ISSUE TWO • 2024

ENGINEERING INC.

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AI Sparks Transformation in Firms

Annual Convention Highlights

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V3 Multiplies Community Impact

RAILROAD RENAISSANCE

MTA Grand Central Madison wins top honors at the 2024 Engineering Excellence Awards

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And the 2024 Grand Conceptor Award goes to...AECOM for MTA Grand Central Madison in New York City.

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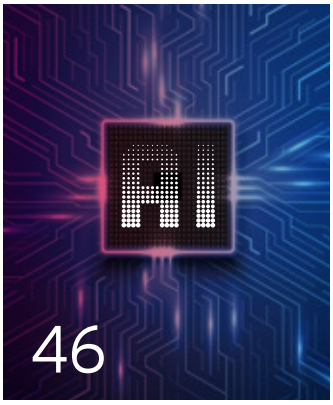

FEATURES

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COVER: RANDY DUCHAINE/ALAMY

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ACEC's award-winning quarterly 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.

Convention Cultivates Industry Innovation and Connections

More than 900 individuals attended ACEC's Annual Convention & Legislative Summit, which featured dozens of business management education sessions, networking opportunities, and insights from leading keynote speakers.

We heard from American Enterprise Institute Senior Fellow Kevin Kosar and NPR Political Correspondent Mara Liasson on the upcoming presidential election and the state of American politics.

Pollster and messaging expert Michael Maslansky gave a timely presentation on environmental, social, and governance (ESG), offering attendees several ways to frame their efforts around ESG that convey good intentions versus moral judgment.

A sold-out crowd of nearly 800 members and guests celebrated the 2024 Engineering Excellence Awards (EEA) to honor a record 203 project submissions in this year's competition. Special congratulations to AECOM for winning the Grand Conceptor Award for the year's most outstanding engineering achievement: Grand Central Madison in New York City (*EEA coverage begins on page 22*).

We ended our Convention with an Engineering and Public Works Roadshow event at the DC Infrastructure Academy, a project with a unique emphasis on training Washington, D.C., residents for in-demand infrastructure and public works jobs. We were joined at the event by D.C. Mayor Muriel Bowser (*see page 10*).

This issue includes complete Convention highlights (*see page 18*), an introduction to the members of the 2024-2025 Executive Committee (*see page 50*), and a look at how artificial intelligence is being used by engineering firms (*see page 46*).

Thank you to everyone who joined us in Washington, D.C., in May. We look forward to seeing you all again at ACEC's 2024 Fall Conference, October 20-23, at the Hyatt Regency New Orleans.

Dr. Gary W. Raba, PE
ACEC Chair

Linda Bauer Darr
ACEC President & CEO

ENGINEERING INC.

PUBLISHED BY:
AMERICAN COUNCIL OF ENGINEERING COMPANIES

Engineering Inc., Volume 34, Number 2 (ISSN 1539-2694), is published quarterly by the American Council of Engineering Companies (ACEC), 1400 L Street, NW, Suite 400, Washington, D.C. 20005-2605. Periodicals postage paid at Washington, D.C., and at additional mailing offices. Annual subscriptions are $24 for members (included in dues as a non-deductible amount); $45 for U.S. non-members; $65 for institutional subscriptions. Back issues are $15.

POSTMASTER: Send address changes to *Engineering Inc.*, c/o ACEC, 1400 L Street, NW, Suite 400, Washington, D.C. 20005-2605.

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The ACEC Research Institute provides the engineering industry with cutting edge research, trend data, and economic analysis to help firm owners make decisions and delivers thought leadership that advances engineering's essential value to society.

The ACEC Research Institute wishes to extend its sincere appreciation to its generous contributors.

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Survey Sheds Light on Lump Sum Contracting Practices

Earlier this year, the ACEC Research Institute commissioned a study of lump sum contracting. Led by Virginia Tech engineering professor Dr. Michael Garvin, this study sought to identify the opportunities and challenges presented by these types of contracts. Institute Chair Mike Carragher and Senior Research Consultant Kevin McMahon shared some of the study's early findings at ACEC's Annual Convention & Legislative Summit in May.

The predominant contracting methodology in procuring engineering services on large public transportation services is cost plus fixed fee (CPFF). This methodology utilizes a detailed scope of services, specifying task hours, types of technical personnel needed, expected time frames, and estimated expenses, and typically requires a large administrative and auditing burden by clients to verify. In contrast, the use of lump sum requires an agreement of scope of services between the client and engineering firm, but allows for more staff flexibility and less administrative burden by clients. The focus and effort shifts to the deliverable rather than the process.

"The ACEC Research Institute acknowledges the impact of technology and AI on a firm's ability to more effectively execute projects," stated Carragher, who's also on the ACEC Research Institute Board of Directors. "We believe lump sum or value-based contracting will continue to grow in importance to our industry's business model considerations, and therefore this study was initiated to help both clients and firms understand current practices and identify opportunities for wider implementation."

Representatives from 14 state and federal client organizations and senior leaders from nine engineering firms of all sizes with broad geographic coverage were interviewed for the study. Both the private and public sector interviewees averaged more than two decades of experience. Participants were asked how often they use lump sum contracting. On the client organization side, 20 percent of respondents indicated at least moderate use (25 percent to 50 percent of contracts). Forty percent of respondents indicated extensive use (more than 80 percent of contracts—using lump sum contracts as the rule, rather than the exception). The remaining 40 percent indicated limited use of lump sum arrangements (fewer than 10 percent of contracts).

CHUYN/GETTY IMAGES

Of the firms surveyed, Garvin found that lump sum contracts compose anywhere from 20 percent to 80 percent of those firms' business. He noted that the percentage was "very dependent on firm size, regions served, and client types."

CLIENT ADVANTAGES (INITIAL FINDINGS)

- Increased efficiencies for design services
- Incentive for consultants to control costs
- Reduced time and cost of invoicing
- Greater focus on product/deliverable rather than administration and invoicing
- Better alignment on scope and price due to early dialogue and negotiations

That said, all interviewees indicated that lump sum contracts are appropriate when the scope of work is clear and well-defined. As the engineering and design services industry continues to navigate workforce shortages, lump sum contracts can be useful in allowing firms to deploy limited human resources on an as-needed basis. Said one interviewee: “Lump sum allows you to bring in and utilize whatever workforce you have available. Shift the resources to meet the project, particularly the project schedule, because resources always affect that.”

When asked what types of services are suitable for lump sum contracts, participants agreed that resurfacing, rehabilitation, and restoration projects, as well as interchange/intersection improvements, bridge inspection, and culvert replacement, are all good candidates, while more complex projects with “unknown unknowns” are unsuitable. Projects requiring significant engagement with third parties and those with complex maintenance of traffic are also not good candidates for lump sum.

What was clear in the responses on both sides of the lump sum question is that artificial intelligence (AI) and other emerging technologies will play a decisive role in how contracts will be executed going forward, replacing some effort of hours currently deployed to the project. "AI is going to change the game," Garvin says.

It remains an unsettled question what that changed landscape will mean to the engineering industry as a whole. But on lump sum contracting, there is opportunity in that uncertainty.

“We all have to figure out how to address the AI component of engineering services,” said one respondent. “Lump sum seems to be a very good solution to address the commercial arrangement as we move into AI type delivery. There’s still human intervention in this. Somebody still has to select, somebody still is going to come up with ideas that haven’t been thought of. And that’s where the real value [for engineering firms] gets created.” ■

Visit the Institute's website, www.acecresearchinstitute.org, for the full report.

ACEC Advocates for R&D Deductibility in Senate

The House of Representatives approved the Tax Relief for American Families and Workers Act of 2024 (H.R. 7024) by a bipartisan vote of 357 to 70. The legislation addresses a key ACEC priority by delaying the research and development (R&D) amortization requirement until 2026. It remains stalled in the Senate.

Other provisions in H.R. 7024 include a delay of the limits on interest deductibility and full expensing of capital equipment purchases. The package also expands the child tax credit with an emphasis on low-income families.

Pushing for Senate action on H.R. 7024 was the focus of recent Capitol Hill visits by ACEC firm executives during the Annual Convention & Legislative Summit. Republican senators in particular continue to express concerns over the child tax credit provisions, and alternatives offered by both sides have not been accepted. Support for R&D deductibility remains strong, however, with some senators speculating that there may be opportunities to move the bill later in the year.

ACEC and its coalition allies continue to press the Senate to pass H.R. 7024 as soon as possible.

Congress Clears New FAA Program

Congress gave final approval in May to a long-term Federal Aviation Administration (FAA) reauthorization bill that boosts funding for airport projects and includes other priorities outlined by ACEC. President Joe Biden has signed the measure into law.

The FAA package will provide $4 billion in annual Airport Improvement Program funding for fiscal years 2025 to 2028, an increase of $650 million per year above current levels. An additional $200 million annually is set aside for airport resilience and runway safety grants, and the law establishes a

$350 million reimbursement program for airport sponsors to replace firefighting equipment and foam associated with per- and polyfluoroalkyl substances (PFAS), including costs for cleaning and disposal of equipment and wastewater treatment.

The package amends existing design-build authority to include Construction Manager at Risk and Progressive Design-Build and creates a pilot program for five Integrated Project Delivery projects.

Finally, the new law will advance the development of a comprehensive system and strategy for safely integrating unmanned aircraft systems (UAS) and advanced air mobility aircraft into the national airspace. The strategy includes a regulatory pathway and standards for operations beyond visual line-of-sight; a risk-based approach in reviewing waiver requests under Part 107; a grant program to support the use of UAS when inspecting, repairing, or constructing critical infrastructure; and renewal and expansion of UAS test ranges.

SERGEY NIVENS/SHUTTERSTOCK; GUVENDEMIR/GETTY IMAGES

FTC Bans Noncompete Agreements

The Federal Trade Commission (FTC) has finalized a ban on noncompete agreements in most circumstances. The ban takes effect in August but has already been challenged in court, and implementation may be delayed.

Once the rule takes effect, noncompete agreements—including preexisting ones—cannot be enforced. There is a limited exception for existing noncompetes with senior executives, defined as workers earning more than $151,164 annually and who are in policymaking positions. In addition, there is an exemption for noncompetes in connection with the sale of a business that applies to owners of the business being acquired.

In its comment letter, ACEC asked the FTC to make the ban prospective, allow noncompetes with any business owner, and provide clarity on alternatives to noncompete agreements. Although the FTC confirmed that alternatives to noncompete agreements, such as nondisclosure agreements, are allowable as long as they are not functionally equivalent to a noncompete, the agency did not provide clear guidelines.

ACEC will be providing educational programming to help firms navigate the new rule.

DOL Raises Overtime Pay Salary Threshold

The Department of Labor (DOL) has finalized a rule that raises the Fair Labor Standards Act (FLSA) overtime pay salary threshold, which requires that employees must be paid time and a half for hours over 40 worked in a week.

On July 1, the salary threshold increased from $35,568 to $43,888. This is an inflationary update using the methodology of the FLSA final rule from 2019. On January 1, 2025, the salary threshold will increase to $58,656, based on the new methodology proposed by the DOL last year. Starting July 1, 2027, the salary threshold will be automatically updated every three years.

It is possible that some industries will bring legal action against the rule due to the automatic updates, which are not authorized by the law and were the basis of the 2016 FLSA rule being successfully challenged in court.

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For More News

For legislative news, visit ACEC's *Last Word* blog online at acec.org/news/last-word-blog.

Driving Growth

Recent Engineering and Public Works Roadshow events highlight innovative projects and successful partnerships while celebrating engineering's essential impact on society

ACEC Chair Emeritus Jay Wolverton speaks at the Phoenix Roadshow event.

NORTHWEST VALLEY INFRASTRUCTURE PROJECT, PHOENIX, FEBRUARY 22

The Northwest Valley Infrastructure Project is a true example of how early planning, attention to safety and quality, and focus on partnering can result in a highly successful venture.

The $125 million construction project required the installation of the water and wastewater infrastructure under an exceedingly accelerated schedule that allowed less than six months for preconstruction and procurement and only nine months for construction.

Northwest Valley Infrastructure Project tunnel.

Construction of the $12 billion Taiwan Semiconductor Manufacturing Company (TSMC) plant (one of two) could not have moved forward without the Northwest Valley Water & Wastewater effort.

Representatives from the Phoenix Water Services Department, Wilson Engineers, Carollo Engineers, Sundt Construction, Felix Construction, and Garney Construction attended the event.

"America's engineering firms plan and deliver innovative infrastructure every day. That's why we're here today—to spotlight the engineers of today and the generations to come, who will design the future," said ACEC Chair Emeritus Jay Wolverton.

"This accomplishment highlights the important role that meticulous planning, design, and construction efforts play in ensuring the success of critical ventures like our city's new TSMC plant," said Phoenix Mayor Kate Gallego.

COLMAN DOCK, SEATTLE, APRIL 3

Seattle's Multimodal Terminal at Colman Dock exemplifies how comprehensive infrastructure investment can promote equity within a community and drive economic growth.

Supporting more than 10 million passengers on Washington State Ferries each year, Colman Dock plays a critical role as a transportation hub for residents. As the structures were aging and vulnerable to seismic impacts, the dock and terminal were reconstructed to better withstand environmental impacts. Facilities were also expanded to accommodate additional passengers and vendors, transforming the terminal into a local attraction.

Effective project management of the nearly $500 million construction project has allowed Washington State Ferries to continue serving 10 million annual passengers without delay from the construction project. The seating capacity in the expanded 20,000-square-foot terminal triples that of the past terminal.

The event drew representatives from the Washington State Department of Transportation, WSP USA, Hoffman Construction Company, and the city of Seattle.

"Investment in transportation is a means to multiple ends," said Secretary of Transportation Roger Millar of the Washington State Department of Transportation and past president of the ASCE Transportation and Development Institute Board of Governors.

"Colman Dock and other such infrastructure projects will hopefully entice more of our youth, our future engineers, to dream about how they could be part of something so consequential," said ACEC Washington President Van Collins.

Photo left: ACEC Washington President Van Collins addresses Roadshow attendees. Photo below: Colman Dock at Washington State Ferries.

Congressman James Clyburn speaks to attendees in Charleston.

LOW BATTERY SEAWALL RESTORATION PROJECT, CHARLESTON, SOUTH CAROLINA, APRIL 25

Charleston's Low Battery Seawall Restoration Project underscores the importance of innovative engineering solutions in addressing the challenges of climate change and rising sea levels.

Constructed in two phases from 1909 to 1919, the Battery has withstood numerous severe storms and hurricanes and suffered from natural erosion from the elements. Following a 2004 Seawall Evaluation and Study, ACEC member firm Johnson, Mirmiran & Thompson began the surveying work in May 2015 to collect data needed to accurately assess and design the new seawall. A new city initiative was introduced during the design phase that required new city projects with a design life of 50-plus years to account for an anticipated sea level rise of 2.5 feet.

Construction along Charleston's Low Battery Seawall.

Roadshow event participants included Congressman James Clyburn; Charleston Mayor William S. Cogswell Jr.; Michael Seekings, District Eight council member; and Patrick Ripton, U.S. Army Corps of Engineers; along with executives from ACEC, ASCE, and APWA.

To meet the challenges of climate change, "programs like this one require leaders with vision—people who can see off into the future," said Clyburn.

"It's wonderful to see our dedicated city staff and external partners receive recognition for their innovative engineering and visionary contributions to our city," said Cogswell.

"Our climate is changing, producing stronger storms, higher tides, and more destructive, unpredictable weather patterns," said ACEC Chair Emeritus Jay Wolverton. "We need to design our infrastructure not only for today but into the future to mitigate risk and ensure the safety of our neighbors."

DC INFRASTRUCTURE ACADEMY, WASHINGTON, D.C., MAY 16

In coordination with Infrastructure Week, the Roadshow stopped at the DC Infrastructure Academy (DCIA) to highlight Washington, D.C.'s efforts to grow the infrastructure workforce, led by Mayor Muriel Bowser.

DCIA was chosen for its unique emphasis on training D.C. residents for in-demand infrastructure jobs. Launched in 2018 by Bowser, DCIA is a partnership between the District government and utility, union, university, and private sector partners to create a pipeline to jobs in infrastructure and public works.

During the event, Bowser spoke about the focus of DCIA—to "train our residents for the jobs of the future and the infrastructure of the future"—and the expanded impact DCIA will have when it transitions to the newly renovated Spingarn High School in 2025.

ACEC Board Chair Dr. Gary W. Raba, PE, commended D.C.'s efforts to make infrastructure careers accessible to residents. "To folks who may not have considered a career in infrastructure before today, let me say this: We need you. Our industry has good-paying jobs that make our neighborhoods better, and we want you to join us."

Washington, D.C., Mayor Muriel Bowser speaks at the DC Infrastructure Academy Roadshow event held in coordination with Infrastructure Week.

ACEC Board Chair Dr. Gary W. Raba commends D.C.'s efforts to make infrastructure careers accessible to residents.

In addition to Roadshow partner executives, event participants and speakers included Bowser; Raba; Jason Washington, chief of staff, D.C. Department of Employment Services; Hugh "Mac" Cannon, ACEC Metropolitan Washington President; and Rodney Chester, ACEC Workforce Committee Chair. ■

For more information on the Engineering and Public Works Roadshow and to learn about upcoming events, go to: **www.infrastructureroadshow.org**.

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Energy Market Update

BY DIANA O'LARE

U.S. TOPS GLOBAL LNG EXPORTS

In October 2023, the United States became the world's number one exporter of liquefied natural gas (LNG) for the first time. Although the Department of Energy did pause LNG export approvals in January, that brief hiatus should only affect those countries without free trade agreements with the U.S. The White House released a statement saying that the pause should not affect existing exports.

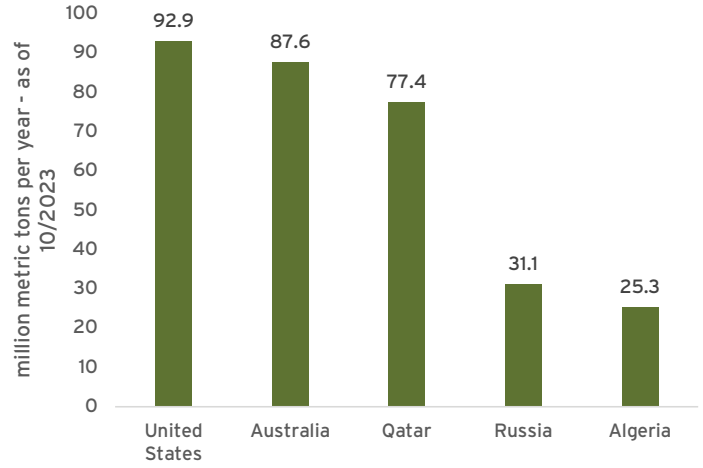
U.S. LNG export facts:

- **92.9 million metric tons** of LNG export capacity per year was reported for the U.S. in October 2023, the largest in the world (Statista).
- **8.6 million tons** of LNG was exported in December 2023—an all-time monthly high.
- In 2022, the U.S. exported **34 percent** of its LNG for global spot and short-term volumes, the largest of any country (U.S. Energy Information Administration).

What caused this shift to make the U.S. number one? Here are a few causes:

- The "Shale Revolution" in the U.S., hydraulic fracturing technology, and horizontal drilling stimulated by public and private innovations and investments.
- Freeport LNG returning to normal operations and the opening of Calcasieu Pass in 2022, both of which are major LNG exporters.
- Geopolitical tensions between Russia and other parts of Europe in 2022, which drove demand for global spot and short-term volumes (immediate and day-to-day transactions) of LNG.

