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“Transportation Builder” (TB) is the official publication of the American Road & Transportation Builders Association (ARTBA).
We bring together all facets of the transportation construction industry to responsibly advocate for infrastructure investment and policy that meet the nation’s need for safe and efficient travel. ARTBA also offers value-added programs and services providing its members with a competitive edge. TB is the primary source of business, legislative, regulatory, safety and economic news that matters most to transportation development professionals.

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We bring together all facets of the transportation construction industry to responsibly advocate for infrastructure investment and policy that meet the nation’s need for safe and efficient travel. ARTBA also offers value-added programs and services providing its members with a competitive edge. TB is the primary source of business, legislative, regulatory, safety and economic news that matters most to transportation development professionals.
What’s in a Name?

U.S. Public Law No: 117-58, signed by President Joe Biden on Nov. 15, 2021, is formally called the Infrastructure Investment and Jobs Act, or IIJA.

The acronym lacks the real-word zip of its predecessor surface transportation reauthorization, the FAST Act, which stood for Fixing America’s Surface Transportation.

IIJA just doesn’t roll off the tongue like FAST Act, even if its record investment will help Americans roll down the road and ride the rails faster and safer.

Perhaps to address this, many refer to the IIJA as the Bipartisan Infrastructure Law.

Some lawmakers, transportation agencies, and publications have even attached the acronym BIL, which reads like “bill” ... even though it’s a “law.”

Cue the Schoolhouse Rock song, which concludes: “He signed the bill, now you’re a law.”

Infrastructure Investment and Jobs Act is longer than Bipartisan Infrastructure Law, but the former is more descriptive than the latter in the benefits that matter most: transportation investment and jobs, which in turn, means increased economic growth.

Sure, support for the law from Democrats and Republicans conferred good governance in these days of bitter politics. We suspect that’s why the White House and others use the Bipartisan Infrastructure Law formulation. It remains to be seen whether the law will be fully implemented in the bipartisan manner intended by Congress.

Transportation Builder and ARTBA’s other communications prefer the Infrastructure Investment and Jobs Act name and IIJA acronym.

What’s important, in the language of ARTBA’s vision statement, is building the projects that create a “dynamic transportation network that enriches American life.”

Now that Congress has finally wrapped up the overdue FY 2022 appropriations process, it’s time to put the year-one IIJA investments to work.
CHAIRMAN'S CORNER
WARD NYE | Chairman & CEO, Martin Marietta

Telling the Infrastructure Success Story

The transportation design and construction industry has an exceptional story to tell. We need to tell it—in both a compelling and relentless manner. And while the reauthorization of the Infrastructure Investment and Jobs Act (IIJA) is not required until 2026, for us to build the type of bipartisan support that carried the IIJA, we need to act intentionally and purposefully. Now.

Imagine it’s 2026 and members of Congress are sitting down to cast their votes on the next surface transportation reauthorization having heard the success stories and being familiar with the characters. Under that circumstance, each delegate, armed with a full understanding of the IIJA’s generational impact, sits down and votes on the facts. If that happens, America wins—and so does our industry.

Sharing success stories is a multi-year commitment that ARTBA members, our private sector allies, and federal, state, and local transportation agencies need to incorporate into their workflows because no one else can more effectively explain how infrastructure improvements positively transform America. Moreover, we need to be concerned that if we’re not telling the compelling and positive stories, those opposed to our agenda will be telling theirs. Should the latter occur, both our nation and industry take a needless step backward.

The impact of that type of positive effort was most recently evidenced in March when Congress and the president made good on the promises of the IIJA in the FY 2022 appropriations process by exceeding the highway and public transit investment levels called for in the law’s first year. However, don’t be fooled. Even assuring the appropriations process went well following the IIJA’s passage was not easy. It took a great deal of dedicated and thoughtful work.

That said, how do we collectively share the story of forthcoming projects made possible by the IIJA? We focus on the five “W’s” and “H” of journalism:

**Who?** Taxpayers. Businesses. Communities. People. We need to share the IIJA’s benefits in their lives and business. Are daily commutes safer and smoother? Are communities more connected? Are goods and services being delivered more efficiently? Let us highlight these stories and put a spotlight on the thought leaders who are helping to make them reality.

**What?** Connect projects to specific user groups, places and results. Show how innovation and technology are being used to maximize the resources provided by the IIJA to speed project deliverables and have an impact now.

**Where?** Projects funded by the IIJA are making an immediate and important difference at the local level. Cumulative IIJA investment will bolster economic growth, create jobs, stimulate commerce and improve the standard of living in communities across the country.

**When?** Now. Do not wait for the ribbon-cutting. Start promoting projects while people can watch the work. Do so in partnership with state transportation officials and community beneficiaries of the projects. Generate and sustain interest and excitement. Emphasize long-term benefits to help minimize the short-term work zone inconveniences.

**Why?** Cataloguing and quantifying these benefits will build momentum for 2026 and will help strengthen the case for continued infrastructure investment.

Telling these stories can also have the ancillary benefit of boosting workforce recruitment and retention. Our industry has an extraordinary effect on society. It’s not hyperbolic to observe that without our goods and services, America ceases to properly function. GDP would grind to a halt. Sharing these truths will help attract the next generation of talented leaders.

**How?** ARTBA’s veteran team of journalists can collaborate with you to write and bundle these stories. Make your project “fact sheets” readily available. Leverage your own print, online, and social media platforms, and open up your worksites to share stories with elected leaders.

Remember, good storytelling both informs and inspires. If we educate Congress and the public now, they will be with us for the future. Our investment will pay dividends.

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Keeping Our Eye on the Ball

“Now this is not the end. It is not even the beginning of the end. But it is, perhaps, the end of the beginning.” —Winston Churchill, 1942

November’s passage of the new infrastructure law brings to mind this Churchill quote, delivered after a long-sought victory during World War II. Enactment of the law was a hard-fought achievement, but it is just step one of a multi-year process, culminating in a renewed transportation system for all Americans.

The Infrastructure Investment and Jobs Act’s (IIJA) massive spending increases may dominate the headlines, but its implementation will also determine the infrastructure law’s legacy. Now that Congress passed a funding deal that exceeds the IIJA’s recommended levels, the hard work of putting policy into practice begins. The law’s programs and policies were a carefully-crafted, bipartisan achievement, and their implementation must move forward with the law’s intent top of mind. For ARTBA, this means a strategic emphasis on the executive branch.

