SAVING LIVES

POSITIVE SEPARATION PROTECTS OUR WORKERS

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“Transportation Builder (TB) is the official publication of the American Road & Transportation Builders Association, a federation whose primary goal is to aggressively grow and protect transportation infrastructure investment to meet the public and business demand for safe and efficient travel. In support of this mission, ARTBA also provides programs and services designed to give its members a global 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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EDITOR’S NOTE

MARK HOLAN | Editorial Director

A new look

This annual “safety source” issue of “Transportation Builder” (TB) has a new look created by ARTBA’s new Visual Editor & Director of Design Rachel Barth. Rachel has nearly 20 years of experience as a journalist and designer. She spent the last nine years as a product designer at Sightline Media Group, which publishes Military Times newspapers, among others.

She is managing all facets of the design, production and distribution of TB, the digital Washington Newsline, and other special publications, reports and marketing pieces. She is working closely with me and the ARTBA staff and membership to present news and other important content in ways that are easier to read in a shorter amount of time.

We know you have busy schedules.

In addition to this issue’s comprehensive coverage of ARTBA safety programs and services, we introduce a new feature on Page 14, “In case you missed it…,” which is a roundup of transportation news presented as short and informative briefs. You’ll also notice more pull-out boxes, bigger headlines and additional teases on the cover of the magazine, all designed to give you the content you need to know but in a more reader-friendly format.

This is in addition to new features we’ve added over the past few issues: “Spotlighting Innovations” by ARTBA’s Research and Education Division, and a Q & A with members of ARTBA’s Women Leaders in Transportation Design & Construction Council. Our regular columns also have a new look.

In the coming issues you can look forward to even more changes as we strive to provide you with even more great content packaged in an informative and fun-to-read magazine. We will strive to create more synergy between the print publication and the online version of the magazine.

Please let Rachel and I hear your thoughts and suggestions about how TB can better serve your needs.

Enjoy the magazine.
ARTBA has a long and distinguished history of safety education, training and advocacy. Our concern about transportation construction workers and the traveling public is highly regarded from the work zone to private industry boardrooms and the halls of government. The volunteer leaders in the Traffic Safety Industry Division, and on the Transportation Safety Advisory Council, and the Safety & Insurance Committee drive most of ARTBA’s good work in this area.

This fall, we will take our commitment to safety to a whole new level, but I will come back to that.

First, however, let me provide a quick update on some of the things we’ve been doing this year, including several reported in this annual “safety source” issue of Transportation Builder (TB).

SEEKING CLARITY ON MOVABLE BARRIERS
In April, ARTBA formally asked the Federal Highway Administration (FHWA) to clarify its position on whether state transportation departments can use federal-aid highway funds to purchase movable safety barriers. FHWA’s lack of clear guidance has essentially blocked the potential use of this innovative, life-saving product class.

In May, the agency asked an ARTBA task force to share its perspective on the use of proprietary and patented products or processes on federal-aid projects, including innovations that can help save lives. FHWA is reviewing its existing regulations that severely limit the use of such products.

SILICA LAWSUIT
In March, the Occupational Safety & Health Administration (OSHA) issued new regulations that will significantly tighten the existing federal standard for allowable worker exposure to crystalline silica dust. Our biggest concern is the new standard will divert significant resources—human and financial—away from activities aimed at mitigating, if not eliminating, documented, serious hazards to our workers health and safety like runovers and backovers and work zone intrusions. Therefore, on behalf of its membership, ARTBA and its allies filed a federal lawsuit April 4 to stop implementation of this unwarranted regulatory action that we believe has the potential to increase overall safety risks to transportation construction workers.

INTRUSION PREVENTION
Our association is not waiting for agency officials or politicians to make our work places safer. To reduce the problem of non-construction vehicles crashing into job sites, killing and injuring workers, ARTBA played a lead role in organizing the Intrusion Prevention Partnership (IPP). Representatives of other industry-related associations, national contractors, organized labor and several state transportation departments are working together to look at this deadly problem and find solutions.

FALL PREVENTION
In May, ARTBA released 13 new fact sheets designed to assist transportation construction industry firms in preventing fall-related deaths and injuries. The documents cover a wide range of topics, including suspension trauma, swing falls, horizontal lifelines, and lanyards and connectors.

ARTBA also completed a contract with FHWA to produce a variety of other safety-related guidance documents that can help save lives and reduce the costs of doing business for highway and bridge contractors; planning and design firms; and state and local transportation agencies. These materials are highlighted in this and future issues of TB, as well as a regular “Put Safety First” feature in the weekly Newsline.

COMING THIS FALL:
A SAFETY GAME CHANGER
The biggest safety news of the year will be unveiled at ARTBA’s National Convention, held Oct. 4-6, in Tucson, Arizona.

We can’t reveal the particulars at this point, but I assure you that it’s a major new initiative, developed by the industry’s “best of the safety best,” and one that promises to be an industry game changer. You’ll want to be in Tucson this fall for the public roll out.