Top 5 Countries by LNG Export Capacity



PETMAL/GETTY IMAGES

BATTERY STORAGE CAPACITY TO DOUBLE IN 2024

Extreme growth in the battery storage sector is projected over the next three years; it is an essential element for diversifying a clean energy mix. Battery storage is an enabler of renewable sources, allowing power generated by solar and wind to be used later.

Battery storage capacity facts:

- **7,322 megawatt storage hours** were reported in Q3 2023, hitting a new operational capacity high (Wood Mackenzie).
- Storage capacity is expected to increase from **7.8 gigawatts to 40 gigawatts** from 2022 to 2025 (U.S. Energy Information Administration).
- **$370 billion** was allocated to clean energy and energy efficiency investments through the Inflation Reduction Act (Department of Energy & Environment).
- Solar power generation is expected to grow by **75 percent**, and wind power generation by **11 percent,** by 2025 (U.S. Energy Information Administration).

RAPID EXPANSION IN THE DER MARKET

Quick growth is anticipated in the distributed energy resource (DER) market. In the wake of the energy transition, the demand for DERs is growing fast. DERs are small-scale energy resources such as rooftop solar panels, battery storage, and electric vehicles. Virtual power plants, also growing in popularity for their ability to generate power and for being a low-cost alternative, are a cloud-based coalition of DERs.

DER facts:

- The value of the DER market from 2022 to 2027 is projected to be **$68 billion per year** (Wood Mackenzie).
- The Federal Energy Regulatory Commission issued Order No. 2222 to provide opportunities and compensation in the DER market by allowing DERs to compete against traditional generation sources.

CONGRATULATIONS TO **2024 EEA HONOREES!**

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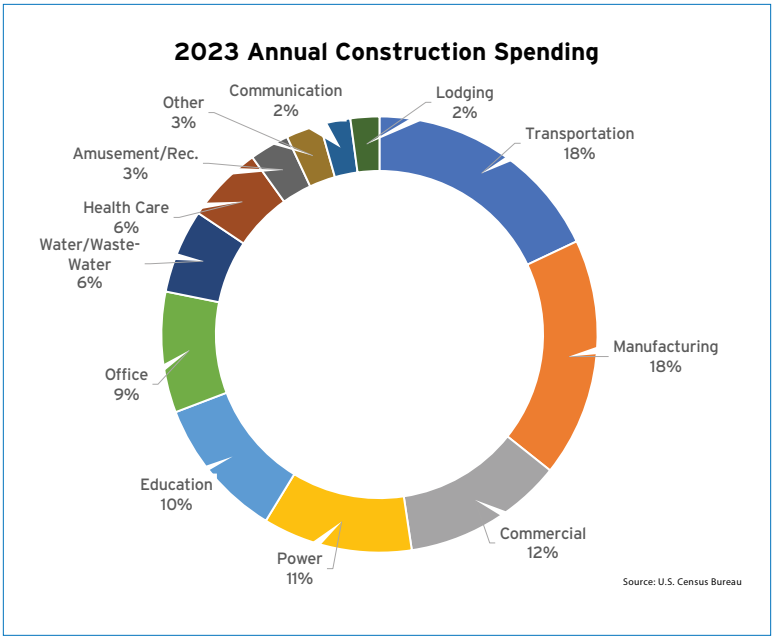
Strong Growth Forecasted for 2024

Last year, the National Association for Business Economics (NABE) reported a mixed outlook for the economy. Some respondents reported tepid GDP growth expectations for 2023 with a rebound projected for 2024, while others reported an imminent recession looming. NABE President and Morgan Stanley Chief U.S. Economist Ellen Zentner summarized the latest NABE survey results, stating that they "sharply revised upwards their projections for U.S. economic growth in 2024." Strong economic growth is now forecasted for 2024. Optimism is running high, yet respondents continue to agree that "too much monetary policy tightness" is the greatest downside risk to the economy.



WHAT DOES THIS MEAN FOR THE AEC INDUSTRY?

In 2023, the economy of the AEC industry was affected by supply chain disruptions, rising interest rates, inflation, labor shortages, geopolitical tensions, and a post-COVID-19 environment. According to FMI's Q1 2024 report, "despite the economic uncertainty, total engineering and construction spending for the U.S. is forecasted to end 2023 up 10 percent."

According to data reported by the U.S. Census Bureau, these five sectors had the highest design and construction spending for 2023 (see pie chart for all nonresidential sector standings):

1. Transportation: $198 billion
2. Manufacturing: $196 billion
3. Commercial: $132 billion
4. Power: $122 billion
5. Education: $116 billion

Manufacturing moved up from spot number four in 2022, from 12 percent of spending to 18 percent, while the top five markets remained the same in the nonresidental sector. Government spending continues to be a primary driver for the transportation sector. The single-family residential sector took a hit in 2023, while nonresidential markets carried the industry. And the office sector is seeking new ways to utilize its space.

WHAT TO EXPECT FOR 2024, ACCORDING TO NABE PANELISTS:

- Anticipation that the Fed will cut rates by June with a return to 2 percent by 2025
- 30-year fixed mortgage rates are not expected to fall below 6 percent in 2024
- 3.9 percent average annual unemployment rate
- A soft landing for the U.S. economy

Commercial & Residential Real Estate

Energy & Utilities

Economic Outlook

Intermodal & Logistics

Health Care & Science+Technology

Education

The Private Side column in *Engineering Inc.* focuses on the private-sector markets listed to the left, and information and insights on economic data relevant to the industry. For more on these topics, subscribe to ACEC's bimonthly *Private Industry Briefs*: **https://www.acec.org/resources/private-market-resources/#newsletter.**

Diana O'Lare, *CPSM, is ACEC's director of private market resources. She can be reached at* ***dolare@acec.org****.*

▶ ACEC President and CEO Linda Bauer Darr welcomes attendees to the Opening General Session.

▼ ACEC Chair Emeritus Jay Wolverton calls the Board of Directors meeting to order.

2024 Annual Convention Wrap-Up

The Council and the industry are stronger and better positioned for the future

▲ Newly installed ACEC Chair Dr. Gary W. Raba addresses the Board of Directors.

More than 900 individuals convened in Washington, D.C., in May to attend ACEC's Annual Convention & Legislative Summit. The event was packed with business education sessions and networking opportunities and featured a great lineup of keynote speakers. Nearly 800 people attended the 2024 Engineering Excellence Awards Gala, where AECOM took home the Grand Conceptor Award for Grand Central Madison in New York City.

Dr. Gary W. Raba, PE, chief growth officer at Raba Kistner, was installed as ACEC's new chair for 2024–2025.

In her report before the Board of Directors, ACEC President and CEO Linda Bauer Darr celebrated the Council's PAC growth. "Thanks to all of you, our PAC had a record-setting 2023, and we are on pace for another record-setting year," she said.

The Council is also committed to finding solutions to the workforce shortage. "Taken together, the Workforce Summit, the new committee, and the work of the Institute add up to a significant investment in finding solutions to one of our business's most vexing problems," Darr said.

There are looming issues for the industry in Congress as we head into the thick of the election season. "2024 is shaping up to be an excellent year for ACEC," Darr concluded. "There's a lot at stake, a lot up in the air, and a lot of work to be done. Whatever happens in November, ACEC is prepared to meet the moment."

Annual Convention highlights include:

PERSPECTIVES ON STATE OF AMERICAN POLITICS

The Convention opened with presentations on the state of American politics from two Washington insiders, American Enterprise Institute Senior Fellow Kevin Kosar and NPR Political Correspondent Mara Liasson.

Kosar gave a deeply researched, data-rich presentation on ways to fix a political system that no longer works as well as it should. He discussed potential reforms that could create better incentives for candidates—and, in turn, better candidates for voters. Kosar made the argument that our system of elections needs to be restructured to create better incentives. Access to different methods of voting has increased: Whereas it used to be that elections happened on one day and one day only, now there are several ways to cast a vote. However, voter turnout remains a challenge. As public trust in all institutions continues to drop, putting more power in the hands of voters to choose candidates through reforms like open primaries, ranked choice voting, and nonpartisan redistricting could go a long way toward restoring faith—and encouraging participation—in elections. The happy byproduct of that, Kosar said, is that it could yield candidates who are more interested in governing than partisan sniping.

▲ American Enterprise Institute Senior Fellow Kevin Kosar discusses how election reform may be the only way to restore trust in our political system.

The topic of partisanship formed the basis of Liasson's presentation. American politics, Liasson asserted in her presentation, has become too much of a zero-sum game. She pointed to a *New Yorker* cartoon in which a dog in a suit tells a colleague, "It's not enough that we succeed. Cats must also fail."

Of course, it wouldn't be a Washington gathering without handicapping the presidential race. Liasson said that polls indicate that voters don't like either candidate, but elections are referendums on the incumbent. As Americans continue to experience sticker shock at the grocery store and the gas pump, inflation could end up being the deciding factor, should Joe Biden lose reelection. "Inflation defeats incumbents," she said.

▲ NPR Political Correspondent Mara Liasson previews the presidential race for attendees.

Liasson also weighed in on another hot topic of discussion: the impact that the vice presidential candidates will have on the election. She said that this time, unlike in many elections, running mates will matter.

Still, Liasson says there is cause for optimism. "There are a lot of people on both sides who care about this country getting better," she said. "And that is something to feel good about."

NAVIGATING THE ESG MINEFIELD

As our industry—and every industry—continues to grapple with the thorny question of environmental, social, and governance (ESG), messaging expert and pollster Michael Maslansky asserted that the biggest problem with ESG is in how it's framed. Language matters, he said, and it's important to remember that it's not what you say, it's what people hear. ESG fails when it is framed as forced morality. Phrases like "It's the right thing to do" are subtle triggers that lead audiences to think a company or entity is making a values-based argument. In a polarized political climate, preferencing one set of values over another is a recipe for controversy. When companies make a decision in the ESG space, Maslansky said, it helps if the "why" of that decision is immediately clear.

There are ways that companies can execute against their own internal environmental, social, and governance strategies without reaping the potential whirlwind of "ESG" as a brand. A poll of attendees revealed that many of ACEC's firms are already on this path. Workforce shortages are one of the top challenges of our industry, and no solution to those shortages exists without dedicated outreach and recruitment of underrepresented groups. Is that diversity, equity, and inclusion—the "S" in ESG? Or is that simply good business?

▲ Pollster and messaging expert Michael Maslansky discusses navigating the ESG minefield.

The answer, said Maslansky, is the latter. When the issue is framed as delivering value, not values, the argument becomes much clearer and much easier to make. "People respond to positive and simple messages," he concluded.

MMA CHAMP-TURNED-HUMANITARIAN JUSTIN WREN ON WINNING THE BIGGEST FIGHT OF HIS LIFE

"What meaningful impact would you make if you only knew you could?"

MMA fighter and author Justin Wren posed the question to Convention attendees during his lively presentation. Through a series of events both tragic and triumphant, Wren found himself on a journey of self-discovery that would lead him to what has become his life's work.

▶ MMA fighter and author Justin Wren captivates Convention attendees with his journey of self-discovery.

▲ ACEC Chair Emeritus Jay Wolverton moderates a panel about ESG. Pictured from left to right: Michael Maslansky; Gayle Packer, chair, CEO, and president of Terracon; Lisa Brothers, president and CEO of Nitsch Engineering; and Wolverton.

▼ Bret Tushaus, vice president of product management at Deltek, leads an educational session on artificial intelligence and machine learning.

ACEC/PAC ANNUAL CONVENTION SWEEPSTAKES WINNERS

The total number of entries in the annual ACEC/PAC Spring Sweepstakes was 2,201. ACEC/PAC raised $61,556.96 in contributions between Sunday and Wednesday of the Convention. In addition, ACEC/PAC raised $22,000 for the Rep. Ron Estes (R-KS) campaign fundraiser.

The winners of this year's PAC Spring Sweepstakes: **Michael Smith** of **ACEC Utah** in Sandy, Utah, won the $10,000 Grand Prize. **Matthew Stacey** of **Wade Trim** in Detroit won $7,500. **Russ Romine** of **ACEC-KY** in Frankfort, Kentucky; **Taylor Wright** of **Atkins** in Atlanta; and **Michael Carragher** of **VHB** in Watertown, Massachusetts, each won $5,000. **Travis Todd** of **Thomas & Hutton** in Nashville, Tennessee; **Coriann Salas** of **WGI** in Deerfield Beach, Florida; and **Heidi Gordon** of **ACEC Colorado** in Denver each won $2,500.

The following 10 individuals each won $1,000: **Greg Haggerty** of **Dibble** in Phoenix; **Cameron McGown** of **HNTB** in Leawood, Kansas; **Jim Longest** of **Egis** in Indianapolis; **Keith London** of **Kennedy/Jenks Consultants** in Murrieta, California; **Rick Brownlow** of **Jacobs** in Atlanta; **Jim Hoffman** of **Summer Consultants** in McLean, Virginia; **Dave DeLizza** of **Pennoni** in Philadelphia; **Stephanie Christensen** of **EMCS** in Wausau, Wisconsin; **Paul Yarossi** of **HNTB** in Kensington, New Hampshire; and **Jerry Payonk** of **Clark Dietz** in Champaign, Illinois.

A target of bullying as a child, Wren credits his parents for helping him find his passion in wrestling. He noted a side benefit to pursuing the sport: "Wrestlers don't get bullied."

Wren would become a champion wrestler in high school and went to an Olympic training center right after graduation. A freak injury in 2005 ended his Olympic dreams and ultimately set him on a path of drugs and despair that culminated in a failed suicide attempt in a hotel in Mexico. Wren woke up from that suicide attempt shocked that he was still alive. At that moment, he said, what he called a "whisper in [his] soul" told him to get in the water. As Wren knelt in the ocean, with the waves rolling over him, he began to fight his way back. "Something changed," he said. "I watched the most majestic sunrise of my life, and in that moment, I decided to get clean."

As he began what he called "the bonus round of life," Wren was determined to find what he wanted to do. After a life of fighting against people during his MMA career, Wren decided it was time to fight for people. A vision of himself in a rainforest, serving as the voice of the voiceless, led him to the Democratic Republic of Congo (DRC). When he saw a young boy die of a preventable waterborne illness, Wren began his mission to solve the water crisis.

After researching how to drill wells on YouTube and Google but not finding any success with those methods, Wren sought the counsel of an engineer. The engineer determined what Wren had been doing wrong and pointed him in the right direction. Using this tweaked technique, fresh water began to flow. This would be the first time the people in the village in the DRC had ever seen safe water. "It was like Mother Earth was rewarding us for our efforts," Wren said.

▶ ACEC/PAC Major Donors and PAC Champions enjoy a yacht rock reception at ACEC's office.

▲ Michael Carragher, board chair of the ACEC Research Institute and chair and CEO of VHB, and Kevin McMahon, senior research consultant for the ACEC Research Institute, present a preview of the ACEC Research Institute's Lump Sum Contracting study.

▼ ACEC citizen lobbyists took to Capitol Hill during the Convention. Left to right: Jonathan Kramer, president of OHM Advisors; Cheryl Gregory, senior project manager for Rowe Professional Services Company; Rep. Haley Stevens, D-Birmingham, Michigan; Mike Cooper, principal/president of HED; and ACEC/Michigan Executive Director Ron Brenke.

▲ Attendees enjoy the Welcome Reception in the Exhibit Hall, featuring displays from more than 30 exhibitors.

TECHNOLOGY, WORKFORCE COMMITTEES RUN FULL SPEED AHEAD

With emerging technologies and the ongoing workforce challenge both high on attendees' lists of concerns, these sessions were an invaluable check-in on the progress the Council has made.

More than two dozen Convention-goers were on hand for the Technology Committee meeting, which was led by Committee Chair Raj Arora of Jensen Hughes and Committee Liaison Thomas Grogan. Arora level-set the meeting by reiterating the purpose of the committee: to raise awareness of the business impact of technology on ACEC member firms and advance the engineering industry, and to ensure that no firm is left behind. "We're not here to tell anyone what to do," said Arora. "The whole point is just to educate membership so they can make the best business decisions for their companies."

June 2024 marked the one-year anniversary of the committee. Since its launch, the committee has held numerous education sessions. The committee also has conducted a number of listening sessions. From those sessions, two common themes have emerged. The first is that there is no one-size-fits-all solution on technology. What is needed—and why it is needed—varies significantly by firm size and focus. The second common theme is that workforce development is paramount. The engineering industry needs workers who know technology and change management experts who can lead firms into adopting that technology. Said Arora: "It all comes back to talent."

The Workforce Committee meeting came on the heels of the Council's first Workforce Summit, held in April at ACEC's Washington, D.C., headquarters. Moderated by ACEC Workforce Development Director Patrick Brady, the committee members shared their respective views on attracting the industry's new and future workforce, as well as retaining and developing the current workforce, and discussed issues of public policy that impact hiring and recruitment.

From these three buckets emerged a shared priority: that engineers need to tell their story. That recurring theme was repeated during the committee meeting. Said Committee Co-Vice Chair Susan Osterberg: "We need to show the difference [engineers] make in this world, and that there is purpose in what [we] do."

Committee Chair Rodney Chester asserted that rethinking outdated college curricula needs to be a priority, namely around math requirements. Math phobia is real, and the engineering industry needs to make clear that one doesn't need *A Beautiful Mind*-level math skills to be an engineer.

One takeaway from the Workforce Summit was the need for a toolkit for Member Organizations to use for their own grassroots workforce initiatives. The toolkit is slated for completion in the near future. ■

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ACEC 2024 ENGINEERING EXCELLENCE AWARD WINNERS

THE ANNUAL GALA HONORS THE INDUSTRY'S MOST INNOVATIVE PROJECTS

The ACEC 2024 Engineering Excellence Awards (EEA) Gala honored 203 ACEC member firm achievements from across the nation and internationally. A panel of 27 judges representing a wide spectrum of built environment disciplines selected 24 projects for top awards: 16 Honor Awards and eight Grand Awards, which includes one project that won the Grand Conceptor Award for the year's most outstanding engineering achievement. The sold-out Gala was hosted by award-winning improv comedian Paul Mecurio, and drew nearly 800 members and guests to recognize and honor exceptional engineering innovation.

SUSAN CANDELARIO/ALAMY

AECOM received the Grand Conceptor Award for its work on Grand Central Madison. SVP and Regional Business Line Leader Samuel Donelson, VP and Project Executive Michael Pujdak, Associate VP Manzi Pierre, and Construction Director Peter Malvese accepted the award on behalf of AECOM. Program Executive Judith Kunoff accepted on behalf of the Metropolitan Transportation Authority.