The IIJA contains more than 75 regulatory actions that could impact transportation projects across the country, and ARTBA’s regulatory affairs team is tracking each one. ARTBA members now have access to this new regulatory matrix at artba.org, which catalogs each provision and statutory deadline and will be updated throughout the law’s duration.

ARTBA is ramping up engagement with federal agencies to advance the priorities of the transportation construction industry and ensure the new law delivers true infrastructure solutions.

Long-standing ARTBA efforts to streamline the project delivery process can make headway through the IIJA’s codification of the “One Federal Decision” executive order. ARTBA met with the White House Council on Environmental Quality on the environmental review process and reinforced the IIJA’s goal to reduce delays. Similarly, ARTBA was invited to a discussion with the White House officials on the new law’s Buy America provisions and followed up that conversation with detailed comments and recommendations.

Safety is a top U.S. Department of Transportation (U.S. DOT) and ARTBA priority. The enhanced funding levels in the IIJA will lead to more work zones, and in turn, puts more roadway construction workers at risk. U.S. DOT is prioritizing vulnerable road users (VRUs), but has failed to acknowledge workers as a part of this group. Through participation in a March listening session and in letters to Transportation Secretary Pete Buttigieg and other administration officials, ARTBA is urging U.S. DOT to more explicitly classify roadway construction workers as VRUs. This would help prioritize their safety, alongside administration efforts to reduce pedestrian fatalities.

Before long, it will be time to begin formulating policy reforms for the next surface transportation reauthorization. But for now, ARTBA remains engaged with multiple Biden administration agency officials as the IIJA implementation process escalates in the year ahead.
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Bridge Repair Work Ramps Up, As New Funding Begins to Flow

ARTBA’s 8th Annual U.S. Bridge Conditions report was released Feb. 2, about a week after a dramatic bridge collapse in Pittsburgh. The analysis found nearly 224,000 structures need repair work, including major rehabilitation or replacement. The interactive report can be found at artbabridgereport.org. Highlights from repair projects now underway are also featured in this section.

In March, Congress appropriated first-year funding for the Infrastructure Investment and Jobs Act, with significant new money for bridge work, including Pittsburgh’s Fern Hollow Bridge and the Brent Spence Bridge over the Ohio River. We’d like to hear from ARTBA member firms and public agencies about more of these projects. Please contact ARTBA Editorial Director Mark Holan at mholan@artba.org.
The Fern Hollow Bridge in Pittsburgh collapsed hours before President Joe Biden’s scheduled Jan. 28 visit to “the city of bridges.” His impromptu stop at the bridge site later that day created an instant iconic image for the nation’s need to invest in transportation infrastructure.

ARTBA member firms HDR and Swank Construction Company were hired days later to design and build, respectively, its replacement. The $25.3 million projected cost is fully funded though the Infrastructure Investment and Jobs Act (IIJA).

“Many of our core bridge team live and work in Pittsburgh, including some who relied on that bridge every day. It’s personal for us,” said Jim Carnahan, who manages HDR work in Pennsylvania, Ohio, and West Virginia. “We’re committed to doing our part to help restore this important connection and community amenity.”

As Transportation Builder want to press in late April, debris from the collapsed Fern Hollow Bridge had been cleared from the site. Crews were still working through a few surprises with nearby utilities. Foundation drilling was getting started. Full construction should be underway by the time you read this.

The new bridge will have the same 64-foot width due to existing right-of-way limits on the road within the city’s Frick Park, as well as an adjacent historic gatehouse. Both steel and concrete bridges were considered, but the prestressed concrete option was selected as the most timely and economical, especially given national supply-chain worries, said Cheryl Moon-Sirianni, district executive for the Pennsylvania Department of Transportation’s (PennDOT) Engineering District 11. The work also includes about 500 feet of new roadway.

Nobody was killed in the early morning collapse of the 50-year-old bridge. A preliminary National Transportation Safety Board report found there was no backup support for the unusual “K-frame” design, one of only six such bridges in the state. The bridge had a 26-ton weigh limit since 2014.

Pittsburgh motorists now must detour about three miles to get around the ravine and small creek once spanned by the bridge. The city has re-synchronized nearby traffic lights to help the flow. Sure, it’s inconvenient, but not nearly the nightmare that could have happened in a city with more than 440 other bridges.

More Bridge Work
In March, PennDOT announced $317 million in 2022 infrastructure work in District 11, including several key bridge preservation projects in Pittsburgh:

- $35.41 million Boulevard of the Allies bridges and ramps, part of Interstate-376
- $15-$17 million McKees Rocks Bridge, a 1-mile span over the Ohio River
- $8.4 million on the historic Smithfield Street Bridge, opened in 1881

Pennsylvania is set to receive $353.3 million of the first installment of a five-year, $27.5 billion national bridge formula program included in the IIJA. The City of Pittsburgh and Allegheny Council will receive other IIJA funds to help pay for work on locally owned bridges.

Like other transportation agencies, PennDOT was facing significant deficits before Biden signed the law in November and Congress appropriated the money in March.

“This almost fills the void,” Moon-Sirianni said. “Projects can now move forward,” including paving and other non-bridge work that was being pushed further into the future.

PennDOT and its private-sector partners aim to have the new Fern Hollow Bridge opened before the first anniversary of the collapse. “We hope to beat that,” Moon-Sirianni said.

Mark Holan is ARTBA’s editorial director. He’s also a Pittsburgh native who has driven over the old Fern Hollow Bridge.
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Biden Administration Announces $5.5 Billion for Bridges

The Federal Highway Administration in January released the first installment of a five-year, $27.5 billion bridge formula program included in the Infrastructure Investment and Jobs Act (IIJA). The funding is dedicated for projects in all 50 states, Washington, D.C., Puerto Rico, and tribal transportation programs.

Unlike core highway programs that are subject to annual appropriations, this $5.5 billion annual funding is appropriated in the IIJA. The allocation is divided up according to bridge needs and conditions in each jurisdiction while also ensuring each locality receives at least $45 million annually. States and localities have discretion over the bridge projects selected for funding.