In the meantime, please read through this issue to learn more about the safety programs that come with your ARTBA membership… and stay safe!
YOUR COMMUNITY HAS THE IDEA.
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CASE Construction Equipment is offering $25,000 in equipment support to one deserving community, township or municipality to go toward critical infrastructure repairs. If you represent local government and are looking to revive your parks, roads or bridges—we have a way for you to offset some of the costs.

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DireStates.com
This June 29 marks the 60th Anniversary of the day President Dwight D. Eisenhower signed the law authorizing the construction of the U.S. Interstate Highway System and creating the Highway Trust Fund to pay for it.

The 47,000-mile road network drove the 20th century American success story. The Interstates not only provided mobility and connected communities, but continue to serve as the lifeblood of the U.S. economy and are an integral component of the daily operations for virtually all businesses and motorists.

But, there can be no doubt that years of chronic under-investment have taken a toll on the Interstates, and the U.S. intermodal transportation network as a whole.

Nearly 60,000 U.S. bridges are structurally deficient and need repair. Aging transit systems in Boston, New York and Washington, D.C. are experiencing frequent breakdowns. More roads are needed across the country.

Looking to the future, U.S. population growth is expected to increase 22 percent to 390 million by 2045. Gross Domestic Product is expected to jump by 115 percent over the same period. And the total number of motor vehicles is expected to grow 26 percent, from 260 million to 327 million by 2045, according to ARTBA’s analysis of federal government data.

These trends illustrate why America needs a 21st century plan to help ensure global competitiveness and future mobility. In honor of the 60th Anniversary of the Interstates, here are six ideas policymakers should consider:

1. **Repair, modernize and add capacity to the Interstate Highway System**, particularly in high-density freight corridors and population centers. Think Interstates 2.0.

2. **Prepare now for the autonomous vehicles that are already nosing their way on to the nation’s entrance ramps**. They have the potential to improve traffic flow. However, it will be necessary to make major improvements to the existing physical infrastructure.

3. **Dig more tunnels like projects in Boston, New York, Miami and Seattle** to move more people and goods.

4. **Add more elevated trains and high-speed rail corridors**, and continue to develop innovative personal transport systems like Elon Musk’s Hyperloop.

5. **Build additional runways and fully modernize the traffic control system** to allow more passengers to fly to their destinations on schedules that better suit their needs.

6. **Prepare to transport the tsunami of freight headed to our shores**. ARTBA has been pushing a vision called “Critical Commerce Corridors” to improve the safe and efficient movement of goods. This could be in the form of self-financed “truck only lanes” or elevated freight shuttle system guideways.

While no one really knows what the future holds, one thing that makes America unique is that the possibilities are limitless.

So, back to the question of what “Ike” would do. In 1952, he told Hearst Newspapers, “The obsolescence of the nation’s highways presents an appalling problem of waste, danger and death.” He later noted that a modern network of roads is “as necessary to defense as it is to our national economy and personal safety.” He never wavered from these views.

President Eisenhower provided the leadership model that is necessary to implement the ideas outlined above.

We urgently need consensus among elected officials and policymakers about the importance of massive new investments in all modes of transportation. We must continue to make the case for permanently fixing the beleaguered Highway Trust Fund with a long-term and sustainable funding source.

We know what “Ike” would do. He wouldn’t be pusillanimous, partisan or pussy footing. He would unleash the men and women of the U.S. transportation design and construction industry to get the job done.

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T. Peter Ruane

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8 | www.transportationbuilder.org

May/June 2016
Drive down distracted driving in work zones.

RoadQuake® 2F Temporary Portable Rumble Strip alerts distracted drivers in work zones. Designed to reduce accidents and save lives, RoadQuake generates the same level of sound and vibration as milled strips. Drivers refocus their attention on driving!

RoadQuake 2F Temporary Portable Rumble Strip with CRIB™ Cargo Carrier. CRIB reduces deployment and removal time, enhancing worker safety.

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The ARTBA Foundation’s Safety Training Programs are Getting Strong Endorsements!

ARE YOU MISSING OUT?

“I wanted to thank you once again for bringing the Roadway Safety+ course to Mississippi for several MDOT maintenance supervisors, safety officers and engineers. We have received nothing but positive feedback. The material and resources were found to be outstanding and have already been put to good use in our districts statewide . . . Again, we appreciate you coming and hope that you left Mississippi feeling good about the training.”

—Cookie Leffler, safety director, MDOT

“I wanted to thank you for scheduling the OSHA 10-Hour workshop and the Preventing Runovers & Backovers workshop that was held in Riverton, Utah in 2015. We are in support of this program and would like to go on record that it is extremely important to our local governments. Van [Howell] did an excellent job and was very knowledgeable in the safety field, and presented the material in a comprehensive and interesting way for the students.”