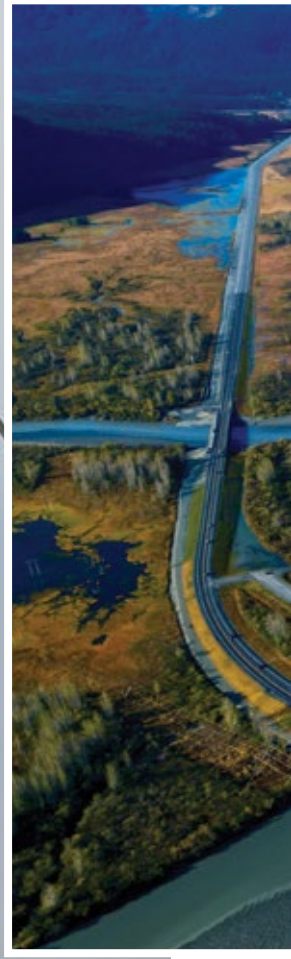
2024 GRAND CONCEPTOR AWARD

MTA Grand Central Madison (formerly East Side Access) New York, New York

AECOM
Client: Metropolitan Transportation Authority C&D

MTA Grand Central Madison, formerly known as East Side Access, significantly upgrades the Long Island Rail Road's service to Manhattan's East Side with 40 miles of new tracks, a new terminal, and extensive excavations deep below Park Avenue in Manhattan. MTA's largest capital project spanned three boroughs, and included modernizing the Harold Interlocking—the busiest rail junction in the U.S. Several innovations were incorporated, including the use of pneumatically applied concrete to vertical and overhead surfaces through a more powerful force of compressed air rather than traditional cast-in-place methods. The transformational project now provides a one-seat, shorter commute into Manhattan from Long Island. It also allows long-planned rehabilitation work on East River tunnels to begin next year.

GRAND AWARDS



Wellsburg Arch Bridge
Brilliant, Ohio and Wellsburg, West Virginia

COWI

Client: West Virginia Department of Highways

As a key and reliable artery for northern West Virginia and eastern Ohio communities, the bridge will foster economic growth for the region. It also includes a distinctive arch design that was delivered through an unusual process. The selected steel arch rib geometry is nontraditional, as opposed to the normal parabolic curve, which provides a lower rise and more efficient shape when combined with a network cable arrangement. The 830-foot main span was lifted onto two pairs of barges and moved into position in a massive, 13-and-a-half-hour operation. At the time, it was the largest bridge float-in project performed in North America. The new bridge is expected to reduce travel time between Wellsburg and Brilliant, stimulate economic development in the area, provide a new river crossing for commerce, and offer an alternative route across the river if maintenance work needs to be done on nearby bridges. The new crossing is a signature bridge for the community and will also serve as an attraction to the region. Not only is the tied arch bridge an efficient structural solution, but it is also an elegant architectural form that complements the surrounding environment.

Seward Highway MP 75-90 Road and Bridge Rehabilitation
Anchorage and Kenai Peninsula Boroughs, Alaska

HDR

Client: Alaska Department of Transportation & Public Facilities

Nearly a half century after the Seward Highway was reopened in 1968 following the 9.2 magnitude Great Alaskan Earthquake, it had reached the end of its design lifespan. Despite being the only route between Anchorage and the Kenai Peninsula and designated as an All-American Road and National Scenic Byway, it became a source of severe regional congestion. The new highway features straightened curves; reconstructed or rehabilitated and seismically upgraded nine bridges; 5 miles of passing lanes in each direction and turn lanes at critical intersections; repavement of the entire stretch; enhanced pedestrian facilities; improved drainage; and protected shorelines. With three new underpasses and an extended multimodal scenic trail, the project increases pedestrian safety and improves access to recreational spots.

University of Idaho ICCU Arena
Moscow, Idaho

KPFF

Client: University of Idaho

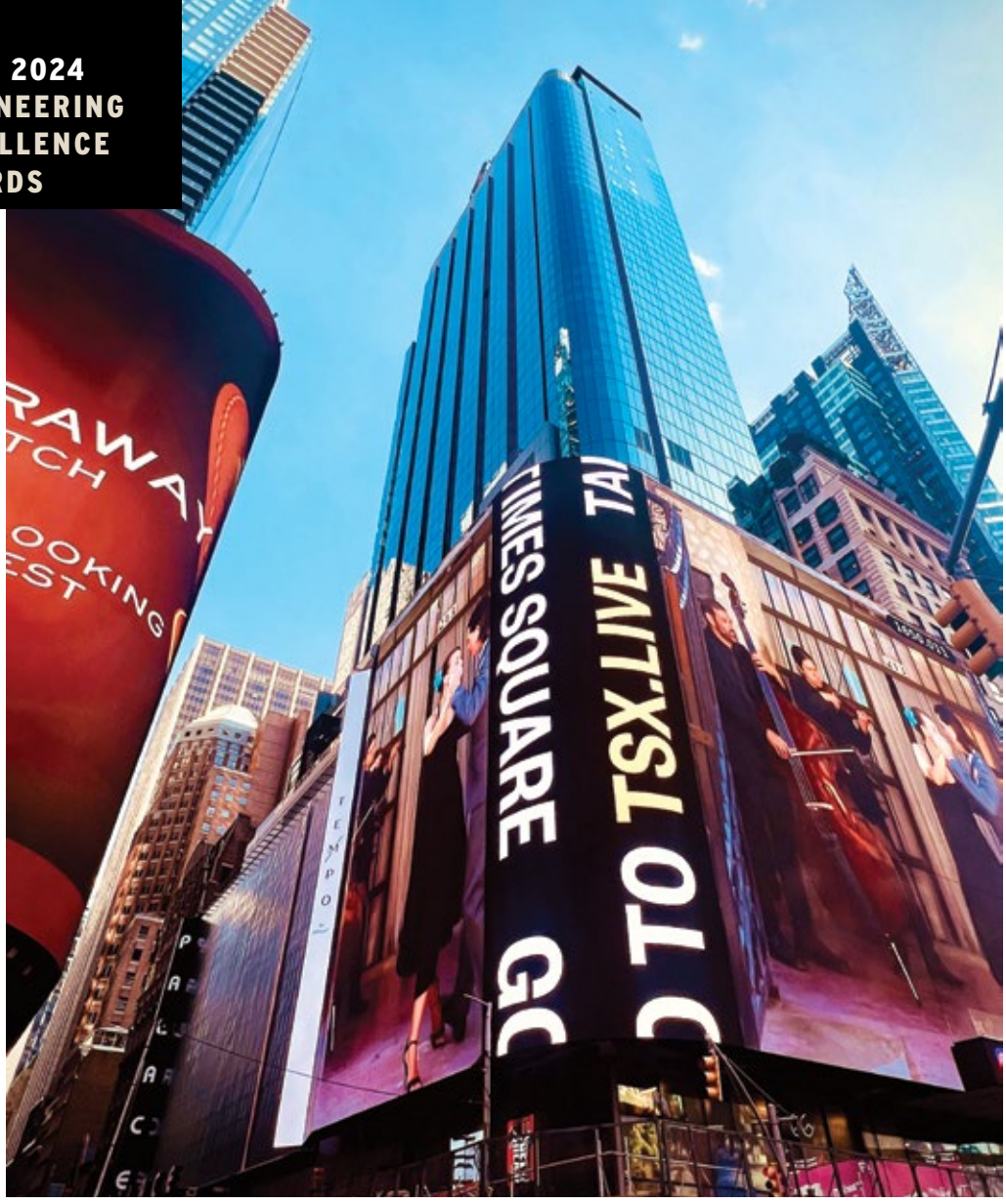
With a vision to showcase what Idaho timber can do, the University of Idaho rejected easier routes of using steel or concrete for its new arena. Instead, the team utilized wood harvested from the state of Idaho, including some harvested from the university's Experimental Forest. The striking shape of the building mimics the quintessential rolling hills of the surrounding Palouse region and required innovative applications of wood to produce. After a series of iterations of central support designs, designers settled on a portal frame with king post trusses. The mass timber featured in this project also includes glulam columns, cross-laminated and dowel-laminated floors. The arena has quickly become one of the most iconic wooden structures in the state.

Budd Inlet Treatment Plant Biological Process Improvements Olympia, Washington

Parametrix

Client: LOTT Clean Water Alliance

More than 80 wastewater plants discharge treated effluent into Puget Sound, contributing to nutrient loading (particularly nitrogen) that causes algae blooms and oxygen depletion, which harms the marine ecosystem. Nitrogen levels can be greatly reduced through a biological nutrient removal (BNR) treatment process. With the Biological Process Improvements project, the project team took the process to an entirely new level, reconfiguring and consolidating enhanced monitoring and controls. It also replaced aging equipment with state-of-the-art technologies. Treatment performance is highly effective, with total inorganic nitrogen (TIN) levels as low as 0.4 milligrams per liter (mg/L) and averaging 1.6 mg/L compared to the 3 mg/L permit limit. This high performance improves water quality in Budd Inlet, LOTT's receiving waters, and has the capacity to meet community growth and comply with more stringent discharge permit limits anticipated in the future. The upgrades include energy-saving technologies and operational strategies estimated to save about 20 percent of overall plant electrical usage.



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TSX Broadway and Palace Theater Redevelopment
New York, New York

Severud Associates
Client: L&L Holding Company

Resourceful engineering produced a new revitalized entertainment, retail, and hotel complex at the center of Times Square in New York City, while involving an extraordinary lift of the historic Palace Theater. The project team incorporated telescoping steel posts and computer-controlled hydraulic jacks, which allowed the entire Palace Theater structure to be raised an astonishing 31 feet. The 113-year-old structure, which occupies most of the project's densely urban site, is protected from demolition, but its original location would have limited use of the site if not lifted. Raising the Palace Theater two stories into the air made the project physically and economically possible, freed valuable ground floor space, and provides millions of visitors sidewalk access to expanded retail space.

▶

LaGuardia Terminal B Replacement Project
Queens, New York

WSP USA | HOK (Joint Venture)
Client: LaGuardia Gateway Partners

New York's LaGuardia Airport (LGA) is the nation's 19th busiest airport, serving over 30 million passengers annually. LGA was consistently recognized as one of the worst airports in the country because of aircraft taxiway congestion and general passenger discomfort. Following the opening of its new Terminal B, the tide has changed. The design team proposed a reconfiguration of Terminal B from a finger concourse design to an island design connecting the concourses to the arrivals and departures hall via elevated pedestrian bridges. This solution reduces overall airside congestion by allowing air traffic to navigate beneath the bridges in both directions and offers passengers a view of the New York City skyline and airfield. Other project design elements have contributed to its sustainability achievements, including the placement of vehicle charging stations; infrastructure to support a transition to all-electric ground support equipment on airside; and building innovations that ultimately cut energy consumption and greenhouse emissions. LGA's Terminal B is also the first terminal in North America and one of only 24 terminals and airports worldwide ranked at 5 Stars by Skytrax.

Long Island Rail Road Third Track Expansion Project Long Island, New York

Stantec

Client: 3rd Track Constructors (Joint Venture)
(Dragados USA, Picone, Halmar, CCA Civil)

The Long Island Rail Road (LIRR) is the busiest commuter railroad in North America. Originally built in the early 1800s, it has since consisted of two tracks serving about 50,000 people. Today, those same two tracks carry more than 72 million customers annually on about 750 daily trains. The LIRR Expansion Project upgraded an extremely heavily utilized 9.8-mile two-track Main Line segment in Long Island, New York. The enhancement involved new three-track-wide bridges that were cast in place adjacent to the existing tracks and then were hydraulically jacked into position beneath the LIRR. This process reduced the interruptions of train service at each crossing location to just one weekend where the tracks were taken out of service.

Governor Harry W. Nice/Senator Thomas "Mac" Middleton Bridge
Newburg, Maryland

AECOM

Client: Maryland Transportation Authority

The new Governor Harry W. Nice/Senator Thomas "Mac" Middleton Bridge (Nice-Middleton Bridge) improves regional traffic speeds and maritime travel for a key gateway over the Potomac River between Maryland and Virginia. The new four-lane Nice-Middleton Bridge replaces the existing 1.9-mile, two-lane bridge originally opened in 1940 and had reliably stood the test of time. But after seven decades of dedicated service, the bridge no longer met current safety standards. The new Nice-Middleton Bridge now provides twice the traffic capacity with its four 12-foot-wide lanes. It also includes shoulders to improve safety and facilitate access for emergency response, maintenance, and wide-load vehicles. Navigational vertical clearance of 135 feet also has been enhanced to enable tall ships to pass beneath.

New York Penn Station LIRR Concourse Improvements
New York, New York

AECOM

Client: MTA Construction & Development

As one of the busiest train stations serving Long Island Rail Road (LIRR), NJ TRANSIT, and Amtrak, with direct connections to six New York City Transit subway lines, Penn Station hosted approximately 600,000 visitors daily pre-pandemic. With expanding regional rail services, future demand is now projected at over 830,000 daily commuters. The LIRR Concourse improvements were doubled in width and the ceiling height raised to 18 feet. An innovative structural framing system helped increase ceiling height while maintaining structural support to Madison Square Garden, sidewalks, and roadways above ground, and avoiding significant structural work in the train shed. The design and sequencing approach maintained pedestrian circulation at concourse level and traffic movements on 33rd Street throughout construction. Penn Station remained fully operational through construction. Critical to ongoing 24/7 station operations, support and crew facilities for LIRR and the MTA Police Department were upgraded. While overcoming these complexities, no trains were delayed during construction.

Waterway Protection Tunnel
Louisville, Kentucky

Black & Veatch
Client: Louisville and Jefferson County Metropolitan Sewer District

The Louisville and Jefferson County Metropolitan Sewer District entered into a Consent Decree with objectives aimed at eliminating more than 5 billion gallons of untreated combined storm sewer and wastewater overflows (CSOs) into local waterways each year. As the sewer district sought one approach to handle CSOs, the project teams offered an alternative to handle overflows CSOs from 25 different locations using a deep bedrock tunnel alternative solution to provide much greater flexibility. The result is a 4-mile-long, 20-foot-diameter, 200-foot-deep CSO storage and conveyance tunnel with a capacity of 55 million gallons. During wet-weather events, a total of 25 CSOs are diverted to the tunnel for storage and conveyance. The new tunnel is designed to prevent 439 million gallons of CSO from discharging to public waterways, such as the Ohio River, in a typical year. As the first deep bedrock tunnel in downtown Louisville, several crossings beneath stakeholder infrastructure were necessary. As of fall 2023, after 16 months of operation, the new tunnel captured over 500 million gallons of CSOs that would have otherwise polluted Louisville's waterways.

EchoWater Project
Elk Grove, California

Brown and Caldwell/HDR (Joint Venture)
Client: SacSewer

A new treatment system produces cleaner water for discharge to the Sacramento River, as well as for potential reuse as recycled water, such as for landscape and irrigation. The project, branded "EchoWater," reflects how wastewater would return to a clean, natural state—much like an "echo" returning to its original source. Additionally, its new Nitrifying Sidestream Treatment facility converts ammonia to reduce chemical costs for odor control by $10,000 per day. Meanwhile, its Biological Nutrient Removal process, one of the largest in the country, removes 99 percent of the ammonia and 89 percent of the nitrogen from the wastewater. The EchoWater Project results in cleaner discharge to the Sacramento River, provides recycled water for unrestricted beneficial reuse, and keeps SacSewer in compliance with regulatory permits.

Pure SoJo Direct Potable Reuse Demonstration Facility
Riverton, Utah

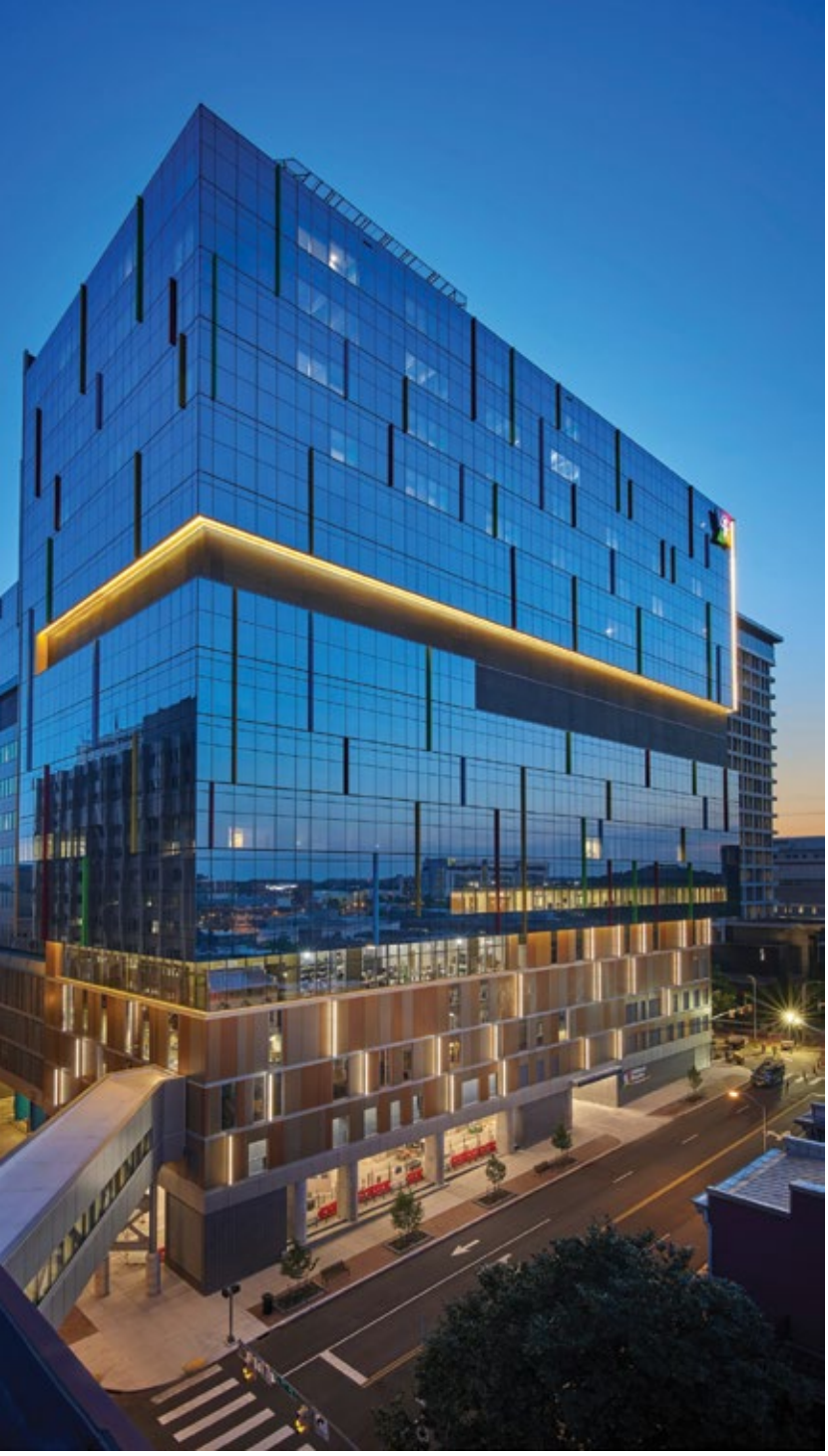
Carollo Engineers
Client: City of South Jordan, Utah

The city of South Jordan, Utah, has no culinary water rights of its own and currently obtains all its drinking water from a regional wholesaler. The city had been looking for a drought-tolerant, local water supply of its own to supplement wholesaler deliveries and assist with meeting new demands. A direct potable reuse (DPR) was deemed the right solution, and the project team designed a DPR pilot for demonstration purposes and public outreach. DPR—the process of purifying treated wastewater effluent to drinking water standards—is still relatively new with several implementation challenges. With the Pure SoJo Demonstration Facility, the project team is introducing the following non-reverse osmosis treatment plan to meet the city's objectives: ozone/biologically active filtration, ultrafiltration, granular activated carbon, ultraviolet disinfection, ion exchange, and chlorine disinfection. This treatment has produced safe, clean drinking water that has met all regulatory requirements with additional levels of safety. The city and Carollo have hosted multiple tours at the pilot facility and will soon be offering taste-testing events. The Demonstration Facility will operate for five years.

