firms are ACEC members.

ACEC member H2M architects + engineers (Melville, N.Y.) acquired Wiedersum Associates Architects (Hauppauge, N.Y.), an architecture firm that focuses on the education market. H2M is a multidiscipline professional consulting and design firm.

GSE Systems (Sykesville, Md.), a provider of engineering, expert staffing and simulation software to clients in the power and process industries, acquired DP Engineering (Fort Worth, Texas), an ACEC member. DP Engineering is a provider of engineering services and solutions to the nuclear power industry.

ACEC member RESPEC (Rapid City, S.D.) acquired Mine Development Associates (Reno, Nev.), a firm that serves the mining industry with geologic expertise and engineering services. RESPEC is a pioneering geoscience, engineering and technology firm.

ACEC member James W. Sewall Co. (Old Town, Maine) acquired Maine Traffic Resources (Gardiner, Maine), a transportation engineering firm. James W. Sewall provides services in aerial photography, surveying and GPS, photogrammetry, cadastral mapping, GIS, forestry consulting and engineering.

Half Associates, Inc. (Richardson, Texas), acquired Genesis (Tampa, Fla.) and its construction engineering and inspection company, Genesis CE&I Services. Genesis will do business as Genesis Halff and Genesis CEI will do business as Genesis Halff CEI. Both Halff and Genesis are ACEC members.
This highway has a story. When told and marketed just right, its story will deliver all the right business results—and help you land your next big client project.

Contact us today to learn how our content marketing experts can convert your admirers into leads, your leads into qualified prospects, and your prospects into clients.

Let’s get started.

imagination.

Specializing in content marketing for engineering and construction thought leaders

Chicago • Washington, D.C.
Contact Erin Slater at eslater@imaginepub.com
imaginepub.com
On the Move

Matthew G. Cummings was named president and CEO of San Francisco-based T.Y. Lin International, succeeding former president and CEO Alvaro J. Piedrahita, who transitions to a new role as chairman of TYLI Group. Cummings, who formerly held senior executive positions at AECOM, is the past president of ACEC/PA.

Christopher C. Sherry was named CEO of Greenwood Village, Colorado-based Merrick & Co., succeeding David G. Huelskamp. Huelskamp has served as CEO or chairman for the past six years and will continue as chairman. Sherry has served as the firm’s president and will continue those responsibilities as he assumes the CEO role.

Matthew S. Richards has been promoted to president and CEO of Madison, Wisconsin-based Strand Associates, Inc., succeeding the retiring Philip E. Budde, who started with company in 1976 and became president in 2005 and CEO in 2017. Richards joined the firm in 1998 and most recently served as executive vice president.

Following a corporate restructuring and rebranding, Darren L. James was appointed president of KAI Enterprises, overseeing the holding company. Previously, he served as president and COO of KAI Texas. Matt Westphal has been named president of KAI Design and KAI Engineering, traveling between the company’s Atlanta, Dallas and St. Louis offices.

Charlotte, North Carolina-based WK Dickson & Co., Inc., announced several key leadership changes following a restructuring. David Peeler, previously the president/CEO, has transitioned out of the president role and will continue serving as CEO and chairman. David Pond assumed the role of president, he previously served as COO. Scott Whalen was promoted to COO, he previously served as vice president and Raleigh regional manager. Scott Sigmon has been promoted to vice president and Raleigh regional manager. He formerly served as the program manager for the watershed services group in the Raleigh, North Carolina, office.

Camp Hill, Pennsylvania-based Gannett Fleming announced the following appointments: Audrey Daly was promoted to subsidiary president of ECS Florida, LLC, an operating entity of the ECS Group of Companies, where he will oversee leadership, financial management, business development and training. Champion, who formerly served as branch manager of the Jacksonville, Florida, and Brunswick, Georgia, offices, will remain based in the Jacksonville, office.

Joe Champion was promoted to subsidiary president of ECS Florida, LLC, an operating entity of the ECS Group of Companies, where he will oversee leadership, financial management, business development and training. Champion, who formerly served as branch manager of the Jacksonville, Florida, and Brunswick, Georgia, offices, will remain based in the Jacksonville, office.