—Nicholas Jones, director, Utah LTAP

“[ARTBA Master Instructor] Neal Carboneau was in Oklahoma in 2015, during which he taught six separate sessions of this two-day class at five locations for municipal, county and tribal government employees. Mr. Carboneau was an excellent instructor and well received by the personnel in attendance. I personally observed Mr. Carboneau’s instruction at two of the classes and was impressed with his level of knowledge, attention to detail, enthusiasm, and ability to connect with his students. I would highly recommend Mr. Carboneau to any organization considering his services.”

—Douglas Wright, director, Center for Local Government Technology, Oklahoma State University

“I would like to communicate my appreciation for Mr. Van Howell (an ARTBA master instructor). It is not easy to capture and hold the attention of 20+ people but Mr. Van Howell was able to do so with ease. This training brought safety awareness to a wide range of workers in construction, maintenance and small business owners. In addition to bringing awareness, the Roadway Safety class also distributed the software resource to participants of the Roadway Safety+ program . . . This training brought some much needed attention to the value of safety in all operations that take place here on the Pueblo. Mr. Van Howell was able to inform, enlighten and inspire participants to take safety seriously, to use safety resources effectively and to be vigilant in working to maintain high safety standards.”

—Deanna Lynn Aquiar, small business specialist, Ysleta del Sur Pueblo

For more information about how ARTBA safety training courses can help you, contact Robinson Vasquez at rvasquez@artba.org or call 202.289.4434.
Program

Tuesday, July 12
4:00-6:00 p.m.
Transportation Investment Advocates Council Meeting

6:00-7:00 p.m.
Council Networking Reception

Wednesday, July 13
8:00-8:30 a.m.
Networking Breakfast

8:30-8:45 a.m.
Welcome

8:45-9:15 a.m.
Trends in State and Local Transportation Funding
A review of 2015 action and preview of 2016 transportation ballot initiatives

9:15-10:00 a.m.
Understanding and Neutralizing Opponents Arguments
Advice on anticipating the arguments from gas tax/tolling opponents and building preemptive communication strategies.

10:00-10:15 a.m.
Networking Break

10:15-11:00 a.m.
Framing the Gas Tax Package: What the Public Supports
New research on how policy characteristics and messaging can influence public support for raising the gas tax.

11:00-11:45 a.m.
Maintaining Momentum after Legislation Stalls
Advocates share their lessons learned on campaigning for a transportation funding increase after legislation failed to pass.

11:45 a.m.-1:00 p.m.
Hot Topics Lunch
An interactive discussion on transportation funding methods and campaign techniques.

1:00-2:00 p.m.
How to Get Legislators on your Side and Help Champions Win the Battle
Advice from state legislators.

2:00-2:15 p.m.
Networking Break

2:15-3:00 p.m.
Winning Local Transportation Ballot Measures
Learn how advocates ran successful campaigns to increase local transportation funding.

3:00-3:45 p.m.
Winning Motor Fuel Tax Strategies in 2015
Campaign strategists from three of the eight states that successfully increased taxes on motor fuel last year share insights.

3:45-4:00 p.m.
Closing Remarks

6:00-7:30 p.m.
Capitol Hill Reception

Registration and sponsorship: www.transportationinvestment.org
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Washington, D.C. 20001

Make your room reservations directly with the Washington Court Hotel by calling 1.800.321.3010 or 202.628.2100. Ask for the ARTBA P3 Conference rate of $279 per night.

### Registration:
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Non-Member: $1,550

### Sponsorship:
Contact Ed Tarrant at etarrant@artba.org or 202.289.4434.

Register: [www.artbap3.org](http://www.artbap3.org)
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IN CASE YOU MISSED IT...

COMPILED BY ARTBA STAFF

PROJECTS

>> Maryland officials in April approved a public-private partnership (P3) to build a $5.6 billion light-rail line through the Washington suburbs. ARTBA members Fluor Enterprises Inc. and Star America Purple Line, LLC (Star America), formed Purple Line Transit Partners, which is providing equity investment in the project, along with Meridiam Infrastructure Purple Line, LLC. ARTBA members Lane Construction Corporation and Traylor Bros., Inc., are part of the design-build team.

>> The Federal Highway Administration (FHWA) in May announced a $357 million Transportation Infrastructure Finance and Innovation Act (TIFIA) loan to help finance the construction of four new toll lanes on State Highway 288 in Houston, Texas. Several ARTBA members are involved in the project, including ACS Infrastructure Development, Inc., of Coral Gables, Fla.; Dragados USA, Inc., of New York, NY.; Pulice Construction, Inc., of Phoenix; James Construction Group, LLC, of Baton Rouge, La.; and MICA Corporation of Fort Worth, Texas.

>> A 2.2-mile streetcar with 16 stops opened in May in downtown Kansas City, Mo. The $100 million project was a joint venture between Stacy and Witbeck of Alameda, California, an ARTBA member, and Herzog Transit Services Inc., of Irving, Texas.