Clean Water for Carlls River
North Babylon, New York

D&B Engineers and Architects
Client: Suffolk County Department of Public Works, NY

Discharge of untreated organic matter and chemical contaminants from cesspools and septic systems in Deer Park, North Babylon, West Babylon, and Wyandanch seriously impacted human and wildlife health, creating algae blooms, brown tides, and high nitrate levels that deteriorated wetlands, and making shorelines of the Great South Bay dangerously flood prone. The project incorporated a low-pressure sewer system to redirect sanitary waste from more than 2,300+ private residences directly to the Bergen Point Wastewater Treatment Plant. The project involved construction on thousands of private residential properties. A portion of the sewer was connected to Suffolk County Sewer District via a 48-inch sewer interceptor extension. Micro-tunneling beneath Southern State Parkway minimized traffic disruptions and kept the artery open. The project preserves the Great South Bay's wetland ecosystems. The low-pressure sewer system mitigates nitrogen buildup and diverts other contaminants.



Wonder Tower at Children's Hospital of Richmond at VCU
Richmond, Virginia

Dunbar/Walter P Moore
Client: VCU Health

The 560,000-square-foot Wonder Tower provides emergency, trauma, and inpatient care services in one state-of-the-art, kid-friendly facility. A part of the VCU hospital network, the project includes a 280-foot-long enclosed pedestrian skybridge that spans over one of the city's busiest intersections to connect the new Children's Hospital to the VCU Medical Center Main Hospital building. Constructed overtop and alongside the Children's Hospital of Richmond's existing outpatient pavilion, the horizontal and vertical expansion presented a host of engineering challenges. It also is the first major Richmond project incorporating the state's rigorous new seismic design code. Additional engineering challenges included designing the innovative new tower on a confined urban site while keeping the adjacent hospital buildings operational and minimizing disruptions to surrounding vehicle and pedestrian traffic.

Bois d'Arc Lake Water Supply Program
Bonham, Texas

Freese and Nichols
Client: North Texas Municipal Water District

Facing some of the most explosive population growth in the U.S., the North Texas Municipal Water District needed a new, long-term water source added to their system to operate in concert with their smart water management and conservation efforts. The result was the new $1.6 billion Bois d'Arc Lake water supply program, a crucial new water source that started serving some 2 million people in more than 71 communities in spring 2023. Two decades in the making, Bois d'Arc Lake, Texas' first major reservoir in 30 years, initially provided 70 million gallons a day of drinking water for North Texans. The main elements include a 2-mile-long, 90-foot-tall earthen dam and 16,641-acre reservoir; a treatment plant and transmission systems that include two huge pump stations and 60 miles of pipelines for raw and treated water; and multiple sites of forested and emergent wetlands, grasslands, and stream restoration, including the planting of 6.3 million trees.

Broadway Viaduct Bridge Replacement
Nashville, Tennessee

Gresham Smith
Client: Tennessee Department of Transportation

As the new main western gateway into Nashville, the Broadway Viaduct Bridge spans five active CSX railroad lines, 11th Avenue South, and two greenways. It serves as a crucial arterial for the city, carrying not only 26,000 vehicles daily but also critical telecommunications for the downtown area. To minimize impacts of construction to the traveling public, the team used accelerated bridge construction techniques that resulted in the complete replacement of the bridge superstructure during a mere eight-week full closure of the bridge. An integral part of the construction was the use of shallow 32-inch web depth steel girders featuring high-performance Grade 70 steel flanges, spanning all five CSX railroad tracks. Steel beams not only improved vertical clearance over the tracks but also provided span lengths with sufficient railroad horizontal clearance that eliminated the need for bent protection.

Orlando International Airport Terminal C
Orlando, Florida

HNTB Corporation
Client: Greater Orlando Aviation Authority

Facing demand projected to increase by 12 million passengers annually, Orlando International Airport needed to expand. The new Terminal C introduces multiple industry firsts that increase safety, efficiency, and mobility, including a terminal-wide, 100 percent trackable RFID baggage handling system. Stunning architectural elements and artistic interpretations create a sense of place and invite passengers to experience Florida's famous natural elements of water, garden, and light. Terminal C elevates the value of engineering by demonstrating how a well-designed project can not only advance the owner's objectives but the aviation industry's objectives as well. Terminal C features special systems design engineering for state-of-the-art connectivity, including virtual ramp control systems, 100 percent automated screening lanes at TSA checkpoints, and visual docking guidance systems that allow pilots to park aircraft themselves.

555 Greenwich
New York, New York

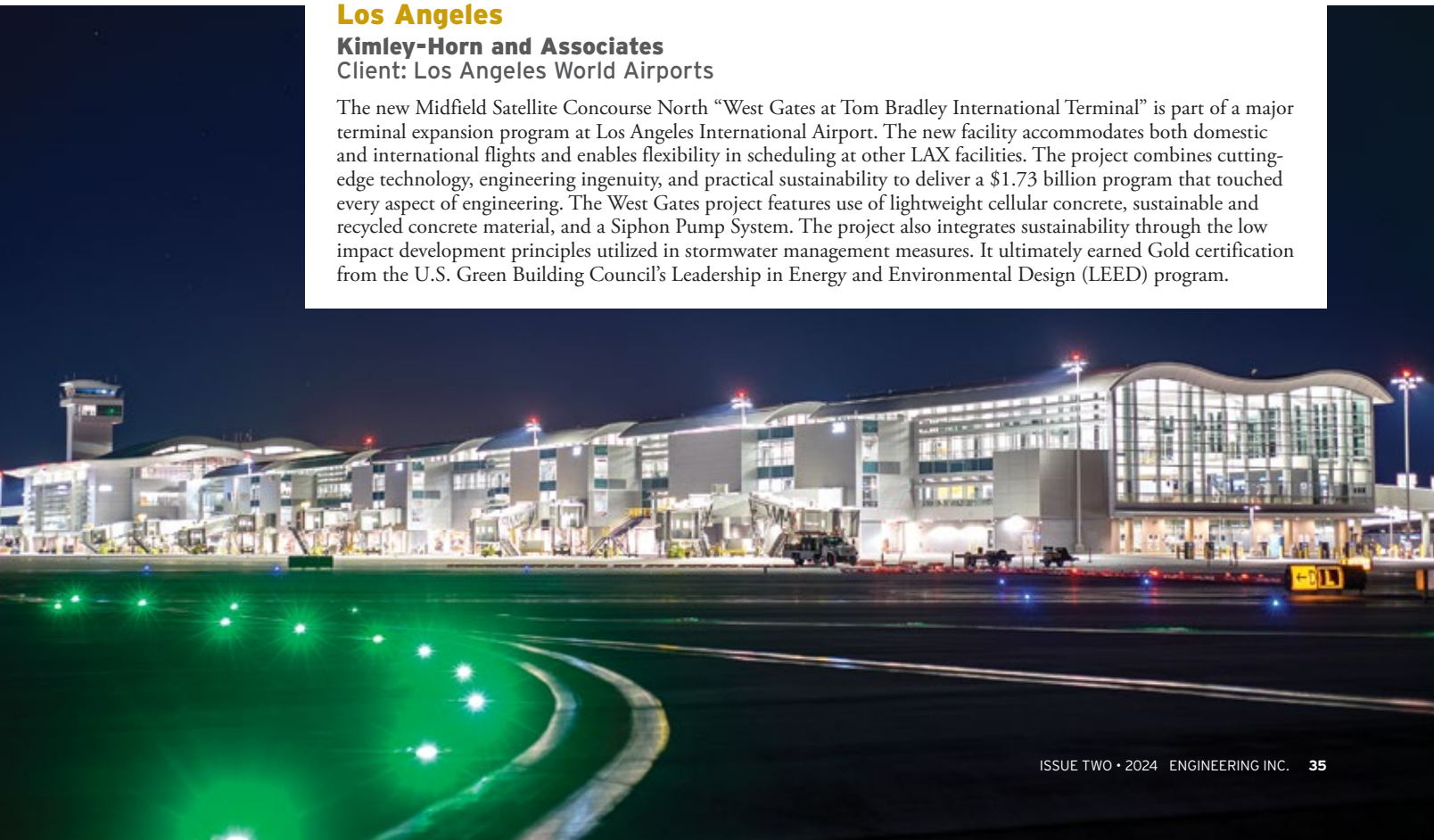
Jaros, Baum & Bolles
Client: Hines

Completed as New York City's first entirely fossil-fuel-free commercial office building, 555 Greenwich employs a revolutionary infrastructure that breaks new ground for sustainable design. The project team had to overcome both the challenge of designing thoroughly sustainable systems for a first-of-its-kind building—and then coordinating those systems with those of 345 Hudson, the existing building to which the first-of-its-kind was being attached. The solution was an ingenious and intricate weave of innovative systems—dedicated outside air units, geothermal heating and cooling, industrial scale air-source heat pumps, radiant heating and cooling, and increased air filtration—innovations previously unheard of in a commercial office building in New York City. The two buildings are now interconnected with a thermal network designed to shift heating and cooling energy between the structures, thus maximizing the HVAC system efficiency of each.

LAX West Gates at Tom Bradley International Terminal
Los Angeles

Kimley-Horn and Associates
Client: Los Angeles World Airports

The new Midfield Satellite Concourse North "West Gates at Tom Bradley International Terminal" is part of a major terminal expansion program at Los Angeles International Airport. The new facility accommodates both domestic and international flights and enables flexibility in scheduling at other LAX facilities. The project combines cutting-edge technology, engineering ingenuity, and practical sustainability to deliver a $1.73 billion program that touched every aspect of engineering. The West Gates project features use of lightweight cellular concrete, sustainable and recycled concrete material, and a Siphon Pump System. The project also integrates sustainability through the low impact development principles utilized in stormwater management measures. It ultimately earned Gold certification from the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) program.



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Boston University Center for Computing & Data Sciences Boston

Nitsch Engineering
Client: Boston University

The Boston University Center for Computing & Data Sciences (CCDS) exemplifies cutting-edge sustainable engineering and design. The project team provided innovative civil engineering, permitting, and land surveying services to convert a former parking lot into Boston's greenest building—a LEED Platinum building that will reach carbon neutrality by 2040. The project overcame significant site constraints on the two-acre urban area to design an innovative stormwater management system, which also required coordination with 31 geothermal wells, associated piping, and sewer infrastructure for the new building. The iconic offset façade allows more space for green roofs, which reduces the carbon footprint. An integrated rainwater harvesting system irrigates the roofs, and the CCDS meets sustainability goals through renewable energy. The CCDS provides a high-profile model for future successful sustainable engineering and design.

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Perelman Performing Arts Center New York, New York

Magnusson Klemencic Associates
Client: Davis Brody Bond (DBB)+REX/Perelman Performing Arts Center (PAC NYC)

Simple and elegant during daylight, a warm illuminating lantern at night, the new Perelman Performing Arts Center is the newest jewel and culminating piece of the 9/11 memorial site. It's a deceptively simple cube that belies an internal one-of-a-kind, immensely complex structural system that performs engineering "gymnastics." Its three principal theaters "float" inside the exterior like three ships in a bottle or three boxes inside their marble cube. These floating boxes are structurally independent and acoustically isolated from each other, the building itself, and the infrastructure below. The structure's three main theaters and two adjoining storage areas, or "scene docks," can be reconfigured, coupled, and de-coupled (transformed) into an unheard-of 11 different theater volumes and over 60 different configurations. Balconies roll in and out, seating platforms rise and drop to create raked or flat seating surfaces—all seamlessly transforming three performance spaces into many configurations ranging from intimate 100-person black-box venues to epic 1,000-person concerts.

▲

Newark Liberty International Airport New Terminal
Elizabeth, New Jersey

STV

Client: Port Authority of New York and New Jersey

The new Terminal A at Newark Liberty International Airport replaces the existing facility with a new 1-million-square-foot, 33-gate domestic terminal. Opened in January 2023, Terminal A was the largest design-build infrastructure program in New Jersey state history. The $2.7 billion Terminal A Redevelopment Program includes eight new bridges and roadways, a new car rental and parking facility, and 1.4 acres of airfield paving improvements. As one of the region's three major airport gateways, Newark's new terminal is emblematic of an airport renaissance for New Jersey and the New York Metropolitan region.

▲

Central 70
Denver

RS&H & AtkinsRéalis

Client: Colorado Department of Transportation

This new 10-mile, $1.2 billion massive highway project totally enhances traffic flow west of downtown Denver, while improving capacity and reliability and reducing congestion. The project removed a failing 57-year-old viaduct before lowering a portion of the reconstructed interstate and covering it with a four-acre park to reconnect the long-divided Swansea and Elyria neighborhoods. Features include the reconstruction of 10 miles of I-70, demolition of 16 bridges with major structural deficiencies, and construction of 24 new concrete and steel bridges, two of which are rail bridges. It is projected to result in $18 billion in increased regional economic activity by 2040.

ACEC 2024 ENGINEERING EXCELLENCE AWARDS

NATIONAL RECOGNITION AWARD WINNERS

FIRM NAME	PROJECT NAME
ACEC ALABAMA	
Kimley-Horn	Tucker Road Pump Station 6
Sain Associates	Will Buechner Parkway
ACEC ARIZONA	
Gannett Fleming	PHX Sky Train Stage 2 Automated People Mover System
ACEC ARKANSAS	
Crafton Tull	Central Arkansas Regional Greenways Plan
ACEC CALIFORNIA	
GHD	Windsor/Windsor River Road Intersection Improvements
HDR	BNSF Needles Third Mainline Track Expansion, Segment 1 and 2
HDR	Cyprus Shores Emergency Stabilization Project
HDR	Isabella Dam Safety Modification
HDR	Redlands Passenger Rail Project
Kier + Wright Civil Engineers and Land Surveyors	NVIDIA Corporate Headquarters
Michael Baker International	AUV Plume Transport Assessments of San Elijo and Encina Ocean Outfalls
TYLin	West Mission Bay Drive Bridge Over San Diego River
Walter P Moore	Acrisure Arena
ACEC COLORADO	
Farnsworth Group	Pueblo Community Health Center, East Side Clinic
Merrick & Company	NW Iowa RNG Site Design
RockSol Consulting Group	I-25 South Gap Monument to Castle Rock
ACEC-CT	
CHA	Windham Bridges
Michael Baker International	Pawtucket-Central Falls Transit Center
STV	Reconstruction of I-95 Interchange 33

NVIDIA Corporate Headquarters in Santa Clara, California, designed by Kier + Wright Civil Engineers and Land Surveyors, is a 2024 EEA National Recognition Award winner.

FIRM NAME	PROJECT NAME
ACEC-FL	
Black & Veatch	C-51 Reservoir Phase 1
Crawford, Murphy & Tilly	SR 212 (Beach Blvd) & SR 115 (Southside Blvd) Intersection Improvements
Kisinger Campo & Associates	Graham Swamp Trail and Pedestrian Trail Bridge Over SR 100
TranSystems	Loxahatchee Movable Bridge Rehabilitation
TranSystems	Skyway Wave Attenuation Design-Build
WGI	Building a High-Speed Railroad in Paradise
ACEC GEORGIA	
GWES	A. Scott Emmons Water Reclamation Facility
Jacobs	CCID Autonomous Vehicle Shuttle Deployment Study
Kimley-Horn	Firefly Bridge Over Trail Creek
Michael Baker International, Aviation Infrastructure Solutions (Joint Venture)	Runway 9L End-Around Taxiway
Prime Engineering	Delta TechOps Engine Overhaul Facility
ACECHAWAII	
HDR	Wastewater Pump Station at Joint Base Pearl Harbor
ACEC ILLINOIS	
Benesch	43rd Street Pedestrian Bridge Over LSD/Metra/CNRR
Benesch	Weber Road at I-55 Diverging Diamond Interchange
Bowman Consulting Group, H.W. Lochner, HDR, Quigg Engineering	Mile Long Bridge
HR Green	Eldamain Road Extension
TERRA Engineering	Peoria Riverfront Master Plan
TranSystems	O'Hare International Airport Multi-Modal Facility
TranSystems, Burns & McDonnell, Civiltech Engineering	Houbolt Road DDI and Extension
ACEC INDIANA	
American Structurepoint	Allison Transmission Innovation Center
American Structurepoint	Range Line Road Corridor
Butler, Fairman & Seufert	Shelbyville Downtown Redevelopment
Clark Dietz	East WWTP Capacity Expansion Improvements
HNTB	I-65/I-70 North Split Project
ACEC/IOWA	
HDR	Des Moines Wastewater Reclamation Authority Flood
HDR	I-80/380 System Interchange Reconstruction Project
HR Green	Water Resource Recovery Facility
ACEC KANSAS	
HDR	Switzer Road - 159th to 167th Street Improvements
HNTB	Monticello Road Improvements Phases 1 & 2
Olsson	Bowersock Dam Rehabilitation

ACEC 2024 ENGINEERING EXCELLENCE AWARDS

NATIONAL RECOGNITION AWARD WINNERS

FIRM NAME	PROJECT NAME
ACEC-KY	
Gresham Smith	MPATH: Empathic Analytics
Gresham Smith	Town Branch Commons
GRW	Brandenburg's WWTP: KY's First Local P3
HMB Professional Engineers	KY-461 & KY-80 New Interchange and Widening
Stantec	US 60 Smithland Bridge Replacement Over Cumberland
ACEC OF LOUISIANA	
Gresham Smith	Move Metairie Tracking Forward
McKim & Creed	Fish Bayou Control Structures
T. Baker Smith	Thibodaux Regional Wellness Center and Sports Complex
ACEC OF MAINE	
GZA GeoEnvironmental	Erosion-Slope Stability Toolkit for Highways
HNTB	Portland Area Widening and Safety Improvements
Thornton Tomasetti	317 Main Community Music Center
ACEC/MD	
STV	MDOT MTA MARC Riverside Heavy Maintenance Building
ACEC/MA	
Fennick McCredie Architecture	Logan Airport Terminal B to C Connector
HDR	Conley Backlands Reclamation
HDR	North Hero-Grand Isle Drawbridge Replacement
HNTB	Haverhill Bridge Replacement Design-Build
Howard Stein Hudson	East Milton Square Reconstruction
Hoyle Tanner	Main Street Bridge & US 202 Reconstruction
Kleinfelder	Carlton Street Footbridge Restoration
WSP USA	Somerville Avenue Utility & Streetscape Project
ACEC/MW	
Arup	International African American Museum
Arup	WMATA Potomac Yard Metrorail Station
EBA Engineering	CIPP Lining of Water Mains – A Cost-Effective Solution
Gannett Fleming	Metro New Canopies Phase 3
Hazen and Sawyer	Disinfection Improvements at the NCPCP
Nitsch Engineering	Hilltop Campus Stormwater Master Plan
Precision Systems	Traffic Safety Investigation Prioritization
WSP USA	John G. Lewis Memorial Bridge Rehabilitation
ACEC/MICHIGAN	
AECOM Great Lakes	I-75 Modernization Project (Segment 3)
Fishbeck	M-46 Drainage Structure Condition Assessment
Spicer Group	Bauer Drain Relocation and Improvement Project
Tetra Tech / HDR	Second Avenue Network Tied Arch Bridge
ACEC/MN	
Barr Engineering	Redhead Mountain Bike Park
Bolton & Menk	Highway 10/169 Improvements
Emmons & Olivier Resources	Capitol Region Watershed District Campus
HGA	Plymouth Community Center
HNTB	3rd Avenue Bridge Rehabilitation (CMGC Delivery)
Kimley-Horn	Abbott Northwestern Hospital Purple Ramp
LHB	French River Bridge Reconstruction
LHB	North Loop Garage
Stantec	Thompson Oaks Transformation
TKDA	Chestnut Street Plaza
TKDA	Terminal 1 Concourse G Apron Reconstruction
ACEC/MISSOURI	
Crawford, Murphy & Tilly	MacArthur Bridge West Approach Span Replacement
HR Green	Route 94/Route 364/Muegge Road Interchange Project Management Consultant (PMC)
TREKK Design Group	Distribution Manhole Inspection Program
TWM	Missouri Route 100 (Manchester Road) Rehabilitation
ACEC-MONTANA	
DJ&A	Mullan BUILD
HDR	Higgins Avenue Bridge Rehabilitation
ACEC NEBRASKA	
Benesch	Lincoln South Beltway
HDR	Omaha RiverFront Revitalization
HDR	South Sioux City Wastewater Treatment Facility
HDR	Wigton Heritage Center
ACECNJ	
Dewberry	Manasquan Area Channels Maintenance Dredging
Dewberry	Newton Avenue Bus Garage Electric Bus Charging System Infrastructure
Dewberry	Somerville Station Transit Oriented Development
Langan Engineering	Pledger Creek Sediment Remediation
Michael Baker International	Old New York Road Over Nacote Creek Bridge
Nitsch Engineering	Princeton East Campus Stormwater Facilities
ACEC NEW MEXICO	
Molzen Corbin	Sunport Emergency Power System Improvements
ACEC NEW YORK	
Buro Happold	Rob and Melani Walton Center for Planetary Health