While the size and scope of this dedicated bridge investment is unique at the federal level, jurisdictions can still—as they have prior to the IIJA—use other federal and local resources to help plan and build bridges.

Chart totals reduced by federal administrative expenses and tribal programs.
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A Crucial Bridge Gets Some Bipartisan Relief

BY JOHN SCHNEIDAWIND
jschneidawind@artba.org

The Brent Spence Bridge is so gridlocked, so dangerous, and yet so important to the American economy that it has triggered a unique cross-state camaraderie in this age of gridlocked politics.

Working together, Kentucky Gov. Andy Beshear, a Democrat, and Ohio Gov. Mike DeWine, a Republican, have jointly asked for up to $2 billion in federal funding to renovate the Brent Spence Bridge and build a companion span across the Ohio River. The nationally recognized freight corridor, which includes Interstates 71 and 75, moves 3 percent of the country’s Gross Domestic Product (GDP), according to Kate Shanks, senior vice president of public affairs with the Kentucky Chamber of Commerce.

More than 160,000 vehicles cross the nearly 60-year-old bridge daily, twice as many as the original design. Because of the increased traffic, motorists are three to five times more likely to have a wreck along this corridor than on any other portion of the interstate systems in Ohio or Kentucky, state transportation officials say.

In fact, the National Bridge Inventory lists the bridge as “functionally obsolete” due to its capacity issues. That’s why the Brent Spence Bridge Corridor Project is a top priority for the Kentucky Transportation Cabinet, the Ohio Department of Transportation, and Ohio-Kentucky-Indiana Regional Council of Governments.

The project area covers 8 miles from the Western Hills Viaduct in Cincinnati to Dixie Highway in Covington, Kentucky, including the Ohio River crossing.

The new proposed companion bridge to the Brent Spence Bridge will add capacity and flexibility for carrying interstate and local lanes, project supporters say. This in turn will improve safety for local traffic traveling across the river and entering or exiting the interstate by reducing merges and weaving.

"I think we all understand the national significance of this bridge," DeWine said as both governors made the announcement on Feb. 28. "The steps that we are taking today, the documents that we will be signing we believe will position us in a perfect position to get the money that we need and to start construction on this bridge."

The $2 billion will come from the Infrastructure Investment and Jobs Act (IIJA), which allocates $40 billion for bridge projects nationwide—$12.5 billion in grant money set aside for economically critical projects like the Brent Spence—and $27.5 billion from the IIJA’s bridge formula program.

Once funding from the IIJA is secured, both states have agreed to contribute any required matching funds. The total cost of the companion bridge is expected to be about $2.8 billion, but both governors say they’re committed to working together to find the additional money needed for the project.

Chad LaRue, executive director of the Kentucky Association of Highway Contractors, an ARTBA chapter affiliate, says that in the next two years, the commonwealth will see $321.5 million, a 33 percent increase in federal funding, because of the IIJA.

LaRue adds that the Kentucky General Assembly has already committed—through general funds and Federal-aid grant-anticipation revenue vehicles (GARVEES) bonds—some $400 million in the next two years toward the new Brent Spence Bridge. Both states are working to bring more money to the project.

Ohio also plans to utilize a combination of federal and state highway dollars and bond proceeds to finance its share, said Ohio Department of Transportation spokeswoman Erica Hawkins. Specific amounts for each funding pool are still being determined. The agency generally seeks transportation appropriations from the legislature during the state’s biannual budget process.

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Aspen, Colo.

Northeastern & Southern
featuring Dr. J. Don Brock
TransOvation™ Program
Nov. 1-3
Kiawah Island, S.C.

John Schneidawind is ARTBA’s vice president of public affairs.
### WEST VIRGINIA

**Project Name:** I-70 Bridges Project

**Location & Scope:** Replacing or repairing 26 interstate bridges or ramps over 10 miles near Wheeling.

**Timeline & Cost:** Study began in 2017, construction in 2019. Expected finish by end of November. $214 million.

**Design & Contractor:** Swank Construction Co.

**Noteworthy:** Rehabilitation of 1950s structures. Had to close I-70 in both directions. No room for crossovers. Started westbound in 2020, eastbound in 2021. Eastbound is the primary way to access Wheeling Hospital. Incentive/disincentive clauses in the contract helped work finish on time.

**Other Bridge Projects:** Building a new bridge south of Wellsberg, across the Ohio River. West Virginia Route 2 and Ohio Route 7.

—Interview with Tony Clark, West Virginia Division of Highways. Written by ARTBA Editorial Director Mark Holan.

### MICHIGAN

**Project Name:** Michigan Bridge Bundling Project

**Location & Scope:** The Michigan Department of Transportation (MDOT) has launched a bridge bundling program that initially encompasses major improvements on 19 locally owned bridges across the state. Work has started on five of the projects, which at press time were 38 to 77 percent complete.

**Timeline & Cost:** Initiated March 2022, with each bridge completed in 60 to 90 days. Total cost: $24.3 million.

**Design & Contractors:** Alfred Benesch & Co.; C.A. Hull, Anlaan Corp

**Noteworthy:** Each bridge will have its superstructure replaced, which includes full removal and replacement of the bridge deck and supporting beams.

**Other Bridge Projects:** Phase II of the program will use $196 million in federal COVID relief funds to work on 59 bridges beginning next year. MDOT estimates $2 billion is required just to get all state-owned bridges up to good or fair condition, and another $1.5 billion to do the same for all local agency-owned bridges.

—Information from Michigan Department of Transportation. Written by ARTBA Vice President of Public Affairs John Schneidawind.

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**WEST VIRGINIA: 20.4%**  
**SOUTH DAKOTA: 17.3%**  
**MAINE: 12.6%**  

**IOWA: 18.9%**  
**PENNSYLVANIA: 13.8%**  
**NORTH DAKOTA: 11.2%**  

**RHODE ISLAND: 17.5%**  
**LOUISIANA: 12.8%**  
**MICHIGAN: 11%**

ARTBA’s annual analysis of Federal Highway Administration (FHWA) National Bridge Inventory data found nine states have inventories that are more than 10 percent structurally deficient. Below are snapshots from the work in several states. The data was downloaded on Jan. 3. Note that specific conditions on bridges may have changed as a result of recent work or updated inspections.
**MAINE**

**Project Name:** Madawaska/Edmundston International Bridge

**Location & Scope:** This project will replace the bridge that provides a critical connection between Madawaska, Maine and Edmundston, New Brunswick, Canada. Construction began in 2019, with completion expected in 2025. In 2019, the project received a $36 million Infrastructure for Rebuilding American (INFRA) grant from the FHWA. The remainder of the $97.5 million cost is being shared by MaineDOT and New Brunswick DOT.