NATIONAL GASOLINE SALES

RATES ON THE RISE

Figures are compared to prior year

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Source: Federal Highway Administration
Photo illustration iStock.com

National gasoline sales increased by 2.8 percent in 2015 compared to 2014, the largest year-over-year increase since 2002, according to the Federal Highway Administration (FHWA). This is the third consecutive year of gasoline sales growth, which is linked to the improving economy, ARTBA Chief Economist Dr. Alison Premo Black said.

FROM THE ARCHIVES

In May 1946—70 years ago—President Harry Truman received a life membership to the American Road Builders’ Association, forerunner of today’s ARTBA. The Missourian had joined the association 10 years earlier. He is the only president to receive the award.

PEOPLE

Kenneth R. Fulmer, PE, will succeed Edward M. D’Alba, PE, as president and CEO of Urban Engineers, Inc., effective July 1, 2016. D’Alba will continue to serve on the firm’s board. This is only the third top leadership transition since Urban’s founding in 1960.

Arthur J. Fox Jr., editor-in-chief emeritus of Engineering News-Record (ENR), died May 11 at age 92. In 2004, the ARTBA Foundation named Fox one of “America’s Top 100 Private Sector Transportation Design & Construction Professionals of the 20th Century” in recognition of his leadership and contributions to construction industry journalism.

Meanwhile, the Association Journal, Engineering News-Record (ENR), announced the 2016 ‘orion award winners. The list of winners includes 16 of the 20 top leadership transitions in the entire construction industry since 1960. ARTBA Chief Economist Alison Premo Black said the winners are a testament to the profession’s leadership and commitment to excellence in the field of transportation engineering.

130 Number of House members signing bipartisan letter urging the Ways & Means Committee to fix the Highway Trust Fund in any tax code reform bill. See the letter in Current Issues section of www.artba.org.
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HNTB offers snazzy jackets for ‘safety excellence’

HNTB has launched a new safety recognition incentive program that rewards employees with a stylish Carhartt Shoreline Jacket embroidered with the company logo and the words “Safety Excellence.”

Objectives of the program include instilling safety awareness to prevent accidents and motivating employees to comply with various regulatory requirements and prevent government fines. The incentive program requires employees to present at least six different tailgate safety meetings and identify at least six different safety problems that were corrected, and complete the OSHA 10-hour class and five HNTB computer-based safety training classes. The program began April 1 and will last for one year.

HNTB’s consistent commitment to safety was recognized earlier this year when the company received Liberty Mutual Insurance’s highest safety level award. HNTB has received safety recognition awards from Liberty for six consecutive years; and the Kansas City, Mo.-based Builders’ Association’s safety award for the fifth year in a row.

For more information about the incentive program, contact Dennis Burks, HNTB safety director, at dburks@HNTB.com.

PSS Eases Handling of Portable Rumble Strips to Work Zones

Sometimes one helpful innovation leads to another.

PSS, formerly Plastic Safety Systems, developed the RoadQuake line of temporary portable rumble strips in 2009 to increase safety in roadway work zones. Because the rumble strips are not nailed or glued to the road, they can be moved relatively quickly within rapidly shifting traffic patterns at a work site, or from job to job.

Distracted drivers usually snap back to attention as they feel the vibrations below and hear the audible cue.

At 110 pounds each, however, moving the folding, 11-foot temporary strips from place to place still takes some time and muscle.

That’s why PSS this year introduced its RoadQuake 2F CRIB Cargo Carrier, which is specifically designed to carry the company’s brand of rumble strips. By reducing how long it takes to deploy or remove the strips, workers spend less time exposed to traffic.

The carrier fits to the back of most commercial vehicles. It has adjustable mount holes, so users can lift or drop the carrier height to suit their needs.

Four states currently mandate use of PSS’s temporary rumble strips in their highway work zones, and the product is being used in 28 states.

For more information, contact William Jamieson, PSS marketing manager, at william.jamieson@pss-innovations.com.
How smartphones aid road inspection

Carnegie Mellon University (CMU) scientists are using smartphones and digital cameras in a low-cost system to monitor road conditions.

These readily available devices are mounted inside cars and other vehicles to collect images and videos of road surfaces. Computer vision algorithms analyze the images to determine where there are high concentrations of cracked street surfaces, where signage is missing or damaged, or where there is snow or slush on the road. These areas are then flagged for maintenance and other attention.

The system is being pioneered by Christoph Mertz, principal project scientist at CMU’s Robotics Institute, and his colleagues. They’ve pilot-tested the system with the Pennsylvania Department of Transportation (PennDOT) on snow plows using smartphones to track real-time road conditions in winter.

The technology also has been deployed in Pittsburgh and nearby Marshall and Cranberry townships. The local governments have reported they value the system’s ability to integrate inspection technology into everyday operations. Mertz has suggested mounting smartphones inside garbage trucks to assess roadway conditions on a routine basis.