ACEC 2024 ENGINEERING EXCELLENCE AWARDS

NATIONAL RECOGNITION AWARD WINNERS

FIRM NAME	PROJECT NAME
Dewberry	City College of New York Shepard Hall Design of a New Elevator and Modernization of Two Existing Elevators
Gannett Fleming	3K Center at Flatbush Avenue
General Engineering Consultants - WSP USA/STV/Parsons Corporation (Joint Venture)	East Side Access
Gilsanz Murray Steficek	Fairfield University - Leo D. Mahoney Arena
H&H	Cleaning and Painting of the RFK Bridge Towers and Queens Approach
Hazen and Sawyer	Cloudburst Citywide Feasibility Study
HDR	NYSCC Reimagine the Canals Fall Fishing Program and SEQRA Review
IBC Engineering	North Syracuse CSD - KWS Bear Road Elementary
Jacobs	East Side Access
JMT of New York	Hunts Point Interstate Access Improvement - Contract 1
Langan Engineering	555 Greenwich Street
Langan Engineering	New York University John A. Paulson Center
NV5-ZOFS (Joint Venture)	Installation of Combined & Storm Sewers - 229th Street
Paulus, Sokolowski & Sartor	River Sediment Cap with Remote Sensing System
Syska Hennessy Group	BlackRock Headquarters, 50 Hudson Yards
VHB	Shorefront Park Living Shoreline Project
WSP USA	Penn Station LIRR Concourse Improvement Project
ACEC/NC	
Kimley-Horn	Carolinas Rehabilitation Hospital at Carolinas Medical Center
McKim & Creed	Troy Lock and Dam Bulkhead Recess Rehabilitation Scan
ACEC OHIO	
DLZ Architecture	Franklin County James A. Karnes Corrections Center
Gannett Fleming	Stark-77 Bridge Replacement and Rehabilitation
HDR	Ashtabula Water Treatment Plant Reconstruction
Michael Baker International	Opportunity Corridor Section 3
ACEC OKLAHOMA	
Garver	SH-20 Keetonville Hill Safety Realignment
ACEC OREGON	
HDR	Mill Plain Bus Rapid Transit
Inter-Fluve	Vinegar to Vincent Habitat Improvement
ACEC/PA	
AECOM Technical Services	Virtual Tool for Innovative Engagement
Benesch	I-95 Bridge Collapse Emergency Repairs
GPD Group	2020 Large Diameter Sewer Rehabilitation
HDR	Fern Hollow Bridge Emergency Replacement Project
Jacobs Engineering Group	PennDOT District 6-0 New Regional Traffic Management Center
McCormick Taylor	Pymatuning Spillway Trail Messerall Truss Project
WSP USA	Broad Street Bridge Reconstruction
ACEC-SC	
HDR	Greene Street Bridge
Michael Baker International	I-85 Design-Build Widening MM 98 to MM 106
S&ME	Great Falls-Dearborn Diversion Dam Bypasses
Thomas & Hutton	Noisette Creek Pedestrian Bridge
ACEC TENNESSEE	
Allen & Hoshall	McLemore Avenue Streetscape and Green Infrastructure
Burns Cooley Dennis	I-40 WB Near MM 343 Slope Stabilization
Kimley-Horn and Perkins Eastman	Imagine East Bank Vision Plan and Mobility Study
Thomas & Hutton	Smyrna/Rutherford County Airport Authority Hangar 692
ACEC TEXAS	
Halff	Bastrop State Park Dam
HDR	I-35 Capital Express Central Project FEIS
Huitt-Zollars	District Gateway Improvements
Pape-Dawson Engineers	State Highway 211
SAM Companies	TxDOT 2020 Bridge Clearance Program Statewide
Walter P Moore	Kinder Land Bridge at Memorial Park
Walter P Moore	Steelhouse Omaha
ACEC UTAH	
Carollo Engineers	Duchesne Valley Water Treatment Plant Process Improvement Project
Horrocks	US-89; Farmington to I-84 PDB
Michael Baker International	I-80 & I-215 Renewed Design-Build
VBFA	Salt Lake Convention Center Hotel Hyatt Regency
WSP USA	UDOT US-89; Farmington to I-84
ACEC VIRGINIA	
A. Morton Thomas & Associates and Johnson, Mirmiran & Thompson	Winterpock Road Widening
ATCS	VDOT, I-95 Southbound Auxiliary Lane Widening Between Route 123 and Route 294
CHA	Sweet Briar College Athletic Complex
Gannett Fleming	Virginia Railway Express (VRE) Lifecycle Overhaul
Kimley-Horn	I-264 Witchduck Road Interchange and Ramp
Kimley-Horn	GRTC Downtown Transfer Station

NATIONAL RECOGNITION AWARD WINNERS

FIRM NAME	PROJECT NAME
ACEC WASHINGTON	
Anchor QEA	Meadowdale Beach Park and Estuary Restoration
Jacobs	I-5, Steilacoom-DuPont Road to Thorne Lane Corridor Improvements
Jacobs Engineering	King County Georgetown Wet Weather Treatment Station
Parametrix	East Lake Sammamish Trail
Shannon & Wilson	Lower Dungeness River Floodplain Restoration and Levee Realignment
ACEC WISCONSIN	
EMCS	STH 35 Trempealeau River East and West Channel Bridges
Greeley and Hansen, (a TYLin Company)	Great Water Alliance Program
HNTB	WIS 50 - Reconstruction and Modernization Project
KL Engineering	WIS 26 Interchange
Strand Associates	Bee Branch Creek Railroad Culvert and Pedestrian Tunnel Project

ACEC thanks the 2024 Engineering Excellence Awards (EEA) Judges and EEA Committee members for their time and dedication to this year's competition.

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THE AI REVOLUTION

From automating tedious tasks to solving complex problems, artificial intelligence is transforming how engineers work

BY SAMUEL GREENGARD

Human ingenuity has always been at the center of great engineering. Throughout the centuries, the accumulated knowledge of design, engineering, and construction experts has led to an impressive array of projects—from canals and viaducts to bridges and modern high-rise buildings.

But suddenly the ground is shifting. The rapid advance of artificial intelligence (AI), including generative AI (GenAI) tools that incorporate large language models, is redefining what it means to be an engineer. Although technology is nothing new to the profession—CAD and BIM tools have automated numerous processes, for example—AI is now extending the scope and boundaries of engineering.

The opportunities are substantial. AI can help firms streamline and improve processes, increase efficiency, understand costs, assist with design functions, predict failures, and identify maintenance requirements for projects. It also can aid in decision-making and unlock innovation at scale—and even generate ideas that humans have never considered.

"Engineers exist to solve problems, and we use data, software, and analytics to do so. For many of us, data also comes in the form of experience," observes Mike Lawless, vice president of innovation at IMEG. "AI has the powerful ability to provide engineers with the right data at the right time."

To be sure, AI is rapidly emerging as a potent force in the engineering field. "With AI and machine learning, the transition to a more predictive and prescriptive business framework is taking place," says Bret Tushaus, vice president of product management for software firm Deltek.

ACCELERATING AI ADOPTION

The enormous value AI can bring to firms shouldn't be ignored. Deltek's 2024 *Clarity: Architecture & Engineering Industry Study* found that 62 percent of firms believe that AI will improve operational efficiency. In addition, over half (52 percent) think it will improve project timelines and delivery, while 35 percent say it will reduce overhead costs.

"There are changing dynamics in our industry," says Raj Arora, chair of the ACEC Technology Committee and CEO of Jensen Hughes. "For several reasons, there's an imbalance of supply and demand. Many firms have more than enough work. The challenge is sourcing quality talent and getting projects completed in a timely manner. AI could help us do more with less, work faster, and eliminate many mundane tasks, allowing engineering teams to focus on higher-value work."

Engineering firms benefit from four key areas of AI, says Hank Tran, director of AI and analytics at software firm BST Global. The technology can improve design, production, operations, and productivity. Yet he also emphasizes that any project must begin with the recognition that AI is built on data. "Having the right data architecture, data quality, and data guardrails are critical factors that are often overlooked," he says.

AI-fueled automation can simplify tasks such as data entry, invoice matching, and timesheet auditing. It can draft documents and pen letters to clients. It can also spot anomalies and exceptions in everything from project designs to financial systems. And it can serve as a digital assistant or natural language chatbot that replaces manual searches through documents, emails, spreadsheets, and other files.

"It's possible to get answers faster, understand trends better, and make more informed decisions," Arora says. For instance, Jensen Hughes is now exploring an AI tool that finds the most qualified team members for a project. "If we're building an airport in Barcelona, for instance, who has the knowledge, experience, and language skills to lead the project?" he says.

GenAI's ability to uncover ideas and designs that engineers haven't even considered can prove transformational. After a set of parameters are fed into a GenAI system that has been trained on past projects, it can churn out hundreds or even thousands of drawings, renditions, and design concepts. "The architect can then refine these to create the best and final solution," Tran explains.

"Our mindset—which we communicate to our staff—is that engineers are important to our firm's future, and AI will be there to augment them, not replace them."

MIKE LAWLESS
VICE PRESIDENT OF INNOVATION, IMEG

PANUWAT CCN/SHUTTERSTOCK; REVELSTOCKART/SHUTTERSTOCK

Andrea Springer, vice president and director of digital engineering solutions at CDM Smith, adds, "We're seeing improvements in processes and workflows, along with insights that didn't surface previously."

Employee retention could be a benefit of working more efficiently: According to the Deltek report, 72 percent of firms believe AI will improve their staff's job satisfaction.

UNLEASHING EFFICIENCY

Engineering firms are beginning to recognize the value of AI. CDM Smith has incorporated machine learning and other AI capabilities into its practice. This includes areas such as computer vision, fuzzy logic, and machine learning (*see sidebar below*). Now the firm is pushing into natural language processing and other forms of GenAI. Springer says that AI has already aided in collaboration and enabled more creative and effective ways of working. "We believe it will be used to solve increasingly complex problems," she says.

At IMEG, AI now helps engineers explore project scenarios. It presents ideas that "are often broader than we might have developed on our own," Lawless says.

"It's possible to get answers faster, understand trends better, and make more informed decisions."

RAJ ARORA
CHAIR, ACEC TECHNOLOGY COMMITTEE
CEO, JENSEN HUGHES

As a result, teams are able to determine the best outcome more quickly. The firm has developed a chatbot named Meg that connects engineers with a vast array of content, including past projects. This helps teams sort through complex technical options and apply lessons learned. It also allows employees to get answers to general questions, such as which days constitute company holidays or how a particular program works.

"One of the benefits of our chatbot is that it can educate and enable our younger staff to perform closer to the level of our more experienced engineers," Lawless says. "Meg will never replace human mentorship, which is an integral part of our firm. But chatbots don't judge. They provide a safe place to start learning."

The company is now looking for ways to use AI to promote document creation, utilizing all the information from past projects and models.

Shawn Weekly, digital transformation architect area lead for digital solutions at POWER Engineers, says that GenAI helps the firm prepare documents faster and at a lower cost point. "It is expensive to have designers and engineers digging through folders full of documentation to find specific equipment that's recommended by the industry for a given set of variables," he explains.

Instead, engineers can now access a GenAI tool that answers questions and finds relevant information in "a fraction of the time."

POWER Engineers is now developing an enterprise-wide AI assistant that will contain large chunks of the company's engineering and design data. "By leveraging this assistant, we expect to see a significant reduction in many of the tedious tasks that we grind through today in all our projects," Weekly explains.

So far, a test environment has yielded productivity gains hovering around 50 percent. POWER Engineers is exploring ways to build machine learning models that tap visual and image recognition to spot errors earlier.

CRACKING THE AI CODE

AI bias
A problem that occurs when AI algorithms reflect social biases and prejudices, typically due to issues with underlying training data.

Chatbot
A computer program designed to simulate conversation with human users through text input or voice commands.

Computer vision
A field of AI that focuses on interpreting and understanding visual data like images and videos.

Fuzzy logic
An AI technique that mimics human-like reasoning to handle ambiguous or imprecise information (versus traditional binary logic, which operates in a strictly true/false manner).

Generative AI (GenAI)
This branch of AI generates new content, such as text, images, video, and code. It is increasingly used to summarize vast amounts of text, operate chatbots, and find new ways to design things.

"Perhaps AI will help our industry finally catch up on the enormous backlog of engineering work that exists."

NATHAN BINGHAM
CHIEF DIGITAL OFFICER
POWER ENGINEERS

SETTING GUARDRAILS

Despite its remarkable capabilities, AI comes with a few caveats. One common problem is that GenAI systems are prone to hallucinations and data biases—meaning that they sometimes invent facts or distort information. And without the right oversight and controls in place, incorrect information can be presented as fact.

To address such concerns, POWER Engineers has published AI usage guidelines on regulatory compliance, data privacy, and security; prohibitions on the use of customer data in AI tools; data retention and destruction policies; and incident reporting and response. In addition, the firm emphasizes that responsibility for the accuracy of content falls on those using AI, and standard checking procedures should be followed, says Chief Digital Officer Nathan Bingham.

When adopting the tech at a firm, Tran believes it's wise to "start small and understand how you will measure the outcome of AI models."

It's also vital to ensure that sufficient guardrails are in place to avoid misuse or abuse and to address cultural issues. Many workers, for example, fear that the technology could push people out of jobs—but that's unlikely in today's environment. "Ongoing talent shortages in the engineering field make this possibility remote—at least for the foreseeable future," Arora says.

Others agree. At IMEG, "Our mindset—which we communicate to our staff—is that engineers are important to our firm's future, and AI will be there to augment them, not replace them," Lawless says.

The focus is on upping productivity and improving results, not replacing people. "This technology can have a huge impact on outcomes for the people and communities our projects serve," he adds. "AI also gives back some time to our engineers and helps them achieve better work-life balance."

A firm can accelerate AI adoption with tech-savvy employees who are willing to serve as early adopters and experiment with use cases, Arora says. Yet it's also crucial that managers and senior executives are on board with a program and don't serve as an impediment. "Otherwise, everything falls apart," he says.

To be sure, in the coming years, AI will alter business models and the way projects unfold. It will usher in new ways to work and new ways to design and build projects. "AI will soon be embedded in almost every type of software," Bingham says. "Perhaps AI will help our industry finally catch up on the enormous backlog of engineering work that exists."

The rapid advancement of AI is proving to be transformative—and it's only going to get more prevalent.

"Artificial intelligence is here to stay," Tran concludes. "It isn't a destination; it's a journey." ■

Samuel Greengard *is a technology and business writer based in West Linn, Oregon. He has contributed to* Entrepreneur, Information Week *and* Wired.

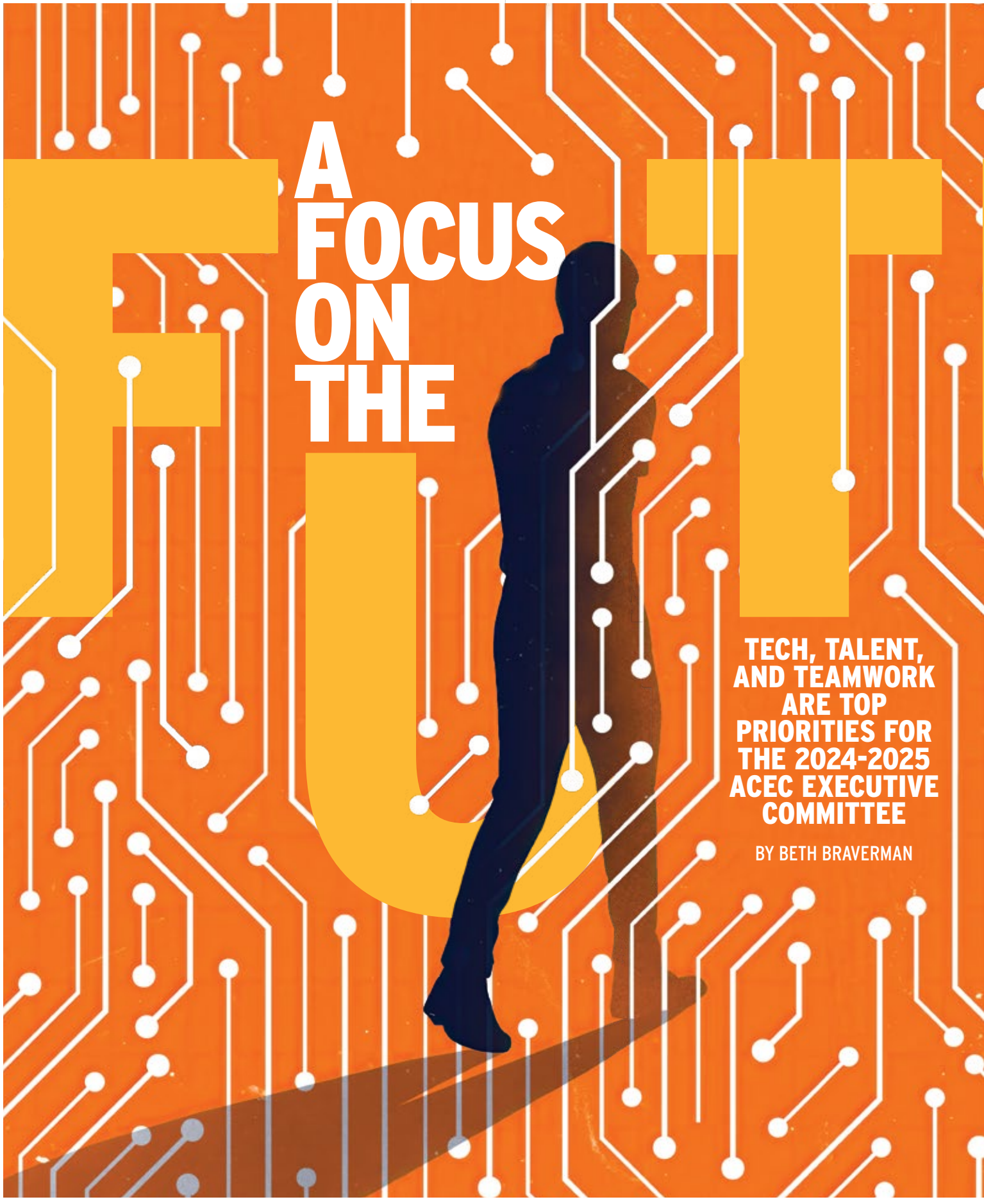
ACEC's Technology Committee is focused on tackling these and other emerging challenges. Join and get involved here: **www.acec.org/committee/technology-committee/**

Hallucinations
A response from an AI system that is misleading, incorrect, or patently false. These problems occur as a result of flawed training data or algorithmic limitations.