New York-based STV announced the following appointments: John Ponzio

David Pond

Scott Whalen

Scott Sigmon

Joe Champion

Audrey Daly

Terry Snow
has been promoted to senior vice president of STV’s national systems practice. He formerly served as vice president and director of systems, safety and security. He is based in the Philadelphia office. John Brestin joined the company as vice president and national bridge practice leader. He formerly served as vice president, bridge practice lead – North America at COWI. He is based in the Seattle office. Tertulien “Tony” Augustin was promoted to vice president. He joined STV in 2017 as the firm’s civil/highway engineering director.

Mike Farrell was appointed senior vice president of civil and field services at Fargo, North Dakota-based Ulteig. Farrell has a distinguished 30-year career in the U.S. Army Corps of Engineers, most recently with the rank of Colonel. Previously, he served as commander of the Mosul Dam Task Force and as commander of both the Sacramento and Walla Walla districts and deputy commander of the Europe District. He is based in the Denver office.

San Diego-based Kleinfelder announced the following appointments: Lisa Millet joined the company as executive vice president and central division director. Millet is based in the company’s Denver office and will oversee operations throughout the Central United States and Canada. She previously served as managing partner of the Global Key Client Program. Glen Christensen joined the firm as vice president and area manager for the company’s Alberta, Canada, operations, which include offices in Edmonton and Calgary.

Blair Hanuschak was promoted to executive director of structures at Houston-based Walter P Moore, succeeding Lee Slade, who has led the Structures Group since 2001. Slade continues to serve as chairman and will transition to a new role leveraging his 42 years of experience. Hanuschak, a 27-year veteran at Walter P Moore, has served as a regional and managing director for structures and as global aviation practice leader. He is based in the Washington, D.C., office.

Krista Raines joined Thornton Tomasetti’s San Francisco office as vice president, providing senior-level support to the firm’s Sustainability practice. She will also lead the San Francisco Building Analytics team. Raines formerly served as sustainable design leader at stok in San Francisco where she started the building enclosure commissioning and daylight analysis service lines.

Lisa Nisenson joined West Palm Beach, Florida-based WGI as vice president of new mobility and connected communities. Nisenson is a national leader in emerging planning technologies and innovations and is the co-founder of GreaterPlaces.com. She is based in the headquarters office.

Dan Thoma has been promoted to vice president of San Antonio-based Pape-Dawson Engineers. Thoma, who relocated from San Antonio to Austin, will lead the office’s transportation team, including project strategy and delivery for the Austin area and the I-35 corridor.

Ed Shackelford joined Houston-based AEI Engineering as associate vice president and director of water resources. He formerly served as senior vice president, business development at Jones & Carter.

Alexander Stone joined Kansas City, Missouri-based TranSystems Corp., as assistant vice president and director of the Atlanta office. Stone also serves as co-chair of the Roadway Design Policy Subcommittee with ACEC/Georgia.
Welcome New Member Firms