The $500,000 project is funded by CMU’s Technologies for Safe and Efficient Transportation (T-SET) University Transportation Center. It is sponsored by the U.S. Department of Transportation, the Hillman Foundation, the Buhl Foundation, the National Science Foundation and PennDOT.

Read more at [www.cs.cmu.edu/~road/](http://www.cs.cmu.edu/~road/). For more information, contact Christoph Mertz at cmertz@andrew.cmu.edu.

Using technology to fight potholes

Michigan State University (MSU) engineers have developed a statistical model to protect roadway surfaces by measuring the depth of freezing underneath. By providing better data about when to post or remove load limits, the model can save money for local governments by reducing road repairs, while helping the trucking industry avoid costly delays or fines.

The model was developed by Dr. Gilbert Baladi and Pegah Rajaei at MSU’s Department of Civil and Environmental Engineering, in cooperation with the Michigan Department of Transportation. It predicts freezing under the roads using air temperature data and the thermodynamic properties of the soils.

In a multi-year study using data from subsurface temperature sensors at 25 stations across Michigan, the researchers were able to predict the freezing depth in different soil types.

The cycle of thawing and re-freezing during the late winter and early spring is one of the biggest causes of road damage. Roads are especially vulnerable to heavy trucks at this time. To reduce the destruction, Michigan and other states have enacted "frost laws" that restrict big rigs from carrying heavy loads during thawing season.

Imposing these laws at the wrong time can have substantial financial costs for both highway departments and the trucking companies.

The MSU research team has tested the statistical model in other states and accurately predicted the frost depths for 10 years. Data-driven frost laws in Minnesota have increased the service life of some asphalt roads by an estimated 10 percent, with total estimated annual savings of $14 million. Dr. Baladi said it might be a few more years before the data-driven program is instituted for all of Michigan.

Read more at [www.michigan.gov/mdot](http://www.michigan.gov/mdot), report RC-1619. For more information, contact Gilbert Y. Baladi, Ph.D, at baladi@egr.msu.edu.
The GENERATION X cutter bit from Wirtgen Rhino Parts reduces operating costs with longer life and reduces downtime with greater reliability. The GENERATION X carbide shape maximizes production, carbide utilization, and cutter bit life. The GENERATION X heavy-duty wear ring minimizes lengthwise toolholder wear, improves contact surface protection for the toolholder, and optimizes cutter bit rotation.

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This material is based upon work supported by the Federal Highway Administration under agreement DTFH61-11-H-00029. Any opinions, findings, and conclusions or recommendations expressed in this publication are those of the Author(s) and do not necessarily reflect the views or policies of the U.S. Department of Transportation or the Federal Highway Administration.
Safety is our business
A special online publication details ARTBA’s many programs

By Bradley Sant and Mark Holan
bsant@artba.org
mholan@artba.org

Since ARTBA was founded back in 1902, safety has been a key part of the association’s mission and a distinguished hallmark of its leadership on behalf of the U.S. transportation construction industry.

To improve safety for workers, pedestrians and motorists, ARTBA works to build consensus and develop policy. We bring together national leaders to better understand the complex and intricate interaction of safety with all aspects of transportation planning, design, construction, maintenance and repair. ARTBA’s Transportation Development Foundation (TDF) secures safety training contracts and alliances, and also promotes safety through scholarships, awards and professional development courses.

ARTBA does more than can be packed into this annual “safety source” issue of Transportation Builder. All of our activity, however, is outlined in a special publication: “The U.S. Transportation Construction Industry’s Most Comprehensive & Value-Added Safety Program.”

It is available in the digital version of this issue at: www.transportationbuilder.org.

Here’s a quick look at some of the topic areas you will find inside this 20-page supplement:

- ARTBA safety staff bios and contact info
- At-a-glance safety trainer profiles
- Legislative and regulatory advocacy
- Traffic Safety Industry Division
- Leadership Opportunities
- Training & Education Programs & Services

- Local/Tribal Technical Assistant Program (LTAP/TTAP)
- National Work Zone Safety Information Clearinghouse
- Partnerships and Alliances
- Coalitions
- Meetings and Conferences
- Awards & Scholarship Programs
- A 40-year time of our safety efforts and achievements

We hope you’ll take time to go online and review this special publication. It’s a good refresher for any industry professional, one we hope you will share with your colleagues. TB

Bradley Sant is ARTBA’s senior vice president of safety and education.

Mark Holan is ARTBA’s editorial director.
SAFETY SOURCE

Saving lives, saving money

ARTBA’s new certificate-training course helps workers stay safe on the job

By Mark Holan
mholan@artba.org

In January, ARTBA’s Transportation Development Foundation (ARTBA-TDF) began offering its Safe Backing and Spotting course to address one of the most significant hazards in transportation construction. It’s the first ARTBA-TDF certificate training course to help workers stay safe on the job while allowing business owners to protect their bottom line. So far, 500 people from eight companies have received the training.