Large Language Model (LLM)
A type of AI specifically designed to understand and generate human language. Trained on vast amounts of content, it can summarize text, write code, and translate languages.

Machine Learning
These systems use algorithms to improve over time as additional data accumulates.

Natural Language Processing
A field of AI that focuses on enabling computers to understand, interpret, and generate human language, allowing for more natural and intuitive interaction between humans and machines.



A FOCUS ON THE FUTURE

TECH, TALENT, AND TEAMWORK ARE TOP PRIORITIES FOR THE 2024-2025 ACEC EXECUTIVE COMMITTEE

BY BETH BRAVERMAN

URE

Between an increase in federally funded infrastructure spending and growing optimism about the state of the economy, members of the 2024-2025 ACEC Executive Committee (ExCom) agree that the future is bright for the engineering industry.

"Most engineering firms are doing well right now, and that's because the funding is there," says **Vice Chair Dan Meckes,** a principal with CMT. "But that funding doesn't happen without our industry advocating for it. We know the benefits of that funding, whether it's safety or economic viability."

But such advocacy can be difficult in today's contentious political environment—especially during an election year. Political disruption from the 2024 presidential campaign is among the greatest concerns for engineers this year.

"The discourse between the two prominent parties is making it difficult for companies to plan long futures," says **Chair Dr. Gary W. Raba, PE,** chief growth officer at Raba Kistner. "We don't know which tax laws are going to be reinstituted or killed, and we don't know about public-sector funding, from education to transportation or wastewater."

Still, there have been some recent wins, but challenges remain. The Relief for American Families and Workers Act (H.R. 7024), bipartisan legislation that will provide a needed temporary fix to the 2022 legislation that required firms to amortize research and development expenses over five years, rather than deducting those expenses in the year they occur, was passed in the House but is now held up in the Senate. Without that fix, firms are paying higher taxes instead of expanding their workforce and investing in research and development in emerging technologies that help them stay competitive.

"Priority number one is getting that bill across the finish line through our advocacy efforts, both at a high level and at the grassroots level," says **Senior Vice Chair Derek L. Clyburn,** president at ECS Southeast, LLC. "It's bad policy that stifled growth and our industry's ability to continue to be able to provide innovative solutions to complex problems and allow people to live better lives."

While legislation has passed the House, it remains uncertain when the Senate will take up the issue.

KEEPING UP WITH TECH ADVANCES

Chair-Elect John Rathke, vice president and principal at Mead & Hunt, believes that as the world becomes more interconnected, advancements in technology will enable ExCom leaders to work more with the International Federation of Consulting Engineers, an association of over 1 million engineers in more than 100 countries, to find solutions to challenges like climate change and housing crises. Solutions must consider the rapid pace of technology advancement across all industries, including engineering.

ROB DOBI/GETTY IMAGES

WHAT DO YOU BELIEVE IS THE MOST IMPORTANT BUSINESS STRATEGY THAT MEMBER FIRMS NEED TO IMPLEMENT TO BETTER POSITION THEMSELVES FOR GROWTH?

"Make sure your company's vision is appropriate for what you want to try to achieve in a three-, five-, or seven-year horizon, and that you have a strategy to match that vision."

–Dr. Gary W. Raba, PE, chair

"Succession planning with their people, and diversification in both their services and their geography. If you want to grow, you have to look at geographic expansion as well as service-line expansion."

–John Rathke, chair-elect

"It's crucial that engineering firms really focus on market segmentation that's defined by what they have the capacity and expertise to do. In order to be successful and to grow, you have to be focused on diverse market segments."

–Derek L. Clyburn, senior vice chair

"Small firms have the opportunity to be hyper-local or hyper-niche to differentiate themselves from other firms."

–Jim Hoffman, vice chair

"The single most important thing a business can do to position themselves for success is focus on their staff: growth of current employees, recruitment of top talent, retention of existing talent, and a general focus on the well-being, success, and growth of the people in the company."

–Erica Jensen, vice chair

"We want to help put together tech strategies to make sure that we are able to protect the public and fulfill our mission, while being efficient and implementing technology that makes sense for our clients, our owners, and our communities," says **Vice Chair Sean McCone,** executive vice president and chief strategy officer at JMT.

The emphasis on technology will, not surprisingly, include a deep dive into the rapidly evolving field of artificial intelligence.

"AI is obviously having a big impact right now," Raba says. "We are all trying to figure out what it is and how we can use it to our benefit and to our client's benefit."

ACEC data shows that more than half of engineering firms already have an artificial intelligence strategy in place or are working on one, and 63 percent believe that AI will have a positive impact on their firm in the coming year.

Meanwhile, with funding flowing to communities and projects from the Infrastructure Investment and Jobs Act of 2021, the Inflation Reduction Act, and the Creating Helpful Incentives to Produce Semiconductors Act of 2022, engineers also have an opening to educate the public on the essentiality of the industry.

"There are great opportunities for a lot of work to be done on national, state, and local levels with some of these discretionary grants," says **NAECE President Adam Jones,** executive director of ACEC-SC. "And as some of these jobs finish up, we can celebrate what we've done."

That's been the goal of the Engineering and Public Works Roadshow, a joint partnership between ACEC, the American Public Works Association, and the American Society of Civil Engineers, which invites local news media and government leaders to events to shine a spotlight on what successful infrastructure investment means for the nation's economy, jobs, the environment, and our future. ExCom members assist staff in identifying potential projects around the country for the Roadshow and help promote the event in their area.

GROWING THE TALENT PIPELINE

In addition to increasing public awareness, the Roadshow aims to foster interest in engineering as an industry and potential career path for young people. Such efforts reflect a focus among this year's ExCom on helping member firms attract and retain enough talent to meet the increased demand for engineering work.

"We just can't hire enough people," says **Vice Chair Jim Hoffman,** president of Summer Consultants. "My firm could be 15 percent greater in size if we could find the people. There's not a firm that I know of out there that couldn't be doing more work if they had the talent available."

In the first quarter of 2024, more than half of ACEC member firms turned down work due to workforce shortages, a figure consistent with the previous year.

"Since we have such a huge workforce issue, I really have appreciated all the efforts ACEC is undertaking to address that from multiple sides, from recognizing the value of engineering, to getting out there and helping states and companies introduce it to younger elementary, middle, and high school students," says **Vice Chair Erica Jensen**, a senior project manager with DOWL.

ACEC's attention to the workforce goes beyond future engineers, however, to include development and retention efforts for

young engineers. For example, ACEC's Young Professional Forum runs sessions on leadership, workplace wellness, and communication, while its Business of Design Consulting is a three-day course to help engineers transition into effective managers.

"Sometimes when you've been with a company for a long time, you understandably forget what it's like to be a 20-year-old engineer right out of college," Jensen says. "We can listen to what they want, whether it's a career development pathway, flexible hours, or meaningful work."

Still, the tight labor market in engineering will likely persist in the near term, as a large portion of the existing workforce is approaching retirement age.

"The shift in the workforce will have a huge effect on engineering companies in coming years," says **Vice Chair Elizabeth Stolfus,** president of Stolfus & Associates, Inc. "We have to figure out how to map out what our companies need and what skillsets our individuals need to bring to the table in order to be successful. That's changing, as compared to historically."

BUILDING RESILIENCE

Looking ahead, members of the 2024-2025 ACEC Executive Committee agree that taking full advantage of the opportunities that arise from the recent funding influx will require dedication and support for the business of engineering at both the national and local levels.

"I'm looking forward to a new level of understanding and collaboration with the Member Organizations," says **Vice Chair Peter Moore,** president and CEO of Chen Moore and Associates. "I come from a very active MO, and I'd love to share some of the great things we've done with other Member Organizations."

That collaborative, proactive approach is what has made ACEC so successful in the past and will allow it to keep making progress on behalf of the business of engineering—no matter what the future might hold.

"ACEC is strong and better positioned than ever before," says **ACEC President and CEO Linda Bauer Darr**. "Members of the new 2024 Executive Committee possess business practice expertise that will help the Council capitalize on future opportunities while also helping to address firm and industry challenges, including workforce shortages and navigating advancements in technology."

"What ACEC is good at is navigating the changing landscape that's in front of it," says **Chair Emeritus Jay Wolverton,** executive vice president and chief growth officer at CHA Consulting. "Things are constantly changing, but we can shift and adjust and work with both sides of the aisle, especially with legislators that want to do things to make our industry better." ■

***Beth Braverman** is a business writer based in New York. She has written for* Newsweek, *CNN Business,* and *CNBC.com.*

"Being selective and having leverage in negotiations over the scope and the fee for projects that have never been done. I think we tend to sell ourselves short a little bit on that."

–Sean McCone, vice chair

"Build a culture that first and foremost takes care of its people and its clients. In a highly competitive marketplace, workforce culture is a powerful currency."

–Dan Meckes, vice chair

"Remembering that this isn't an engineering business; it's a people business. That's the most fundamental thing any engineering organization can do. Our assets walk out the door every day and go home."

–Peter Moore, vice chair

"Learning how to make our businesses and the things we do relevant for a new generation of engineers and, frankly, listening to what they have to say."

–Elizabeth Stolfus, vice chair

"Our industry needs to get better at talking about the great work we do. We are so modest, and we need to do a better job of promoting the essentiality of engineering and the things we do in order to get young people excited and to want to be part of our profession."

–Jay Wolverton, chair emeritus

"Fostering innovation is the most important business strategy for ACEC member firms to implement in order to be successful in today's business climate."

–Adam Jones, NAECE president

During the Workforce Summit, attendees break into groups for more in-depth discussions.

MEETING THE WORKFORCE CHALLENGE HEAD-ON

The Engineering and Public Works Workforce Summit addresses the industry's talent shortage

"No single thing created the workforce shortage, so no single thing can fix it."

That was the recurring theme throughout the inaugural Engineering and Public Works Workforce Summit, held in April at ACEC's Washington, D.C., headquarters. Part discovery process, part intensive brainstorming session, the Summit gathered nearly four dozen leaders from engineering and public works associations, academia, and government to share their impressions of what is causing the engineering talent shortage and to offer ideas to address it.

For two days, the group held a wide-ranging discussion on what the industry is doing to attract the next generation of engineers and, just as importantly, what we must do to retain and support our current workforce.

TACKLING THE TALENT GAP

To level set, the first day of the Summit was spent identifying the challenges. Both panelists and participants arrived at the same conclusions: the industry needs to be more intentional about attracting young people to engineering, and much of what is being done is being done too late.

The group accepted as a given that talent is everywhere but that access is not equal. That said, panelists and participants alike shared both hard and anecdotal data showing that efforts to bridge the gap in access can yield significant dividends.

That conclusion led to a larger discussion on the vital role of STEM education, scholarships, community colleges, and robust mentorship programs.

But the workforce challenge is not limited to the beginning of the pipeline, and no discussion of the worker shortage would be complete without touching on how to retain existing workers. The workforce shortage is forcing firms to do more work with fewer workers. This comes at a time when younger workers are ascending in their careers and expecting that respect for work-life balance will be a given.

FINDING THE RIGHT BALANCE

The work-life balance discussion led to a parallel discussion on remote work. A quick show of hands found that the majority of organizations represented at the Summit follow a hybrid model, with three days in the office and two days remote as the most common policy. That flexibility has become nonnegotiable for next-gen workers, but some attendees were concerned that it brings a cultural cost.

Even so, it cannot be stressed enough that work-life balance is one of the top—if not the top—priorities for younger workers. One attendee shared that of 20 potential interns who interviewed with her firm, 18 of them inquired about work-life balance. She went on to say that these young workers were for the most part not insisting on fully remote arrangements; most of them enjoyed the community and collaboration of an office setting. The ask, she said, is that working in the office not be mandatory every day.

The Summit adjourned with a commitment to not only continue collaboration but to formalize it through the creation of an Engineering Workforce Consortium by way of a Memorandum of Understanding. That blueprint will be delivered in the near future. ■

ACEC President and CEO Linda Bauer Darr moderates a panel discussion on defining the workforce challenge in the engineering and public works industries.

SHINING A LIGHT ON ENGINEERING INGENUITY

Highlights From 2024 National Engineers Week

ACEC member firms and state Member Organizations shined a spotlight on the vital role that engineers play in our society and on our quality of life during 2024 National Engineers Week (E-Week) in February. Our firms and state organizations helped to engage students in engineering and chart a course for a brighter future. See highlights of 2024 E-Week below.

ACEC STATE MEMBER ORGANIZATIONS

ACEC ALASKA ENGAGES STUDENTS TO KICK OFF ENGINEERS WEEK

As part of the critical workforce issues facing the entire industry and the efforts to engage more students in engineering, ACEC Alaska coordinated a partnership between the University of Alaska Anchorage and the local Anchorage School District to conduct three-part educational sessions in middle and high schools. Teachers requested the sessions, and local community engineers filled the slots by volunteering to help teach. Over 30 teachers requested the lessons, and the state organization filled all the requests.

An overview of civil engineering, structural engineering, bridge types, truss types, joints, compression, and tension comprised the first lesson. The second lesson focused on designing a bridge (drawn to scale on graph paper, elevation view, plan view, materials lists, weight estimate, etc.), and the third lesson involved constructing models of the bridges, which were in competition during E-Week.

Aaron Christie of DOWL Engineers guides students during the third lesson on construction.

ACEC/MS AIRS STATEWIDE RADIO SPOT; MEMBERS APPEAR WITH GOV. TATE REEVES FOR PROCLAMATION SIGNING

ACEC/MS member firms appeared with Governor Tate Reeves for the proclamation signing, which honored Mississippi's engineers during Engineers Week. The Member Organization also aired a statewide E-Week radio spot, which you can listen to here: https://bit.ly/3TTBQIC

Front row, left to right: ACEC/MS Executive Director Craig Carter; Gov. Tate Reeves; and Kyle Wallace, Shows, Dearman and Waits. Back row, left to right: Wayne Black, Garver; Darrell Martinek, ACEC/MS Board President, W. L. Burle Engineers; and Brian Deschamp, Eustis Engineering Services.

CHAT I/GETTY IMAGES

Astronaut Don Thomas, crew member of the All-Ohio Space Shuttle Mission, speaks at the 2024 Central Ohio Engineers Week Luncheon.

ACEC OHIO CELEBRATES WITH EVENTS IN COLUMBUS AND TOLEDO

ACEC Ohio honored the accomplishments of engineers during the 2024 Central Ohio Engineers Week. The engineering community came together at a luncheon to hear astronaut Don Thomas, who was a crew member of the All-Ohio Space Shuttle Mission. A veteran of four flights, Thomas has spent 44 days in space and orbited the Earth nearly 700 times. Now, Thomas is helping to inform and excite the public about our future in space and preparing our next generation of scientists, engineers, and explorers for their missions.

At the 2024 Toledo Area National Engineers Week, Northwest Ohio members celebrated the incredible achievements of its engineering community at a luncheon that featured keynote speaker Megan Bendtzen, who shared invaluable insights on infusing fun into the workplace.

Northwest Ohio members recognized the incredible achievements of their engineering community at the 2024 Toledo Area National Engineers Week Luncheon.

ACEC MEMBER FIRMS

OLSSON BRINGS ENGINEERING TO LIFE FOR STUDENTS

Olsson had a couple of different takes on celebrating Engineers Week this year. Olsson volunteers celebrated by bringing engineering to life for more than 2,600 elementary students across the country and by visiting about 90 classrooms to lead engaging, hands-on student activities such as making bubble blowers, building bridges, and creating earthquake-resistant structures. Learn more about Olsson's activities here: https://bit.ly/3Q2WMvE

The company also asked kids (since they are our future engineers) to draw what they think the world will look like in 50 or 100 years. The firm then compiled a YouTube video of their drawings and answers. Check out their incredible possibilities here: https://bit.ly/4aCjClV

Olsson volunteers visited classrooms and engaged students with hands-on activities.

WALTER P MOORE SHAPES A BETTER TOMORROW WHILE CELEBRATING ENGINEERS WEEK

Walter P Moore produced a carousel graphic reflecting on the firm's accomplishments while looking to the future:

> This year's theme "Welcome to the Future" is about celebrating today's achievements and paving the way for a brighter and more diverse future in engineering. We aimed to recognize our team as leaders in the industry, driven by a passion for excellence and a vision for the future. Through our Engineers Week material, we wanted to showcase our legacy of crafting visionary projects that transform landscapes, unite communities, and elevate experiences. Our team members not only understand the power that engineering has to shape the world around us but embrace the responsibility that comes with it.

The firm posted a kickoff message on its LinkedIn page along with the carousel graphic. Read it here: https://bit.ly/WPM-E-Week-LinkedIn

To view a PDF of the graphic, go to: https://bit.ly/3VTGA3l

Nearly 70 attendees participated in Ayres Associates' Career Expo, seeing firsthand the immense value of a professional consulting career.

Ayres Associates staff introduce students to various technical careers, including engineering, architecture, and surveying, at the Career Expo.

AYRES ASSOCIATES HOSTS CAREER EXPO

Ayres Associates hosted several events during Engineers Week to introduce students to engineering, and around 70 attendees saw firsthand the immense value of a professional consulting career.

The firm's Eau Claire, Wisconsin, office hosted its Career Expo event on February 19 to introduce students to the type of work involved in the fields of engineering, architecture, environmental science, surveying, and related technical careers. The evening program included bridge- and boat-building activities, technical demonstrations, refreshments, and a question-and-answer session.

Fort Collins, Colorado, staff and fifth graders from Johnson Elementary School all had fun celebrating Engineers Week by spending the afternoon making and launching paper rockets.

CRS ENGINEERING & SURVEYING ORGANIZES STAFF ACTIVITIES

To celebrate Engineers Week, CRS Engineering & Surveying organized engineering-focused staff activities in the company's three offices in Vernal, Logan, and Salt Lake City, Utah.

Staff had to build a boat that floats and could hold a certain number of pennies; staff conducted a soil-sampling activity, where fun treats were used (pudding, crackers, etc.) to understand the different parts of the soil that geotech engineers look at; and staff broke into teams to build bridges that would hold a Hot Wheels car.

The company also posted a video to its social media accounts, "Civil Engineers Are the Unknown Heroes of Our Communities," to highlight all the work engineers do and how that impacts the daily lives of community members. See the video here: https://bit.ly/3xvAXhL

CRS Engineering & Surveying staff work in teams to build bridges as part of the company's E-Week activities.

The engineering design process is a series of steps that engineers follow to solve a problem. Students were challenged to create the tallest tower out of toothpicks and gumdrops.