ACCE/Arizona
ARQ Engineering, LLC
Fort Mohave
Atwell
Mesa
CONSOR Engineers, LLC
Chandler
Landcor Consulting, PC
Mesa
Point North Advisors, LLC
Scottsdale
Sustainability Engineering Group, LLC
Scottsdale
ACCE/Arkansas
Ally Energy Solutions, LLC
Conway
ACCE/California
AYCE Consulting Engineers, Inc.
Orange
B.A. Sims Engineering, Inc.
Long Beach
Calvada Surveying, Inc.
Corona
Capo Projects Group
San Juan Capistrano
CPM Associates, Inc.
San Francisco
Dersch Design & Engineering, Inc.
La Jolla
Jensen Design & Survey, Inc.
Ventura
MC Consultants, Inc.
Carlsbad
Peterson Brustad, Inc.
Pleasanton
Skyline Engineering, Inc.
Salinas
Soil Retention Systems
Carlsbad
Yemma Consulting Engineers (YCE, Inc.)
Ventura
ACCE/Colorado
IronStride Solutions, PC
Denver
ACCE/Florida
CTS Engineering, Inc.
Deerfield
Electric Service Group, LLC
Altamonte Springs
ACCE/Hawaii
Element Environmental, LLC
Aina
Hawaii Engineering Group, Inc.
Honolulu
R. M. Towill Corp.
Honolulu
Sea Engineering, Inc.
Waimanalo
ACCE/Idaho
h2 Surveying & Engineering
Coeur d’Alene
ACCE/Kansas
KDM Engineering
Chicago
OSEH, Inc.
Chicago
ACCE/Kentucky
Cummins Consulting Services
Lexington
Facility Commissioning Group, Inc.
Lexington
GEO Consultants Corp.
Kevil
ACCE/Louisiana
Bluewing Civil Consulting, LLC
Lafayette
ACCE/Massachusetts
A.J.A Engineering
Marshfield
ACCE/Minnesota
Michel Consultancy
Brooklyn Park
ACCE/Mississippi
McMaster & Associates, Inc.
Madison
N-Y Associates, Inc.
Biloxi
ACCE/Missouri
Milestone Engineering, Inc.
Springfield
Vecino Design, LLC
Springfield
ACCE/Montana
Territorial Landworks, Inc.
Missoula
ACCE/Nevada
EI Engineering, Inc.
Las Vegas
ACCE/New Mexico
Crawford Engineering
Santa Fe
ACCE/New York
Antonacci & Associates Architects and Engineers, LLP
Pelham
M. G. McLaren, PC, d/b/a
McLaren Engineering Group
Albany
ACCE/North Carolina
AME Consulting Engineers, PC
Charlotte
GeoTechnologies, Inc., PA
Raleigh
Kennerly Engineering & Design, Inc.
Winston-Salem
Maser Consulting, PA
Cary
Thrippen Engineering & Consulting, PLLC
Raleigh
Westcott, Small & Associates, PLLC
Greenboro
ACCE/Ohio
Civil Science, Inc.
Wooster
ACCE/Oklahoma
Hallf Associates, Inc.
Oklahoma City
ACCE/Oregon
Northstar Surveying
Corvallis
ACCE/Pennsylvania
A&J Consultants, Inc.
McKees Rocks
ACCE/South Carolina
Buford Goff & Associates, Inc.
Columbia
Tidemark Land Services, Inc.
Fort Mill
ACCE/Tennessee
Civil Site Design Group, PLLC
Nashville
Malasi Engineering
Memphis
ACCE/Texas
Aegean Energy Group, Inc.
Dripping Springs
Auric Engineers, LLC
Houston
BRAYN Consulting, LLC
Houston
Burger Engineering, LLC
Dallas
InfraTex Consulting
Aledo
Insight Risk, LLC
Dallas
L2 Consulting Services, Inc.
Austin
Linfield, Hunter & Junius, Inc.
Houston
Max Sim Technical Services, Inc.
Scheritz
Manhard Consulting, Ltd.
The Woodlands
Metecs
Houston
Probstfeld & Associates
Katy
Ramos Consulting, LLC
Lakeway
Voigt Engineering, LP
The Woodlands
ACCE/Virginia
2RW Consultants, Inc.
Richmond
EEC Consulting, Inc.
Mechanicsville
Engineering Concepts
Daleville
ACCE/Washington
PH Consulting, LLC
Tacoma
ACCE/Wisconsin
Design Engineers
Madison
Pinnacle Engineering Group, LLC
Brookfield
85
CALENDAR OF EVENTS

JULY 2019
23 Deliver the Service Your Clients Expect (online class)
24 Solving the Mystery of Mergers & Acquisitions (online class)

AUGUST
13 Growing Your Firm While Retaining Your Core Values (online class)
20 Knowledge is Revenue: How to Conduct Killer Competitor Research (online class)
22 RFP—Request for Personality, Win People, Win Projects (online class)

SEPTEMBER
10 Identify When, Where and How to Increase Profit with Value-Based Pricing (online class)
16-17 Finance Forum - 2019, Denver
16-17 Human Resources Forum - 2019, Denver
16-17 Information Technology Forum - 2019, Denver

To sign up for ACEC online seminars, go to www.acec.org/education.

Additional information on all ACEC activities is available at www.acec.org.

Welcome New National Affiliate Members

ACCE/Accounting IT Software
Clearview Software
ACCE/Accounting and Tax Services
Barnthouse & Associates, LLP CPAs/ B&A Insurance Solutions, Inc.
ACCE/Consultant - Strategic Planning
Visible Value, LLC
ACCE/IT Software
EleVia Software
ACCE/Legal Services
Simon, Peragine, Smith & Redfearn, LLP

For further information on one of the national affiliate members, go to: http://bit.do/ACEC-nati-affiliate-memb or contact Rachael Ng at 202-682-4337 or rmg@acec.org.
Leadership Skills Program Class 4; New Publications Address Economics and Engineering

ACEC LAUNCHES CLASS 4 OF LEADERSHIP SKILLS PROGRAM
Pathways to Executive Leadership, ACEC's leadership development program, will launch Class 4 during the 2019 Fall Conference in Chicago. Designed for promising midcareer engineering professionals who are beginning to lead and plan the future of their practices and careers, this innovative and intensive six-month program focuses on the core skills necessary to think strategically about markets, build effective teams, and deliver great service for valued clients.