The course is designed to meet ANSI/ASTM E2659 standard, which helps ensure the curriculum meets the most rigid and highly regarded specification. The course was developed just in time for a new regulation being developed by the Occupational Safety and Health Administration.

Many roadway construction worker deaths result from being hit by a vehicle. Sadly, half of these fatalities—about 30 each year—are caused by work zone vehicles and equipment. Other workers are seriously injured in such mishaps.

“The Safe Backing and Spotting course “re-introduced things that we have been saying,” said David Tonini, area safety manager at Lane Construction Corporation. “Sometimes it helps to have someone from outside the company come in and say it.”

The Bangor, Maine, office provided the training to 97 supervisors and other quality control personnel with primary safety responsibilities during two sessions in early May.

Tonini said practical backer/spotter exercises using a simple hand-held mirror were very helpful.

“Our spotters tend to just back up,” Tonini said. “But a spotter should stop, walk ahead, and then re-engage with the truck.”

ARTBA-TDF has developed a four-hour, six-point training program that provides detailed information to eliminate deaths and injuries caused by improper and unsafe backing. The program covers critical topics such as vehicle blind spot recognition and operator-to-worker communications. It is being taught by ARTBA’s cadre of industry-expert master safety instructors.

Workers are trained how to avoid dangerous traffic areas on roadway construction sites, recognize hazards surrounding equipment, and to provide clear communication between drivers/operators and spotters through the use of standardized signals and communication.

The course is a must for spotters, construction drivers/operators, supervisors and other workers who labor in close proximity to moving trucks and equipment. Even experienced spotters can attend this course as a refresher.

All attendees will receive a certificate of course completion from ARTBA-TDF. Employers also receive documentation for their insurance carriers, potentially reducing costs or holding premiums in check.

Industry firms and public agencies interested in learning more about the ARTBA new certificate training course, or other training and safety videos, should contact ARTBA Senior Vice President of Safety & Education Brad Sant at bsant@artba.org or 202.289.4434. TB

Mark Holan is ARTBA’s editorial director.

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ALL PARTS, LABOR, AND MATERIAL MADE IN AMERICA.
Life-saving space

Creating separation and reducing delays to protect highway workers

By Bradley Sant
bsant@artba.org

THE SPACE BETWEEN HIGHWAY workers and moving traffic is usually measured in inches. That's all the separation there is between life and death; between another day on the job and a permanent injury.

The time between when Congress passes safety regulations and when government and industry fully implement those laws in the work zone is too often measured in years. This must be improved.
May/June 2016

Two roadway construction or maintenance workers are killed on the job every week. Another 30 workers are injured every day.

In December 2015, the “Fixing America’s Surface Transportation Act (FAST) Act” became the nation’s newest surface transportation law. It contains a provision designed to better protect America’s roadway construction workers by directing the Federal Highway Administration (FHWA) to “do all within its power to protect workers in highway work zones.”

Congress also wants FHWA to move rapidly to finalize the worker safety regulations it directed in MAP-21, the previous highway funding law passed in 2012. Section 1405 of MAP-21 says FHWA should insure that:

1) at a minimum, positive protective measures are used to separate workers on highway construction projects from motorized traffic in all work zones conducted under traffic in areas that offer workers no means of escape (such as tunnels and bridges), unless an engineering study determines otherwise;

2) temporary longitudinal traffic barriers are used to protect workers on highway construction projects in long-duration stationary work zones when the project design speed is anticipated to be high and the nature of the work requires workers to be within 1 lane-width from the edge of a live travel lane …

Twice since 2012, Congress and the President Obama have instructed FHWA to better protect workers using positive separation, clearly showing that the safety measures contained in FHWA’s current regulations (particularly Subpart K) are not adequate. The transportation construction industry is anxious to work with FHWA to fully implement this mandate.

TOO MANY DEATHS, INJURIES

Two roadway construction or maintenance workers are killed on the job every week. Another 30 workers are injured every day. These figures, based on annual averages, tend to increase during the busy warm-weather building and repair season. Deaths and injuries in the transportation construction industry come at a high cost; not only in pain and suffering by the victims and their families and colleagues, but also in losses that total hundreds of millions of dollars.

The U.S. Occupational Safety and Health Administration (OSHA) reported there were 129 deaths in highway, street and bridge construction from FY2011 to FY2012. In 39 instances, the victim was struck by an errant driver who left the travel lanes and ran over a worker. That’s nearly one-third of roadway worker deaths caused by motorists who may be impaired, distracted or tired. Worse, some are belligerent and intentionally drive around safety drums or barricades, making their travel schedule more important than the person they might kill or injure.

WHAT CAN BE DONE?

More has to be done to protect workers from these motorist intrusions.