SAIN ASSOCIATES HOSTS GIRL DAY EVENTS

Sain Associates began hosting "Girl Day" at their office in 2015, and the event has expanded to include industry groups like the Society of Women Engineers and other organizations. This year's event was held at the McWane Science Center in downtown Birmingham, Alabama. It drew more than 200 students from local middle schools to participate in STEM activities, connect with engineering professionals, and watch the documentary *Cities of the Future* at the IMAX theater. ■

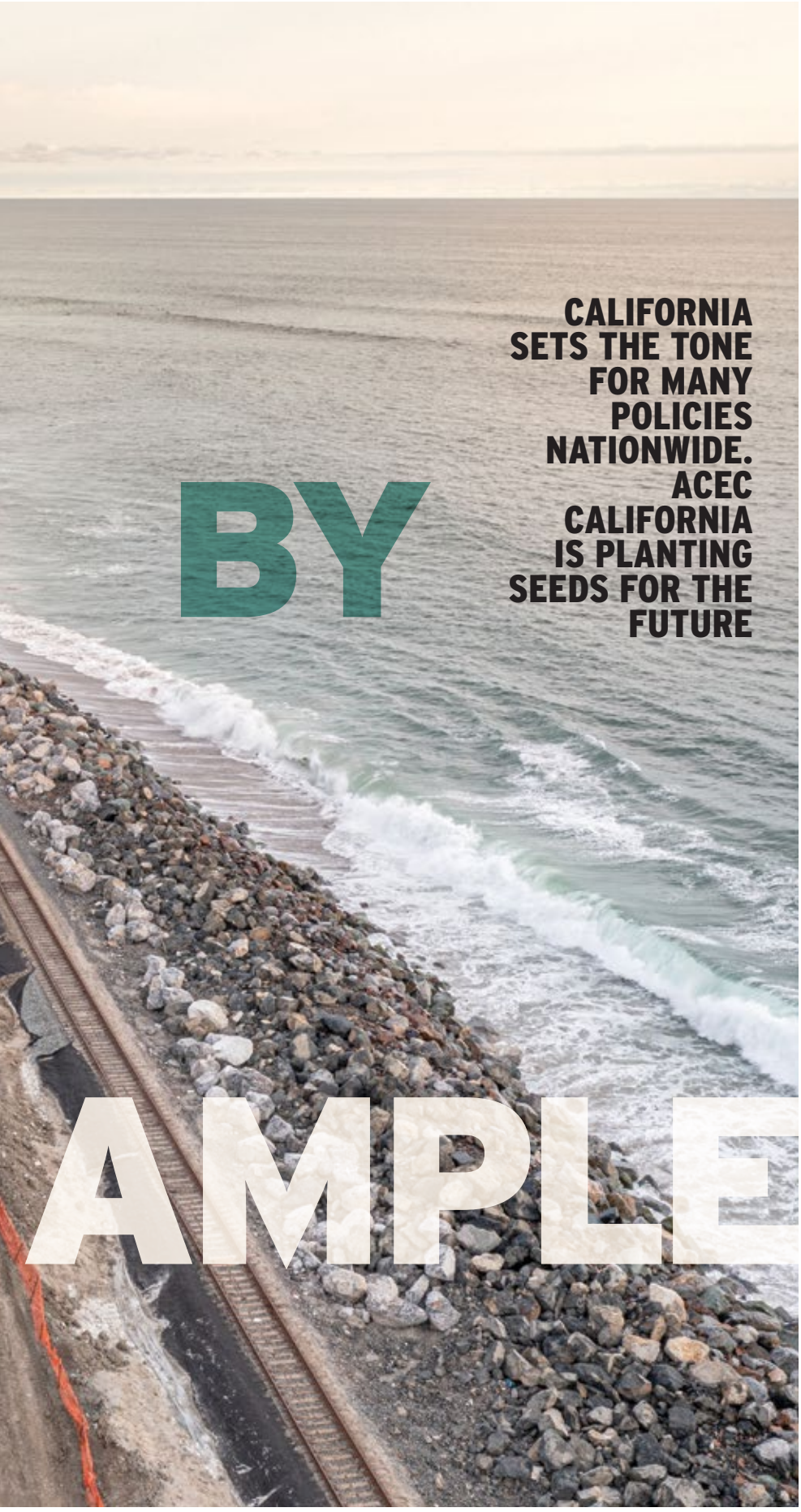
LEAD EX

The $21.7 million Cyprus Shores Emergency Stabilization Project in San Clemente, California, won an ACEC California 2024 EEA Honor Award.

ACEC CALIFORNIA AT A GLANCE

Since its start in the early 1950s, ACEC California has been dedicated to enhancing the consulting engineering and land surveying professions, protecting the general public, and promoting use of the private sector in growth and development in the state.

As one of ACEC's largest Member Organizations, it includes nearly 500 member firms representing 25,000 employees. Divided into 22 local chapters, ACEC California has a 55-member board of directors (elected by the chapters) and nearly 30 policy and programming committees.



BY EXAMPLE

CALIFORNIA SETS THE TONE FOR MANY POLICIES NATIONWIDE. ACEC CALIFORNIA IS PLANTING SEEDS FOR THE FUTURE

BY STACEY FREED

The common phrase, "As goes California, so goes the nation," continues to ring true. And it's one that ACEC California understands as this Member Organization fights legislative battles on behalf of its member firms.

"What starts in California often spreads," says Tyler Munzing, director of government affairs. "And it's not always something that benefits engineers."

But the Member Organization is dogged in its pursuit of legislative wins that benefit the nearly 25,000 full-time employees (which includes engineers and design professionals) of the member firms under its umbrella.

STOPPING SPILLOVER

Take California Assembly Bill 334, which came out of the state legislature in response to a 2015 court decision that held that an independent contractor working for a public agency might be considered a public official when it comes to conflicts of interest.

"For example, if you did the survey on a project, you couldn't work on the final design," explains Munzing. "The statute said one thing, the case law said something else, and everyone was confused. Public agencies became extremely risk averse and would simply just say no to follow-on contracts with engineering firms."

Between 2013 and 2019, a series of California-enacted legislation and court cases evolved into a conflict-of-interest problem for engineering and land surveying firms. In 2017, the ACEC California membership brought the problem to the attention of ACEC National, and a legislative effort to fix the problem began. ACEC California asked for and received an ACEC Minuteman Fund grant to assist with the cost of extra advocacy and attorney costs for this effort. That led to ACEC California sponsoring Assembly Bill 334, which was passed into law.

"It was about a six-year effort, but we were successful in 2023 with the support of the state's Fair Political Practices Commission. Now the statute is clearer in defining what activities and work that firms may perform to be in compliance so there's no conflict of interest," says Executive Director Brad Diede. "This is one example of inadvertently problematic regulations stemming from California that nobody wants to spill over to other states. Some California attorneys misinterpreted the law, and we didn't want it to be misinterpreted across the United States."

COLLABORATIVE CULTURE

Diede came to the organization 10 years ago after his post as executive director of the California Professional Association of Specialty Contractors (now the Housing Contractors of California). He was familiar with ACEC and had worked closely with lobbyists and coalitions with like-minded interests. That put him in a good position to direct ACEC California to fulfill its mission to advocate for its members.

Diede is a leader who works closely with his 11-person staff and contract lobbyists. In an organization with 55 board members, a six-member executive committee, and 22 chapters, he has to be hands-on.

"Getting involved with a professional organization should be part of everyone's career plan."

GENE BOUGDANOS
IMMEDIATE PAST PRESIDENT
ACEC CALIFORNIA
VICE PRESIDENT AND LOS ANGELES AREA PROGRAM MANAGER, HDR

"This is one example of inadvertently problematic regulations stemming from California that nobody wants to spill over to other states. Some California attorneys misinterpreted the law, and we didn't want it to be misinterpreted across the United States."

BRAD DIEDE
EXECUTIVE DIRECTOR
ACEC CALIFORNIA

"Your net worth is your network. For us in professional services, it's all about relationships."

KURT YOSHII
IMMEDIATE PAST NATIONAL DIRECTOR
ACEC CALIFORNIA
PRINCIPAL ENGINEER
NINYO & MOORE GEOTECHNICAL & ENVIRONMENTAL SCIENCES CONSULTANTS

"If there's a program or event that we know will be a big lift, it's all hands on deck. Everybody is willing to pitch in and help out. We're extremely team-oriented and open-door," Munzing says.

ACEC California collaborates with numerous coalition partners, aligning with groups on business issues, water infrastructure, and transportation issues. It has liaison committees with large public agencies such as the Department of Water Resources and the State Water Resources Control Board, and one with the California High-Speed Rail Authority. The Member Organization also has a well-established relationship with the California Department of Transportation (Caltrans).

"We have a well-established working relationship with Caltrans, thanks largely to the collaborative efforts of that committee," says Policy Outreach Director Jennifer Horne. "The committee meets with Caltrans staff every other month. It's a unique opportunity, and we appreciate that."

ACEC California recently worked with the agency to address rising costs. "Caltrans recognized the impacts of inflation and updated its rate escalation policy, which now includes an annual review of relevant labor indexes," Horne says.

The collaborative culture filters through the entire Member Organization. There are 26 committees, and "they are in high demand," Diede says. "We'll be adding more in the near future.

HNTB's Sixth Street Viaduct in Los Angeles won the ACEC 2023 EEA Grand Conceptor Award.

Walter P Moore's Acrisure Arena is an ACEC 2024 EEA National Recognition Award winner.

There are already people itching to get on those committees."

Jane Rozga, an ACEC California past president and legislative review chair and business group leader at GHD, says, "Engagement is why we're here. We're effective at the state level largely because of the grassroots efforts of members working with elected officials."

FUTURE FORWARD

Any good organization stands on the shoulders of the members it works for. Immediate Past ACEC California National Director Kurt Yoshii, principal engineer at Ninyo & Moore Geotechnical & Environmental Sciences Consultants, says a quote he once heard has stuck with him: "Your net worth is your network," he says. "For us in professional services, it's all about relationships."

Members have access to each other through committees, networking events, and yearly conferences. Gene Bougdanos, vice president and Los Angeles area program manager at HDR, says a mentor introduced him to ACEC 25 years ago. He's immediate past president of the Member Organization. "Membership helped open my eyes to people in the industry beyond the firm I work with. The networking and contacts have been invaluable. Getting involved with a professional organization should be part of everyone's career plan."

That sentiment drives the organization's dedication to bringing more people into the profession. The California Engineering Excellence Awards (EEA) program showcases some of the best engineering and land surveying projects across the state, and the national program does the same nationwide. Seven years ago, ACEC California changed the state EEA program to be a fundraiser for the ACEC California Scholarship Foundation. Member firms first participate in the state-level awards, and winners can move on to the ACEC National annual competition.

"We needed to grow our EEA program, so we turned it into a fundraiser for our scholarship foundation to encourage more participation," Diede says. "We've grown steadily since making the change. In 2023, we raised over $50,000 just from that event for student scholarships. Which is important because there are not enough engineers and land surveyors in the world to accomplish all the work that our society needs."

At the February 2024 EEA event, ACEC California had about 45 contestants and 15 Honor Award winners who were eligible for an ACEC National award. "Since the early 2000s, ACEC California has awarded about $750,000 total in scholarships," Diede says.

Getting more people interested in the engineering profession is imperative. Through the Infrastructure Investment and Jobs Act, California will receive an estimated $41.9 billion in funds between fiscal years 2022 and 2026. At the same time, the state, like most in the nation, is struggling to find enough engineers. "Many students who go into STEM careers end up going into high-tech jobs or work for Google or Amazon instead of civil engineering," Bougdanos says.

The Member Organization is working with Caltrans and other major agencies to reach out to high schools and underserved communities to encourage and explain the benefits of careers in engineering. "We give presentations and stress career opportunities, the projects we do, the public service aspects, and the benefits of giving back to the community," Bougdanos says.

Yoshii recognizes the importance of reaching students even earlier. "We need to get to students at the elementary school level," he says. "It's almost like sports. In today's society, if you don't start playing a sport while in elementary school, it can be very difficult to be competitive in high school. We have to take that model and run with it."

Yoshii is positive about the future, though. "I have a feeling that if we start investing in infrastructure and building these big projects again, we'll attract people back to civil engineering." ■

Stacey Freed *is a writer based in Pittsford, New York, who has contributed to* The New York Times, AARP.org, Professional Builder, *and* USA Today.

"Engagement is why we're here. We're effective at the state level largely because of the grassroots efforts of members working with elected officials."

JANE ROZGA
IMMEDIATE PAST LEGISLATIVE REVIEW CHAIR AND PAST PRESIDENT
ACEC CALIFORNIA
BUSINESS GROUP LEADER, GHD

"What starts in California often spreads. And it's not always something that benefits engineers."

TYLER MUNZING
DIRECTOR OF GOVERNMENT AFFAIRS
ACEC CALIFORNIA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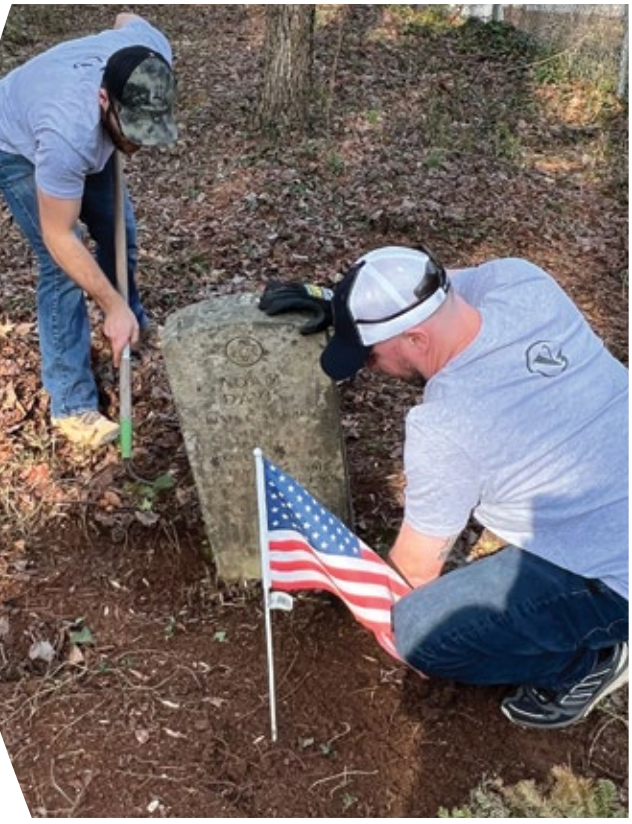
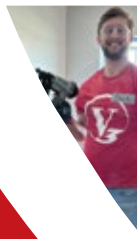




V3's Vision of Volunteerism

The firm and its employees are passionate about making an impact and building lasting relationships

BY MICHELE MEYER

"Visio, vertere, virtute." That Latin phrase means "the vision to transform with excellence," and it's what inspired V3 Companies' name.

"That's who we are," says Greg Wolterstorff, vice president of innovation and process, who has been with the firm for 27 years. "It addresses how we approach not only our work but also our volunteerism and community impact."

Case in point: The Conservation Foundation's annual volunteer day. Forty employees from V3, the Chicago-headquartered ACEC member firm, got right to work. The team unloaded pickup trucks filled with brush cutters, chainsaws, hard hats, safety goggles, and vests to help clear invasive brush and trees from sensitive habitat areas.

"V3 goes far beyond other volunteers," says Renae Frigo, land stewardship manager at The Conservation Foundation, a nonprofit land trust in Naperville, Illinois. "What they did for us would have cost us thousands if we'd hired someone."

The Conservation Foundation respects V3's volunteerism efforts so much that it reserves the most challenging projects for them—an approach also taken by other recipients of the firm's altruism.

V3's verve for volunteering is modeled on the company's mission statement: to deliver excellence while focusing on principles and people over short-term profits. That guiding philosophy has paid off. Even as the firm has swelled over 41 years from two to 400 workers and added regional offices and services, its core values have stayed consistent.

In 1997, Site Development and Infrastructure (SDI) founder Rob Petroelje renamed his firm V3 after "visio, vertere, virtute," meaning "the vision to transform with excellence." He was inspired after getting these Latin words and translation from a local high school teacher.

FUELED BY EMPLOYEES

Lou Gallucci, president and CEO of V3, led the drive in 2015 to formalize the firm's V3 Social Responsibility (VSR) program "so we could coordinate our efforts with greater effect."

V3 then chose five partners to volunteer with: The Conservation Foundation, the ACE Mentor Program, Centennial Volunteers, Engineers Without Borders USA, and DuPage Habitat for Humanity.

Since then, the list has more than doubled. Most of the nonprofits are linked to the environment, including Veterans Bridge Home, Licking County River Round Up, Friends of the White River, and the Parks Alliance of Indianapolis. Other opportunities involve clothing and food drives.

"Leadership may have started it, but employees fuel it."

LOU GALLUCCI
PRESIDENT AND CEO, V3

"We approach philanthropy as we do our job—transform with excellence."

GREG WOLTERSTORFF
VICE PRESIDENT OF INNOVATION AND PROCESS, V3

The program is built on volunteer time off, and about 30 percent of employees participate. "Leadership may have started it, but employees fuel it," Gallucci says.

Each full-time staffer receives eight hours of paid volunteer time off yearly, and each part-timer gets four hours. Extra hours are allowed for some projects, including those out of the country.

On an Engineers Without Borders team, Gallucci went to Honduras four times to help build a potable water system for an economically disadvantaged community.

Leadership works in the trenches with other employees. "We work shoulder to shoulder under the direction of young staff members," Gallucci says. "There's role reversal when it comes to volunteering."

An 18-member committee chaired by Katie LaSalle, V3's communications specialist, meets quarterly to discuss goals, events, and ways to entice participants. Activities are promoted on the firm's website and internally by a V3 liaison who consults nonprofit partners about their needs.

In 2023, major initiatives involved removing tires, toxin-filled drums, and even mattresses from rivers in Indianapolis and

4 Ways to Build Better Volunteerism

1 LEAD THE WAY.
"Leadership must be passionate about it and support it," says V3's Katie LaSalle. "If passion is there, it will be successful."

2 USE YOUR TALENTS.
Seek volunteer opportunities that encourage team building, offer training opportunities, and align with who you are as an organization and with your workers' skill sets.

3 ENCOURAGE MORE ENGAGEMENT.
"Once employees participate in an event, they tend to keep coming back," says V3's Greg Wolterstorff.

4 STICK WITH YOUR PARTNERS.
"You build relationships and deliver more service if you continue to represent the same ones," Wolterstorff says.

Columbus, Ohio. Additionally, V3 teams cleared invasive species that were threatening a nature preserve in Charlotte, North Carolina, and Belrose Farm in the Chicago area.

Last year, V3 donated $28,969 in labor, in the form of 690 hours of paid volunteer time. Another $11,500 was budgeted for donations, materials, supplies, and meals, "and anything that has to do with events, but not hours and wages," LaSalle says.

While V3 does donate dollars, "we believe our main contribution is the time we dedicate," she adds.

ABOVE AND BEYOND

The culture of putting in extra effort comes from the top. "Rob was raised on a farm with servant leadership and a philanthropic heart," Wolterstorff says. "We approach philanthropy as we do our job—transform with excellence."

V3 has proven its long-term dedication to the communities it serves, says Linda Nicodemus, stormwater manager at Licking County Soil & Water Conservation Management and formerly an employee of the Village of Hebron in Ohio, where V3 has helped to manage flood control. "That's why they've been Hebron's go-to for more than 30 years," she adds.

"We assign them the most challenging sections, because if it can come out, they'll get it out—including a waterlogged couch, shopping carts, and tractor tires," Nicodemus says. "Other volunteers use buckets. V3 uses teamwork."