**Design & Contractor:** Reed & Reed Inc.

**Noteworthy:** The current structure is 100 years old. Since October 2017, the International Bridge has been posted at a 5-ton weight limit, creating a significant detour. The new bridge is being constructed on a new alignment across the St. John River at an approximately 45-degree angle, 1,400 feet upriver from the existing span. It will be nearly twice the length. The new bridge will feature wider travel lanes and added shoulders on both sides. There will also be a raised sidewalk on the downriver side. It will be constructed using steel girders supported on concrete substructures and is designed to last 100 years.

**Other Bridge Projects:** MaineDOT’s 2022 Transportation Work Plan includes nearly $1.8 billion for highway and bridge capital projects, including 235 bridge projects at an estimated cost of $631 million.

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**RHODE ISLAND**

**Project Name:** Route 37 Improvements

**Location & Scope:** Two separate projects will rehabilitate or replace 22 bridges and make safety and congestion improvements in this critical east-west freeway between Cranston and Warwick, including retail, office, and residential areas, and T.F. Green State Airport. With a daily traffic count of 42,000 vehicles, Route 37 is one of the state’s busiest corridors. Built in the 1960s, almost half of the Route 37 bridges are classified as being in poor condition.

Phase 1 involves preservation, major rehabilitation, and/or reconstruction of 15 bridge structures between Route 1 (Post Road) in Warwick and the Pontiac Avenue interchange in Cranston. Six of these bridges are structurally deficient. Four of them will be replaced and the other two will be rehabilitated. The project also includes safety improvements at the Pontiac Avenue interchange from Route 37 West, widening the highway and ramps to eliminate chronic congestion, reduce vehicle emissions and improve safety. Traffic often backs up onto Route 37 and then onto I-95, resulting in wasted fuel and increased emissions.

Phase 2 is a design-build project starting this spring. It will rebuild six bridges and build one new bridge along the Route 37 corridor west of Pontiac Avenue in Cranston. It also will make safety improvements and reduce congestion and emissions at the interchange of Route 37 and I-295 and along I-295.

**Timeline & Cost:** Phase 1 began in 2020 and is scheduled to finish in 2023. Total cost: $79.5 million. Phase 2 is starting this year and set to finish in 2026. Total cost: $85 million.

**Design & Contractors:** Phase 1: Cardi Corporation. Phase 2: Design/Build contract not yet awarded.

**Noteworthy:** RIDOT is using accelerated bridge construction methods for three bridges in the corridor, including a bridge slide over the Pawtuxet River and two bridge deck moves in which decks built adjacent to the old bridges will be moved into position using self-propelled modular transporters during weekend closure periods scheduled this summer.

**Other Bridge Projects:** RIDOT in 2016 began the RhodeWorks program to invest more than $5 billion in a 10-year period to bridge Rhode Island’s transportation system into a state of good repair, with the goal of reaching the federal bridge sufficiency standard of 90 percent within the first 10 years. RIDOT remains on target to achieve that goal. To date, RIDOT has overseen 253 projects valued at $2.8 billion, working on 360 bridges. They have completed 192 projects, which includes 217 bridges.

—Information submitted by Charles St. Martin III, Rhode Island Department of Transportation (RIDOT). Written by ARTBA Editorial Director Mark Holan.
No sooner has the Infrastructure Investment and Jobs Act (IIJA) become law than ARTBA and its state chapter affiliates once again find themselves in a familiar fight. State and federal lawmakers have been aiming to suspend gas taxes with the dubious claim that it will lower record pump prices. At the federal level at least, such moves threaten to undermine the primary funding structure of surface transportation investments in the IIJA.

As this issue of Transportation Builder went to press in late April, 26 states had either proposed or enacted temporary suspensions of their gas taxes, which help fund transportation improvements. Several members of Congress also introduced bills to suspend the 18.4-cents-per-gallon federal gas tax for the remainder of 2022.

Since early in the new year, ARTBA has been using multiple advocacy tools to make the case against these proposals:

- ARTBA CEO Dave Bauer sent a Feb. 9 letter to Senate Majority Leader Chuck Schumer (D-N.Y.) and Senate Minority Leader Mitch McConnell (R-Ky.) opposing a Senate bill introduced that same day.
- The Transportation Construction Coalition (TCC), which ARTBA co-chairs, sent a Feb. 17 letter to congressional leaders urging opposition to proposals circulating in both chambers.
- ARTBA and its members launched a grassroots campaign that generated more than 2,000 emails and social media messages to members of Congress.
- Bauer wrote a Feb. 23 opinion piece in The Hill newspaper: “Federal Has Tax Cut Follies; Why Suspending the Gas Tax Remains a Bad Idea.”
- ARTBA also launched a paid social media ad campaign using 2008 presidential candidate Barack Obama’s response to gas tax suspension proposals by senators Hillary Rodham Clinton and John McCain.

“We’re arguing over a gimmick that would save you half a tank of gas over the course of the entire summer so that everyone in Washington can pat themselves on the back and say they did something,” Obama said at the time. “Well, let me tell you, this isn’t an idea designed to get you through the summer, it’s designed to get them through an election.”

ARTBA’s efforts targeting Capitol Hill have paid off. The Senate and House gas tax suspension bills have not generated significant additional co-sponsors. Congressional leaders from both parties have also thrown cold water on the proposals.

State Battles
Now, in Ohio, politicians are threatening to suspend—for five years—the increase in the state gas tax approved in July 2019.
Such a move could cost the Buckeye State $778 million in revenue—just as the IIJA is set to provide about $398 million over the same timeframe.

Most federal funding for infrastructure projects is awarded to states only if states also commit money, notes Chris Runyan, president of the Ohio Contractors Association, an ARTBA chapter. “So, decreasing the money you have available at the state level because you have more federal money doesn’t really make a lot of sense,” he told the Wall Street Journal.