The first step to reducing this toll of death and injury is to work with FHWA to create federal regulations that promote greater use of positive separation between workers and motorists, as directed in both the FAST Act and MAP-21. That will happen when concrete, moveable and other forms of barrier as used more frequently, and the use of these devices is mandated in the contract specifications. This will allow all contractors who bid on a job to provide suitable protection for the workers.

Another step will be to ensure that new, innovative forms of protection are allowable for purchase on federal-aid projects. Toward that end, ARTBA President & CEO Pete Ruane wrote to FHWA Administrator Gregory Nadeau to express concern about problems concerning funding for movable barriers in work zone applications. In his April 24 letter, Ruane said:

“… it is our understanding that the FHWA has not provided clear guidance to the states indicating that movable barriers are eligible items for purchase with their federal-aid funds even if the state warrants they will be used exclusively on their federal-aid projects. This lack of guidance has essentially blocked the potential use of this innovative, life-saving product class on federal-aid highway projects across the nation.”

Ruane added:

“These products—innovative American advancements in construction barriers—are proven to be extremely effective in providing positive separation between workers and traffic, a federal goal articulated by Congress in surface transportation program law and strongly supported by industry. Movable barriers have also been demonstrated to greatly minimize traffic disruption time caused by roadway work zone operations, a key objective of state DOTs in the public interest. These are priorities on which we all agree.”

ARTBA is working with federal officials to create policies and regulations that will better protect America’s workers. Support for these
initiatives from transportation construction professionals is essential to getting our federal agencies to move in the right direction. But we cannot wait for politicians and agency officials to make our workplaces safer.

To focus more attention on preventing a major safety problem—non-construction vehicles crashing project sites, killing and injuring workers—ARTBA played a lead role in organizing the Intrusion Prevention Partnership (IPP). Joining ARTBA in the IPP are leading national contractors, organized labor and several other industry-related associations and state transportation departments.

Representatives on the IPP are working together to look at the problems and find solutions. The partnership has developed a focused program of work that includes:

- Creating regional workshops and peer-to-peer exchanges to discuss the problem, share ideas and gather information; and
- Developing a guidance document that describes the findings and explains the steps needed to carry out best practices.

**EQUIPMENT SOLUTIONS**

We have also begun consolidating information about products and technologies that are available to help prevent motorist intrusions including portable rumble strips that warn and "wake up" drivers as they approach roadway construction sites. These strips can easily be moved from one work location to the next.

The roadway construction industry is working together, through our partnership, to gather and develop practices, products and strategies to prevent work zone intrusions. The job will not be easy, and it will take the coordinated efforts of contractors, roadway owners, equipment manufacturers and government agencies to make serious progress towards significantly reducing the number of deaths caused by motorist intrusions.

**JOIN THE CAUSE**

There are many things that the industry can do to prevent work zone intrusion deaths. First, talk to your representatives in Washington, D.C., and ask them to ensure FHWA completes the regulations mandated in two federal highway laws to increase the use of positive separation.

Second, get informed about the many new, innovative products that are available to better protect workers in both long and short-term operations.

Finally, get involved with the IPP. It is open to anyone interested in sharing resources and promoting practices that will prevent worker deaths. Working together, we can save lives!

Please contact me if you or your organization is interested in joining this important effort.

Brad Sant is ARTBA’s senior vice president of safety and education.
To address this human and economic toll and prepare you for an expected Occupational Safety & Health Administration regulation under development, the ARTBA Foundation has created a first-of-its-kind “Safe Backing & Spotting” Certificate Training Program to help protect your people and your bottom line.

Key topics covered:
1. Blind spot recognition
2. Operator-to-worker communications
3. High visibility clothing
4. Hazard identification
5. Safe vehicle routing
6. Proper hand signals

**SCHEDULE TRAINING**
Contact ARTBA’s Robinson Vasquez at 202.289.4434 or rvasquez@artba.org to schedule training at your headquarters.
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GOMACO’s patented three-point finishing system provides the smoothest deck possible with an auger to level the concrete, a cylinder consolidates and finishes the concrete, and a float pan seals and textures the surface. GOMACO finishers are available with several different options to customize them to your exact bridge deck specifications. Give us a call for the latest in concrete paving technology. Our worldwide distributor network and our corporate team always stand ready to serve and assist you.
ARTBA Foundation helps students
11 children of fallen highway workers receive scholarships

By Eileen Houlihan
ehoulihan@artba.org

The ARTBA Transportation Development Foundation (TDF) helps the children of highway workers who were killed or permanently disabled on the job through the “Lanford Family Highway Worker Memorial Scholarship” fund. Established in 1999 with a gift from brothers Stan Lanford of Lanford Brothers (1999 ARTBA chairman), and Jack Lanford with Adams Construction Company (1991 ARTBA chairman), the program has provided more than 120 scholarships to children in 25 states. The 2016 class includes:

RACHAEL MOSER
Rachael’s father, Richard Moser, a 21-year veteran of the Maryland State Highway Administration, was killed in 2007. Rachael, a recipient of the scholarship for her undergraduate studies at Denison University, will pursue graduate studies in education at Harvard University this fall.