But the firm's generosity extends beyond such tasks.

Since Nicodemus' role involves stormwater, Stephen Kopechek, a project manager at V3, "would clarify or explain any changes to the regulations—at no charge," she says. And engineers also showed up at city council meetings, unasked, to explain her needs.

Similarly, Scott Salmon, executive director of Friends of the White River, benefits from V3's thoroughness. When the nonprofit needs to justify project costs, such as restoring an eroded stream bank, "other engineering firms usually give one page of what's feasible," he says. "But V3's quotes tend to be seven pages, including two pages of invaluable visuals."

"They send a sizable contingent—and are in the mud with us."

SCOTT SALMON
EXECUTIVE DIRECTOR
FRIENDS OF THE WHITE RIVER

Then, at twice yearly cleanups of illegal dumping sites, "They send a sizable contingent—and are in the mud with us," Salmon says.

V3 also has adopted a three-mile stretch of the DuPage River near Chicago, with eight to 15 volunteers showing up in waders—and meaning business.

"It's incredibly important to remove metal, plastic, and other trash from the river and its banks," says Wolterstorff. "Garbage degrades water quality and can trap animals. We pull 400 to 1,000 pounds of junk each time."

A LASTING CONNECTION

Volunteers often build long-term relationships with the groups they aid. Each organization works with the same V3 liaison year after year, developing a deeper bond.

The Conservation Foundation's V3 liaison is Keith Jones, a senior project manager and ecologist at the firm. Frigo marvels at his efficiency, which spares her staff extra work and worry. "It's amazing how much gets done in one day."

And his enthusiasm is infectious. Jones is "lighthearted and makes it fun," she adds. "He often grills lunch over a fire of the brush pile we've created."

In addition to cultivating a passion for the organizations it helps, the VSR program fosters a sense of unity among team members who may otherwise never have the chance to meet or collaborate.

"It's not just about the volunteer work. It's about bonding and gaining new respect for those with different talents, all while having fun," Wolterstorff says. ■

Michele Meyer *is a management and marketing writer based in Houston. She has written for* Forbes, Entrepreneur, *and the International Association of Business Communicators.*

"V3 goes far beyond other volunteers. What they did for us would have cost us thousands if we'd hired someone."

RENAE FRIGO
LAND STEWARDSHIP MANAGER
THE CONSERVATION FOUNDATION

M&A Boom Rolls on in 2024

BY NICK BELITZ

Despite the nonstop parade of disruptors that have occurred in the last several years, U.S. engineering, architecture, and environmental consulting firms are as financially healthy as they have ever been. Revenues and profits are up. Backlogs are robust. Valuations are at historic highs. ACEC firm leaders have taken that rosy picture and used it to drive deal-making of all sorts. And indications are that there is even more growth on the horizon—particularly for firms working in the transportation, water/wastewater, and power markets.

Flush balance sheets have sparked a period of unprecedented consolidation that shows no signs of abating. Annual mergers and acquisitions (M&A) activity in the A/E and environmental industry have more than tripled since 2010—with the last three years bringing an even more dramatic acceleration of deal-making.

Sharp interest rate hikes and widespread predictions of a recession caused a slight decrease in A/E and environmental industry M&A activity in 2023. Still, the 437 deals tracked by Morrissey Goodale last year marked the third-highest count on record, trailing only the all-time high of 483 deals in 2022 and 444 transactions in 2021.

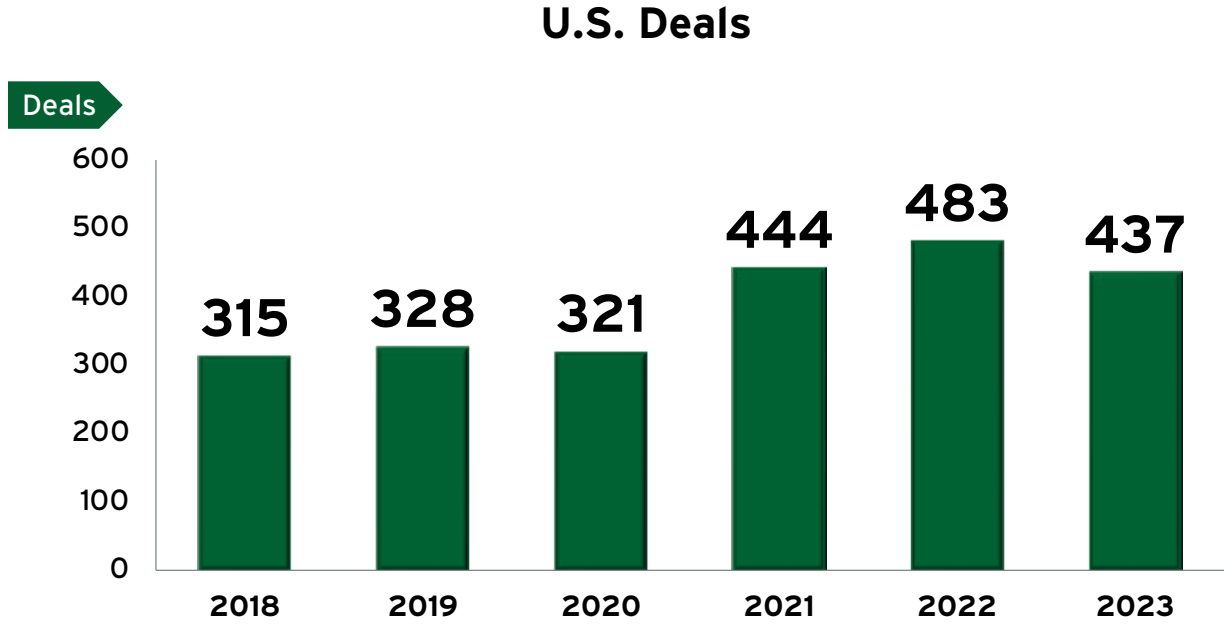
Employee-owned buyers accounted for the largest share of deals in 2023—53 percent of all domestic acquisitions—followed by private equity-backed buyers at 39 percent and publicly traded buyers at 8 percent. The median acquirer reported revenue of $96 million, while the median seller reported revenue of $3 million. Florida, Texas, and California witnessed the most consolidation, in line with trends observed over the past few years.

Initial indications are that 2024 will be another near-record year for A/E and environmental industry deal-making. Morrissey Goodale forecasts an uptick in M&A activity this year to 450 transactions. Undeterred by geopolitical conflicts abroad and political uncertainty at home as the U.S. presidential election approaches, decision-makers remain extremely bullish. Eighty percent of the attendees at Morrissey Goodale's Southeast M&A and Business Symposium in March were optimistic about business conditions in 2024, and most intended to continue with their level of planned M&A activities.

Even the darkest cloud hovering over the engineering industry—the talent crunch—carries with it a silver lining for deal-making. As engineering firms struggle to staff all the projects coming through their doors, they are responding not just by investing more in people and technology but also in acquisitions to quickly boost head counts.

The pressure to realize these staffing benefits as quickly as possible has contributed to compressed deal timelines. While the time from Letter of Intent to close averaged between 60 days and 90 days only two years ago, buyers are now often seeking to close in as little as half that time.

Private equity firms continued to make sizable investments in the engineering industry in the first quarter of 2024. Global alternative investment firm H.I.G. Capital (Miami) acquired **CHA** (Albany, N.Y.), and private equity firm CIVC Partners (Chicago) invested in **HR Green** (Cedar Rapids, Iowa). After Blackstone (New York City) announced a minority growth investment in **Salas O'Brien** (Irvine, Calif.), the engineering firm welcomed I.C. Thomasson (Nashville, Tenn.) to the company, as well as made acquisitions in Alabama and Wisconsin.



Other ACEC member firms that were particularly active in the first quarter of 2024 included **LJA Engineering** (Houston) and **IMEG** (Rock Island, Ill.), which each made four acquisitions, and **Verdantas** (Dublin, Ohio), which closed three transactions. **Bowman Consulting Group** (Reston, Va.), recipient of Morrissey Goodale's Most Prolific and Proficient Acquirer Award at this year's Southeast M&A and Business Symposium, continued its deal-making streak with a pair of purchases. Other *Engineering News-Record (ENR)* Top 500 member firms that made multiple acquisitions in the first quarter of 2024 included **Atwell** (Southfield, Mich.), **Gannett Fleming** (Camp Hill, Pa.), **Pape-Dawson Engineers** (San Antonio, Texas), **Woolpert** (Dayton, Ohio), **DLR Group** (Omaha, Neb.), **NV5** (Hollywood, Fla.), **DCCM** (Houston), **Pennoni** (Philadelphia), and **SAM Companies** (Austin, Texas).

With government funding and incentives focused on infrastructure, A/E and environmental consulting firms with proven records in the water/wastewater, transportation, and power markets continue to draw the most interest from industry buyers and investors. Firms serving the water/wastewater market accounted for 27 percent of all sales in 2023, while those providing services to the transportation and power markets represented 25 percent and 15 percent of selling firms, respectively. Firms operating in these sectors are well-positioned to negotiate favorable terms in potential acquisitions, capitalizing on the increasing market demand and governmental support for infrastructure and energy-transition projects.

Following is a list of recent transactions, with ACEC member firms highlighted in **bold**.

MARCH 2024

Apex Companies (Rockville, Md.) acquired **PBS Engineering and Environmental** (Portland, Ore.) (*ENR* #360) a regional leader in environmental consulting and engineering services across infrastructure, private, public, education, and industrial markets.

HCS Engineering (Decatur, Ala.), a multidisciplined engineering and design firm serving industrial customers, joined **Salas O'Brien** (Irvine, Calif.) (*ENR* #54).

Prominent Texas water and transportation engineering firm DEC (Houston) (*ENR* #350) joined fast-growing industry leader **Gannett Fleming** (Camp Hill, Pa.).

RaganSmith (Nashville, Tenn.), a civil engineering, surveying, land planning, landscape architecture, transportation, and environmental services firm, joined **Pape-Dawson Engineers** (San Antonio, Texas) (*ENR* #112), a civil engineering, environmental, and surveying services firm.

Langan Engineering & Environmental Services (Parsippany, N.J.) (*ENR* #46), an environmental and engineering consulting firm, acquired JPH Land Surveying (Hurst, Texas), Langan's second acquisition in Texas.

Technology, conformity assessment, and consulting solutions firm **NV5** (Hollywood, Fla.) (*ENR* #22), acquired **Fluhrer Reed** (Raleigh, N.C.), a firm that provides structural engineering and forensics engineering services.

Green Companies (Cedar Rapids, Iowa), the parent company of the **HR Green** (Cedar Rapids, Iowa) (*ENR* #168) family of engineering firms, acquired **Y.S. Mantri and Associates** (Tempe, Ariz.), a traffic, transportation, and telecommunications engineering firm.

To view the most up-to-date and "live" versions of the M&A heat maps, and to see who are the buyers and sellers in each state, go to www.morrisseygoodale.com.

Nick Belitz is a principal with Morrissey Goodale LLC, a specialized, full-service management consulting and research services firm that offers strategic business planning, leadership training and development, mergers and acquisitions advisory, valuation and ownership transition, market research, and marketing and business development consulting services. He can be reached at **nbelitz@morrisseygoodale.com**.

I.C. Thomasson Associates (Nashville, Tenn.) (*ENR* #265), a multidisciplinary firm providing expertise in mechanical, electrical, controls, plumbing, fire protection, information technology, energy efficiency, and environmental services, joined facilities planning and design firm **Salas O'Brien** (Irvine, Calif.) (*ENR* #54).

Full-service engineering consulting firm **CHA** (Albany, N.Y.) (*ENR* #69) acquired D'Huy Engineering (Bethlehem, Pa.), an engineering and project management firm serving educational, municipal, commercial, and industrial clients.

GdB Geospatial (Melville, N.Y.), a geomatics, geographic information system, and spatial data management firm, joined geospatial and inspection solutions firm **SAM Companies** (Austin, Texas) (*ENR* #88).

The HFW Companies (St. Louis) (*ENR* #281), an expanding professional services firm in the A/E industry, entered into a new strategic growth partnership with civil engineering and surveying firm **Kuo & Associates** (Houston). This is the eighth A/E firm to join HFW's national network of partner firms.

Verdantas (Dublin, Ohio) (*ENR* #149) acquired Lewandowski Engineers (Toledo, Ohio), a surveying, site civil engineering, and municipal services firm.

Employee-owned firm **LJA Engineering** (Houston) (*ENR* #64) expanded its transportation group through the addition of Lonestar Program Controls Group (New Braunfels, Texas), a firm that offers program controls, construction engineering, and contract management services.

Insight Group (North Charleston, S.C.), a geotechnical, environmental, and construction materials engineering consulting firm, joined industry leader RMA Companies (Rancho Cucamonga, Calif.) (*ENR* #146), a materials testing, inspection, certification, environmental, and geotechnical consulting firm.

TF Bernier (Concord, N.H.), a surveying and consulting firm providing environmental permitting, stormwater design, and drone capabilities, joined civil engineering firm **Hoyle Tanner** (Manchester, N.H.).

In its second deal of the week, **LJA Engineering** (Houston) (ENR #64) strengthened its presence in South Carolina with the addition of Freeland & Kauffman (Greenville, S.C.), a site development, civil engineering, and landscape architecture services firm. ■

On the Move

Montreal-based **WSP Global** named **Joe Sczurko** the firm's U.S. president and **Chris Peters** as the U.S. COO. Sczurko, who joined WSP in 2022 and most recently led the firm's Earth and Environment business in the U.S., is based in Portland, Maine. Peters, who joined WSP in 2017 and most recently served as West region president, is based in Irvine, California.

In other WSP news, **Nigel Astell** joined the firm as senior vice president, intercity rail and strategy leader. Astell previously served as a vice president for transportation project management and business development at Parsons. He is based in Washington, D.C. **Shawn Wilson** has joined the firm as the national agency coordination leader for transportation and infrastructure. Wilson, based in Baton Rouge, La., will identify strategic growth opportunities, and support communication efforts with U.S. state and federal governments.

Dylan Lambermont has been named president of Indianapolis-based **Wessler Engineering**, succeeding former president **Brent Siebenthal**. Lambermont most recently served as executive vice president and co-chaired the company's strategic planning initiative.

Matt Jensen has been named president and CEO of Minneapolis-based **Dunham Associates**, succeeding former president and CEO **Jay Rohkohl**, who is returning to his previous position as executive vice president. Rohkohl took over as president and CEO in 2011. Jensen joined Dunham in 2006 as a mechanical engineer. Prior to joining Dunham, he spent 11 years with other Minnesota engineering firms.

Houston-based **Walter P Moore** announced the following senior-level promotions: **Kelly Roberts** has been named managing director of the Atlanta structural engineering team and heads the firm's Sustainable Design Community of Practice. **Doug Robinson** will serve as principal-in-charge on select projects for the Atlanta team. **Ashpica Chhabra** was promoted to managing director of the structural engineering team in the New York City office. Her portfolio of projects spans the aviation, civic, federal, and tall buildings sectors. **Peter White** was named managing director for the diagnostics group in the Charlotte, North Carolina, office. As a principal, he brings 20 years of experience in all aspects of diagnostics engineering to his new role. **Henry Yau** has been named managing director of the Panama structural engineering team and has worked on high-profile, complex structural projects in Panama and the United States. **Brent Bolerjack** has been promoted to managing director of the Oklahoma civil engineering team and will oversee the strategic growth and operations in the firm's Oklahoma City and Tulsa offices.


Joe Sczurko


Chris Peters


Nigel Astell


Shawn Wilson


Dylan Lambermont


Matt Jensen


Kelly Roberts


Doug Robinson


Ashpica Chhabra


Peter White


Henry Yau


Brent Bolerjack

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ACEC Arizona
Moffatt & Nichol
Phoenix

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D R Consultants & Designers, Inc.
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West Yost Associates
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ACEC Colorado
Agro Engineering, Inc.
Alamosa
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Edwards
Bolton & Menk, Inc.
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Lakewood
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Littleton
JR Engineering
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MES - Mining
Montrose
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West Palm Beach
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Priority Engineering
Land O' Lakes
Structural Forensic Experts
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Tectonic Engineering Consultants, Geologists & Land Surveyors, D.P.C.
Brandon

ACEC Georgia
Southeastern Engineering, Inc.
Marietta
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Hinesville

ACECHawaii
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Honolulu

ACEC Illinois
Chamlin & Associates
Peru
Giffin Engineering
Henry
Illinois Construction & Environmental Consulting, Inc.
Wheeling
InNova Consulting, Inc.
Lincolnwood
Sheppard, Morgan & Schwaab, Inc.
Alton

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Apex Consulting and Surveying, Inc.
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Ayres Associates
Burlington
Thomas & Hutton
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ACEC Ohio
Ohio Valley Environmental Engineering, Inc. dba Ohio Valley
Loveland
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Columbus

ACEC OKLAHOMA
360 Engineering Group, PLLC
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Tampa, Florida
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For further information on national affiliate members, go to: https://bit.ly/ACEC-Natl-Affiliate-Members or contact Erin Wander at 440-281-0464 or ewander@acec.org.

AUGUST 2024

27 State of the Engineering Economy 2024 Q3 (online class)

SEPTEMBER

17 Recruiting the Workforce and Leaders of the Future (online class)

18 Digital Transformation: Unlocking Big Value With Big Data (online class)

22-24 ACEC Annual Forums, Denver

26 Building Documentation Demystified: Ensuring Efficiency, Accuracy, and Communication Throughout the Building Lifecycle (online class)

26-Dec. 12 The Essentials of Risk Management for Consulting Engineers (online course)

OCTOBER

1-Nov. 19 Business of Design Consulting (online course)

8 Retaining the Workforce and Leaders of the Future (online class)

20-23 ACEC Fall Conference, New Orleans

29 Ownership Transition Plan That Attracts Newer Generations (online class)

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

Connect With Your Peers

ACEC COALITIONS

ACEC Coalitions are specialized groups within ACEC that bring together member firms based on firm size, common interests, expertise, or focus areas. They are organized into collaborative communities to address specific industry challenges, share best practices, and advocate for shared interests on a national scale.

GEOPROFESSIONALS

Coalition of Geoprofessionals (GEO)

- Join **education** sessions tailored specifically to geoprofessionals, including online courses and in-person sessions led by industry-leading experts and thought leaders. These opportunities allow geoprofessionals to stay updated on the latest trends, technologies, and business practices in the field.
- Attend geoprofessional **events** at ACEC conferences, like specialized workshops, panel discussions, and technical sessions focused on addressing key challenges and emerging trends in the geoprofessional industry. These events offer attendees practical insights and solutions to enhance their practices.
- Get **advocacy** support and learn how your firm can actively engage with government agencies, lawmakers, and regulatory bodies to influence decision-making processes and shape legislation affecting the geoprofessional sector. This ensures that members' voices are heard and their concerns are addressed.

SMALL FIRMS

Small Firm Coalition (SFC)

- Join **education** sessions tailored to address challenges specific to small engineering firms, including topics covering business management, project delivery, risk mitigation, and industry trends.
- Attend SFC-sponsored **events** at ACEC conferences including roundtable discussions, and networking opportunities designed for small firms to connect, share experiences, and collaborate on solutions.
- Get **advocacy** support at the federal level on initiatives such as the R&D tax credit, infrastructure investment and funding, and ongoing discussions about regulatory reforms that affect small business owners. ■

Find the Right Coalition for Your Firm

Scan the code to learn more about our distinct coalition groups organized by practice area or firm size.

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