Virginia Transportation Construction Alliance Executive Vice President Gordon Dixon teamed with Bauer to co-author a March 27 opinion piece in the Richmond Times-Dispatch. “Infrastructure Fixes are the Way to Save Drivers Money” criticized Gov. Glenn Youngkin’s attempt to suspend Virginia’s gas tax.

And in New Jersey, Utility & Transportation Contractors Association (UTCA) President Robert Briant wrote a similar piece published on the NJ.com website.

At press time four states had enacted temporary suspensions: Connecticut, Georgia, Maryland, and New York.

Fact-based Opposition
ARTBA believes in facts, not election year magical thinking. That’s why in late March the association released a study, “How Changes in State Gas Tax Rates Affect Prices Motorists Pay at the Pump,” that shows gas tax suspensions do not automatically result in significantly lower pump prices and substantial savings for motorists.

The study examined 177 changes in state gasoline tax rates in 34 states between 2013 and 2021 and found that on average, just 18 percent of an increase or decrease was passed on to motorists in the retail price of gasoline in the two weeks after a change took effect.

ARTBA Chief Economist Dr. Alison Premo Black and ARTBA Transportation Investment Advocacy Center (TIAC) Director Carolyn Kramer used data from the Oil Petroleum Information Service (OPIS) and the U.S. Energy Information Administration (EIA) to produce the study. ARTBA’s conclusions mirror those of other previous academic studies: the price of crude oil is the primary driver of changes in the retail price of gasoline, not gasoline taxes.

The full analysis is available at: transportationinvestment.org.

John Schneidawind is ARTBA’s vice president of public affairs.
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The ARTBA Construction Forum’s work group on materials costs and availability has been meeting to focus on the market forces impacting prices. The group has shared strategies for addressing the problem and advocated for equitable solutions between public owners and contractors.

One important outcome of the meetings was the mid-March launch of the interactive National Materials Dashboard. It was developed with ARTBA’s Economics team to centralize national data for key inputs and commodities used by the transportation construction industry.

“We want this dashboard to raise awareness of the unprecedented cost spikes we have been seeing,” said Ananth Prasad, president of the Florida Transportation Builders’ Association (FTBA) and co-chair of ARTBA's Construction Forum. “We especially hope this data will help public agencies better understand the enormous challenge this is for much of the industry.”

This resource will help ensure all partners on transportation construction projects—both public and private—better understand the extent of recent materials costs spikes. In its first month online, the dashboard had more than 1,100 visits.

Unprecedented Challenges
Since late 2020, the transportation construction industry has confronted unprecedented pandemic-related cost increases and often-limited availability for key commodities and materials. Many ARTBA chapters and members have expressed the need for data specific to transportation construction as a means of facilitating better mutual understanding of these challenges.

The national data in the dashboard includes a series of indices from the U.S. Bureau of Labor Statistics to measure relative price changes in the economy. These include the:

- **Consumer Price Index (CPI)**, a measure of the average changes in consumer prices over time and is widely cited as a measure of general inflation.
- **Producer Price Index (PPI)**, measures specific goods, services, and commodities.
- **PPI for Highway & Street Construction**, includes weighted prices for the different components used to deliver highway and bridge projects. It does not include labor, capital investment, or imports.

Dashboard users can also customize the data to see trends for specific commodities.

It is important to note that while ARTBA’s dashboard features national data, some state and regional markets have experienced even more exaggerated increases in costs and delivery time for these materials.

What’s Next
ARTBA will continue working with its affiliated chapters to share knowledge about addressing these materials challenges. As an example, the FTBA is negotiating a series of specification changes for this purpose.

ARTBA and its coalition partners will also continue advocating for use of federal COVID-relief funds to alleviate significant supply chain effects on projects. For a breakdown of how that money has been spent to date, see the Economics column on page 32.

Rich Juliano is ARTBA’s general counsel and managing director of the Contractors and Public Private Partnerships divisions. He is the senior staff contact for the Construction Forum.
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TB: What is your goal or vision for the council, especially in the context of the Infrastructure Investment and Jobs Act (IIJA), and the work it promises to bring?

ND: The IIJA has given us an historic level of funding. What we need to do now is deliver for the taxpayer. To do that we have to have people who are willing to step forward and do these jobs. Part of what I envision this council doing is being a one-stop shop for all facets of our industry to pull resources, ideas, and best practices across various parts of the industry to develop the workforce.

JQ: It's essential to understand that ARTBA is in such an advantageous position to bring everything to bear that Nick just mentioned. Our vision document says: “To position the council as a valued resource for developing and retaining a skilled and inclusive transportation construction workforce.” We want to be a go-to resource for the industry. ARTBA is in a great position to inform the industry.

TB: What is something your firm is doing for workforce recruitment and retention that helps set a good example for the industry?

JQ: Granite uses the term inclusive diversity; we believe we need to be inclusive of all of the diversity at Granite today, tomorrow, and the future. We are looking at how we improve on our priorities, habits, and the systems in place to make sure we have an inclusive environment.

On the recruitment side, as we are reaching out to different talent pools, we are making sure we have an inclusive environment, so that people are not just coming in and then they are leaving. We are making sure we pay attention to the talent and diversity that we already have and invest in their development. If someone leaves, the best way for a company to replace from is internally, especially since some roles in our industry are technical.

We are strengthening our strategic partnerships, and ARTBA is one of them. By doing that, you create the capacity to tackle workforce development. Collectively, we can have an impact on the industry.

ND: At Rogers Group, we are trying to focus on retention. One of the things we are doing is a heavy machine operator training program, which provides folks at the craft level with a career-based skill attainment road map that allows them not only pay progression, but also a positive career trajectory.

We are also focusing heavily on soft skill training for front-line supervisors and managers so that we can adapt to today’s workforce and be able to better coach our teams through their careers. The days of being able to run our organizations with drill sergeants are passing us by.

JQ: The days of managing and leading in the construction industry the way we did it in the past will not serve us well today and in the future. We have to think differently. A new workforce is coming in, and old leadership approaches may not resonate. For example, we have to look out 20 years from now and ask, if we had 30 to 40 percent women in our industry, what would we do differently today?

See Workforce, 24
ND: We are also pushing referral and retention programs to our existing employees so that they will spread the word about what it’s like to work at Rogers Group. We focus heavily on positive recognition, especially as it relates to safety. No one wants to work in an environment that is unsafe.