For program and registration information, visit: https://programs.acec.org/2019-pathways/.

TWO NEW PUBLICATIONS FOCUS ON ECONOMICS AND ENGINEERING
Drawn from U.S. government and industry-specific sources, two new ACEC publications provide information and analysis on the economic impact and weight of the engineering and construction industry on each state and on the nation.

“ACEC Quarterly Economic Reports” feature information on five economic trends, construction spending by market sector, and quarterly revenues for A/E firms.

ACEC’s “State Sheets” are a snapshot of each state and include information related to gross domestic product, engineering employment and construction spending per state. The data provided offers insight for engineering firm managers, as well as a sound starting point for discussions with policymakers on the importance of the engineering industry and infrastructure to a robust U.S. economy.

For additional information, subscribe at http://bit.do/acec-industrybriefs.

EXPERT WITNESS COURSE HELPS ENGINEERS EXPLAIN COMPLEX ISSUES
Since its launch in 2009, ACEC’s Applying Expertise as an Engineering Expert Witness program has trained hundreds of professional engineers to serve as unbiased expert witnesses. The program covers appropriate courtroom behavior, e.g. conduct on the stand when cross-examined, as well as what experts need to know about tasks and actions outside the courtroom during discovery, depositions and writing reports.

Applying Expertise as an Engineering Expert Witness is for engineers, architects and surveyors interested in taking engagements as experts or as an added client service. This year’s course is being offered June 26-27 in Atlanta.


REGISTERED CONTINUING EDUCATION PROGRAM
For engineers, surveyors and design professionals, the Registered Continuing Education Program (RCEP) provides a one-stop online shop for all educational activities, including continuing education record keeping, uniform and reliable transcripts for state licensing boards, up-to-date continuing education and licensure requirements by jurisdiction and a master calendar of Registered Education Providers.

More than 102,000 design professionals use RCEP online to manage their continuing education. Originally developed in 2008 by the National Council of Examiners for Engineering and Surveying in conjunction with ACEC, RCEP is now administered by ACEC with support from the American Society of Civil Engineers.

As a special feature, state licensing board authorities can audit RCEP subscribers directly from the RCEP system. RCEP is a resource for firms to manage and track their staff’s continuing education programs. Firms can create customized reports to track continuing education credits earned toward renewing licenses, identify specific courses and seminars for staff improvement, and use RCEP to recognize and award merit increases to employees for their continuing education achievements.

Contact La’Creshea Makonnen at 202-682-4338 for more information.

FOR MORE BUSINESS INSIGHTS
- Better Business Planning
- Factoring Executive Compensation
- Cyberattacks and Data Security
- High-Impact Proposal Writing

Go to: www.acec.org/education/webinars/

ACEC’s Business Resources and Education Department provides comprehensive and online-accessible business management education.

Visit ACEC’s online educational events calendar at www.acec.org/calendar-listing-acec/ or bookstore at www.acec.org/bookstore, or call 202-347-7474, ext. 349, for further information.
We’re here to make great things possible

We constantly strive to grow and use our talent and knowledge to change the world for the better. That’s why we’re proud to support ACEC, the voice of our industry.

hdrinc.com | ACEC Corporate Sustaining Sponsor
You don't have to be an ACEC member to get a quote.

877-279-6544
uhc.com/acec24

The American Council of Engineering Companies (ACEC), the ACEC Life/Health Insurance Trust and UnitedHealthcare Insurance Company are three separate legal operating entities and, as such, the organizations are governed and function independently. UnitedHealthcare’s services are provided with the authorization of the ACEC Life/Health Trust. Questions related to health benefits offered through the ACEC Life/Health Trust should be directed to 1-800-573-0415. Must be UnitedHealthcare insurance license products; and HMO products do not apply. ACEC membership qualification is determined by the association. Insurance coverage provided by or through UnitedHealthcare Insurance Company. UnitedHealthcare Insurance Company or their affiliates. Plans are not available to member employers in all states.