We utilize state-led on the job training programs. We get involved all the way down to the elementary school level, even sitting down and reading to kindergartners, and telling them what the industry is like. We hold middle school and high school field trips and are engaged with vocational and technical schools.

We tell a story that doesn’t discourage folks from going to college but lets them know you may not necessarily have to go into debt to go to college. There are organizations like ours that will help you obtain a post-secondary degree but at the same time provide a mechanism to earn a very good living in the process.

TB: How can ARTBA members help the council and workforce development in general?

JQ: We have to tell the story internally and externally. We must amplify the extraordinary opportunities in our industry so we can build the capacity for other people to tell our story. Today it feels like people outside of our industry speak for us.

ND: We need ideas and involvement from people with boots on the ground relative to workforce initiatives, for example, the recruiters in our organizations.

We’ve got to share our success stories. We need our members to recommend subject matter experts that can help convey that story, show the successes across various states, and pull resources from the FHWA’s Every Day Counts initiative on Strategic Workforce Development.

We need to look at where we want to be in 10 years, and part of that means trying to bring people out of the shadows of our economy, whether they’re those already here from Latin America or the recent refugees from Ukraine. What can we do with immigration reform that will help our industry? Additionally, how do we incentivize people to become truck drivers who can move our products? We need to push legislative initiatives that will pay dividends for our industry down the road.

JQ: We have to ask who the people we need are and what resources we have to get to them. We’ve got to realize the traditional talent pool is not as strong as it used to be, and there are other talent pools that we just haven’t tapped into.

TB: Is the industry going to be able do the work that needs to be done this year? Is the workforce in place to do that work?

ND: I feel it is, in part due to inflationary pressure and supply chain issues that may slow down certain types of projects, but mainly because this is a “get it done” industry. Most of the organizations that perform work with federal funds should be able to recruit the workforce and meet the need. Part of this will have to be done with pay. The construction industry has an opportunity to provide compensation that re-establishes the differentiation from other industries that it enjoyed decades ago; many of our jobs are more demanding, and we need to stay mindful of that value. Once we get them in the fold, we need to retain them by using the development tools we hope this council can amplify.

JQ: It’s a supply-demand thing. We need a greater supply of talent for the demand of work coming our way. As an industry, we need to be mindful of that. We need to be intentional about opening the funnel on the front end to new talent pools.
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All materials available at: workzonesafety.org

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On the Road

Buddy League, president of Branscome, Inc., a COLAS company, was ARTBA’s official representative at the April 12 National Work Zone Awareness Week kickoff event in Hampton Roads, Virginia. ARTBA Senior Vice President of Safety and Education Brad Sant also attended the event.

Left to right: ARTBA Senior Vice President of Safety and Education Brad Sant met with Granite Construction Regional Safety Manager Travis Johnson and Safety Manager Charlie Keene at the U.S. 89 project in Utah April 18.

ARTBA Chair Ward Nye April 14 shared insights on the transportation construction market at the ARTBA state chapter Virginia Transportation Construction Alliance’s Spring Conference in Hampton, Virginia.

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**UPCOMING ARTBA EVENTS:**

**9th Annual National Workshop for State & Local Transportation Advocates**

**July 12-13**

Transportation investment advocates, state lawmakers, public officials, and industry experts from around the country join in-person for the first time since 2019 to discuss infrastructure-focused legislative and ballot measures and campaign strategies. This year’s Workshop takes place amid increased pressure to repeal or suspend state and local fuel-based revenue sources.

Register: transportationinvestment.org

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**2022 ARTBA P3 Conference**

**July 13-15**

**Stand and Deliver: P3s and Complex Projects in the Spotlight** – Join industry leaders, public officials and other experts from around the country for lively discussions on utilizing and leveraging the record federal transportation investment in the Infrastructure Investment and Jobs Act. After more than three decades, ARTBA’s P3s in Transportation Conference remains the premier forum for this dialogue.

Register: artbap3.org

Grand Hyatt Washington
TB: As you take responsibility for Colas’ operations across the U.S., how do you see the company’s market opportunities as we settle into 2022? Does the market appear uniform nationwide, or does it vary depending on state or region?

JH: Colas USA entered 2022 in a strong position and the November signing of the infrastructure law promises to offer us great opportunities over the next few years. In some regions of our operations, we may see that impact sooner than others, for reasons outside of our control. For example, some states where we work have a great capacity to bid and manage the work these funds will generate, whereas other states, which may not have fully recovered from the pandemic, will be challenged to execute the work this year. Additionally, benefits from the infrastructure law may be tempered with some states rolling back state funded infrastructure initiatives to combat rising fuel costs. That said, we remain optimistic and are ready to perform when our name is called.

TB: Workforce recruitment and retention continue to be challenges for the transportation construction industry, as they are for many employment sectors. How are you addressing these challenges at Colas USA?

JH: We take considerable pride in the people of Colas USA, who clearly differentiate us from our competition. Thanks to our culture, we have strong retention rates and continue to attract top talent. We have made significant strides regarding equity and inclusion—whether gender, generational, or cultural. And with our focus on corporate social responsibility, our employees know first-hand that Colas USA looks towards future effects of our business and how we are taking care of our planet. We want Colas USA to be a great place to work.

TB: While the difficulties of the pandemic over the past two years cannot be overstated, it appears many industry firms have found ways to improve safety and efficiency in their operations during this time. Are there examples of this within the Colas organization, which you plan to keep and build on as we move beyond the pandemic?

JH: COVID-19 forced us to evaluate the way our business operates and how we can be more efficient with our resources. We increased our efficiencies from an administrative perspective by reducing paper waste and moving to digital processes when possible. One example of this is our implementation of a text messaging system that required all employees to complete a series of questions before determining if they were able to come into work for the day. Safety is culture based, and to be successful...

“Some states where we work have a great capacity to bid and manage the work these (IIJA) funds will generate, whereas other states, which may not have fully recovered from the pandemic, will be challenged to execute the work this year. Additionally, benefits from the infrastructure law may be tempered with some states rolling back state funded infrastructure initiatives to combat rising fuel costs.” — John Harrington
requires human interaction. That’s something we consistently emphasize at Colas USA. We place great value on our people and their safety. Despite the improvements we have made during the pandemic, we are grateful to be moving in a direction that allows us to operate as we do best—together.

**TB:** What technological advances excite you in looking ahead over the next few years?

**JH:** Throughout Colas, we continue to look for innovative ways to be good stewards of the environment and reduce our carbon footprint. We also continue to look for ways to use sustainable or regenerative energies to power our plants, such as solar power instead of fuel or electricity. As an industry, it’s important that we not only focus on our short-term benefits but also how we can overcome the long-term impacts that our business has on the environment. We are 100 percent focused on our clients’ needs in the short term, but also focused on our long-term vision such that we can develop products and solutions that are more sustainable. Our goal is to provide a cleaner environment in easier ways for us to travel.

**TB:** What is the best advice someone gave you as a young engineer?

**JH:** As a young engineer, the best advice I received was to look for opportunities to grow professionally and trust that the people around you will provide the necessary support. I was also told to be thoughtful about what you make a priority. This industry, as with many, can be physically and mentally demanding and it’s important to take the time to make sure you are always working from a solid foundation.

I’ve also learned through my career to be mindful of the ability to build relationships—within your organization and throughout the industry. You never know whose path you may cross at any stage in your career, or which colleague you may need to call to work out a project question. Your colleague today may be sitting across the table as you pitch new business in the future. Building relationships is important but nurturing them so they are authentic is the real key.
USE IT... SAVE LIVES!

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The December 2021 Coronavirus Response and Relief Supplemental Appropriations Act (CRRSA) provided $9.8 billion in COVID relief to state transportation departments (DOTs). Through March 30, states had obligated $5.4 billion, or 55 percent of the funds.

State DOTs have until Sept. 30, 2024, to obligate the CRSSA funds, with broad flexibility in how to use the money. Eligible activities include construction projects or other capital outlays, preventive and routine maintenance, state DOT operations and personnel costs, debt service payments, and coverage for general revenue loss.

ARTBA’s analysis shows that $3.7 billion of the obligated funds has been used to support over 600 construction projects. This includes work on Interstate 35E in Texas, capacity improvements on the New York Van Wyck Expressway, and interchange modifications on Interstate 65 in Indiana.

States have also taken advantage of the flexibility to use the CRRSA funds for:
- debt service (Missouri, Washington, Kansas, New Mexico, West Virginia, Hawaii, Delaware, and South Carolina);
- availability payments (Florida); and
- backfill of lost revenue (Pennsylvania, Ohio, Oregon, Alaska, Nebraska, and Minnesota).

Fourteen states have obligated 90 percent or more of their available CRRSA funds, while just seven have obligated 10 percent or less (California, Connecticut, Washington, D.C., Massachusetts, Michigan, Mississippi, and New Jersey).

ARTBA will continue to track and report on these sources of transportation investment.

Dr. Alison Premo Black is ARTBA’s chief economist.

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<th>Description</th>
<th>Federal Funds Obligated</th>
<th>Other Funds</th>
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ARTBA's advocacy work in the federal courts is one of the key benefits to our members. We litigate matters of national importance to the transportation construction industry on a variety of fronts, particularly with U.S. Environmental Protection Agency (EPA), U.S. Department of Labor, and Occupational Safety and Health Administration (OSHA) regulations.

Litigation is often necessary to either overturn regulations that exceed the scope of federal authority or to defend against attacks on our industry from anti-growth groups. Our legal advocacy initiatives have allowed nearly $60 billion in approved, yet challenged, U.S. transportation projects to move forward since the early 1990s.

This year has begun with a significant amount of litigation—much of it expected. Any time there is significant federal regulatory activity, legal action usually follows, and the Biden administration has been prolific in the regulatory arena so far.

Here are three major cases ARTBA has been involved in:

COVID Vax & Testing Requirement
OSHA Jan. 26 formally withdrew its COVID-19 vaccination and testing mandate for private firms with 100 or more employees. The move came two weeks after the U.S. Supreme Court halted enforcement of the agency's Emergency Temporary Standard (ETS). OSHA said it intends to re-introduce the measure as a proposed rule, likely to be narrower and applying to industries at higher risk for COVID. ARTBA, the Associated General Contractors (AGC) of America, and the Signatory Wall & Ceiling Contractors Alliance (SWACCA) had challenged the ETS in federal court, but its withdrawal rendered the case moot.

“Waters of the United States”
The Supreme Court Jan. 24 agreed to hear arguments in Sackett v. EPA, a case focused on the definition of “waters of the United States” (WOTUS) under the Clean Water Act (CWA). Because WOTUS has not been clearly defined by federal agencies or the courts, regulatory enforcement is inconsistent and overly broad. ARTBA and the National Stone Sand & Gravel Association (NSSGA) filed an amicus brief April 18 to detail how unclear CWA regulations unnecessarily delay transportation construction projects. Arguments in the case are scheduled this fall. A decision may come in early 2023.

Defense of NEPA Reforms
ARTBA and its allies successfully fought off a 2021 legal challenge to the Trump administration’s National Environmental Policy Act (NEPA) reforms. Now, the same groups who lost in district court have appealed the decision, which ARTBA has urged the court to dismiss. In our Jan. 25 brief, ARTBA says the appellants fail to demonstrate “a single practical or concrete injury” caused by the NEPA reforms. It is important to ensure that the NEPA reforms survive any legal challenges because it will bolster the case for opposing regulatory efforts by the Biden administration to weaken them. The U.S. 4th Circuit Court of Appeals has not yet scheduled arguments in this case.

ARTBA will continue to actively represent the transportation industry in federal court. Updates on all litigation activity can be found in the Government Affairs section of artba.org, and through the weekly Washington Newsline.

Nick Goldstein is ARTBA’s vice president of regulatory and legal issues.
Common Infectious Diseases Including COVID-19 in Roadway Construction

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PROFESSIONAL DEVELOPMENT HOURS

American Road & Transportation Builders Association

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MESSAGING MATTERS: HOW TO ASSESS THE EFFECTIVENESS OF WORKPLACE SAFETY SIGNAGE (AND WHY)

By: Jaime Vos, AEM Director of Safety Materials

As I scrolled through my online safety blogs the other day, I came across the photo of a rather questionable sign. **WARNING:** *NOT ONLY WILL THIS EQUIPMENT HAZARD KILL YOU, BUT IT WILL ALSO HURT THE WHOLE TIME YOU ARE DYING.*

As someone who takes safety seriously, I felt guilty laughing out loud, but then realized the effectiveness of its intended purpose. While the sign may not have been compliant with government safety standards, its absurdity got my attention and, more importantly, got the message across. It also made me consider the importance of emphasizing proper safety signage and the training needed to ensure employees know its true meaning.

We’re inundated by safety signs in our everyday lives: While we’re driving, crossing the street, and while we’re navigating through the workplace. In many cases, we’ve become conditioned to expect a stop sign at intersections and fire exit signs located in buildings. It’s almost as if we’ve started to take them for granted.

But in a construction environment, it is imperative that employees not become desensitized to the safety message, and that they know the actual meaning of the signage and the level of hazard it communicates.

While there are numerous signs that communicate a range of hazards, the most basic categories that workers need to understand are Safety Signal Words. Signal Words are used to indicate the relative level of severity of the hazard and alert the reader to a potential hazard on the sign or label.

- **DANGER** means if the danger is not avoided, it will cause death or serious injury.
- **WARNING** means if the warning is not heeded, it can cause death or serious injury.
- **CAUTION** means if the precaution is not taken, it may cause minor or moderate injury.

In many cases, these Safety Signal Words are required to be used in all safety literature or technical publications related to equipment operations or manufacturing environments.

Location of the sign is also key. In many cases, there may be local, state or federal regulations that mandate signage in certain areas and that they are placed in specific areas relevant to an employee’s work and the possible hazards they may encounter.

While the standardization of specific wording and visuals of the safety message is important in signage and labels, employee awareness is crucial to understanding where the signs are placed and specifically what they mean. Businesses should always train employees to Standard Operating Procedures that communicate best safety practices and what safety signs will be displayed in which areas. Training and testing should always be documented and, if necessary, certified.

We become accustomed to most of the safety signage and labeling we see in our work and in our homes, but we must never become complacent about the importance of what is being communicated. Employers have a duty to strengthen their safety message in the workplace and ensure that employees are periodically trained and tested to understand the potential hazards of their environment.

When reevaluating your safety training, it is important to consider whether your safety signage is getting the message across. Does your company have documented standard operating practices that clearly communicate safe operation of equipment using the appropriate signage and labels?

Do you regularly document employee training requirements and test their knowledge of best practices for safe operations in their work environment?

Navigating through all the requirements needed to keep employees safe can be daunting. It takes a considerable amount of knowledge and discipline to enforce best safety practices and ensure they meet local, state and federal regulations.

There is no shortage of important considerations to keep front of mind when evaluating the effectiveness of safety signage in the workplace, and it is really not difficult to understand why.

After all, as the questionable sign I saw online so creatively – and accurately – pointed out, the stakes are very high when it comes ensuring the safety and well-being of employees on the job. And that, I think we all can agree, is no laughing matter.
Emerging Technologies That Will Benefit from Infrastructure Law

BY JOHN SCHNEIDAWIND
jschneiderwind@artba.org

The Infrastructure Investment and Jobs Act (IIJA) will help jump-start major repair and construction of the nation’s roads, bridges, public transit, airports, and other systems. The law also seeks to speed delivery of these investments by encouraging the adoption of innovative technologies.

The IIJA’s goal is to “promote adoption of digital tools to reduce risks of project delays and errors, develop more sustainable infrastructure, and deliver projects faster and more cost-effectively,” said Si Katara, co-founder and president of HeadLight, a visual-based inspection technology for infrastructure projects.

Government incentives can help change the transportation construction sector’s historically slow adoption of technology, said David McKenney, vice president of government relations for Bentley Systems. In the United Kingdom, he said, government mandates helped boost the rate transportation agencies adopted tech to 70 percent annually in 2019 from 10 percent annually in 2010.

The IIJA includes $100 million—$20 million annually over five years—to encourage the use of advanced digital construction management systems and related technologies. While the amount of money that will flow to the states has not yet been determined, states will likely have an opportunity to apply for grants under a new Advanced Digital Construction Management Systems Program managed by the U.S. Department of Transportation.

Katara, McKenney and other experts say such funding will coax state transportation departments to adopt:

- Visual-based inspection technologies that connect jobsites to engineering offices in real-time, boosting efficiency, reducing risk, and accelerating project delivery.
- Construction management tools to administer contracts digitally.
- Electronic ticketing technology to remove paper from the construction material supply chain.
- 3D modeling and digital twin technology.
- Drones applied to construction, operations, maintenance, and disaster recovery.

More Uses
John Frost, vice president of business development at drone mapping software firm Propeller, expects IIJA funding to flow into drone visualization, data analysis and digital twins, which are duplicates of a structure that show how that structure ages over time compared to the original. Drones already save time and enhance safety with bridge inspection work.

Technology also can ease supply chain challenges and streamline conventional business practices, enabling contractors to execute projects more efficiently. A key example of this trend is the use of electronic ticketing, or “E-ticketing,” which got a boost as the COVID pandemic mandated social distancing.

Now, instead of accepting a delivery by signing a paper delivery order and handing it to a truck driver, state transportation project officials can accept delivery of construction material by signing an electronic version of the order and transmitting it directly to the driver.

The more technology that the transportation construction industry adopts, the more it needs a way to store the generated information.

"One of the major challenges is the sheer volume of data ... that has to be managed effectively," Katara said. "It has to be open and secure to share data with other systems."

John Schneidawind is ARTBA’s vice president of public affairs.
MAX developed the World’s First battery powered rebar tying tool in 1993 and has a history of manufacturing durable and reliable industrial tools for 80 years. Since then, MAX rebar tying tools have revolutionized rebar tying work in precast plants and a variety of other job sites all around the world.

All MAX products are engineered to perform on professional contractors job sites and with MAX’s 200 R&D engineers we have continued to improve upon MAX proprietary technology, which led to the invention of the TWINTIER® rebar tying tools. TWINTIER® technology allows the tools to tie 5,000 ties per charge while delivering just the right amount of wire for greater productivity and cost savings. These unique innovative features make the TWINTIER® the most efficient rebar tiers in the industry. Today, MAX manufactures a full line of rebar tying tools that can tie between mesh up to #9 x #10 rebar.

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