LYNDSAY SUTTON
Lyndsay’s father, Steven Morgan, was killed in a November 2011 accident while working on Interstate 75 in Florida. She will be a senior at Florida Gulf Coast University, where she majors in communications.

AMY MCNEIL
Amy’s father, Jeffrey McNeil, was killed in 2005 while working for the Texas Department of Transportation on U.S. 69 in Beaumont. Amy is studying nursing at Lamar State College in Orange, Texas.

KAITLYN HENRY
Kaitlyn’s dad, Gary Henry, was struck by a construction vehicle and killed in 2013 while working on a state highway construction project on Interstate 270 near Columbus, Ohio. Kaitlyn will be a senior at Ohio University and is an intervention specialist major.

ANDREA PAIR
Andrea’s father, Shannon Pair, was struck and killed while working for Time Striping Inc., in 1998. Andrea will be a sophomore at Northeastern State University and studies nutritional science.

VICTORIA MARKLE
Victoria’s father, John Markle, was struck and killed on Florida’s I-75 in March 2016 while working for Ajax Paving Industries. Victoria will be a freshman at Florida Gulf Coast University where she plans to study journalism.

CIRAR BUTLER
Cirar’s father, Henry Butler, Jr., was killed while driving a Mississippi Department of Transportation work truck during highway repairs in 2014. Cirar will be a freshman at Coahoma Community College and plans to study physical therapy.

KRISTEN JARES
Kristen’s father, Gregory Jares, was killed in 2001 while working for the Texas Department of Transportation. Kristen will be a freshman at the University of Mary Hardin-Baylor in Belton and will study exercise physiology.

STANDRA JONES, JR.
Stan’s father, Standra Jones, worked for the South Carolina Department of Transportation. In 2007, he was struck and killed while taking down work zone traffic controls on I-26 in Lexington County. Stan will be a sophomore at Clemson University and majors in architecture.

WILLIE BLEVINS
Willie’s mother, Kathy Blevins, worked for the Gwinnett County Department of Transportation. She had just finished painting turn-lane lines when her vehicle was struck and she was killed in 2004. Willie will be a junior studying engineering at the University of North Georgia.

EMILY JONES
Emily’s father, Richard Jones, was killed in a car accident in 2013 while working for Direct Traffic Control. Emily will be a junior at Montana State University and majors in criminal justice. TB

Eileen Houlihan is ARTBA’s senior writer/editor.

CONTRIBUTE AND RECOMMEND

The continued success of the scholarship program relies on donations from our member companies and their employees. Please consider supporting this great cause. For more information, contact ARTBA-TDF Executive Director Matt Jeanneret at mjeanneret@artba.org.

If you know any students who could benefit from the scholarship program, contact ARTBA Senior Writer/Editor Eileen Houlihan at ehoulihan@artba.org.
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Since the American Road & Transportation Builders Association (ARTBA) was founded back in 1902, safety has been a key part of the association’s mission and a distinguished hallmark of its leadership on behalf of the U.S. transportation construction industry.

To improve safety for workers, pedestrians and motorists, ARTBA works to build consensus and develop policy. We bring together national leaders to better understand the complex and intricate interaction of safety with all aspects of transportation planning, design, construction, maintenance and repair.

You might think of our safety programs as a three-legged stool: 1) ARTBA’s legislative and regulatory efforts through its membership divisions and councils; 2) ARTBA’s Transportation Development Foundation (TDF) safety training contracts and alliances; and 3) TDF scholarships, awards and professional development courses.

- ARTBA’s legislative and regulatory advocacy on behalf of its members reaches Capitol Hill and the White House where we regularly put forward policy recommendations in surface transportation bills, and it extends to federal agencies where we make sure officials understand the real-world impacts of proposed rules or standards. The Traffic Safety Industry Division, Safety Management Professional Development Section, Transportation Safety Advisory Council, and Safety & Insurance Committee serve as vehicles for communicating the industry’s views on policy and regulations.

- ARTBA-TDF administers a variety of safety education programs and services through contracts and cooperative agreements with the federal government and other industry allies. This includes the National Work Zone Safety Information Clearinghouse (www.workzonesafety.org), the Occupational Safety and Health Administration (OSHA) Harwood training program, the Federal Highway Administration (FHWA) Work Zone Training program, and support of the National Committee on Uniform Traffic Control Devices.

- TDF’s non-contract work includes a variety of professional development courses such as the “Roadway Safety Academy,” “Flagger Training,” and “Best of the Best Academy.” The Foundation administers the “Lanford Family Highway Worker Memorial Scholarship,” which has been providing since 2000 post-high school financial aid to the children of highway workers killed or permanently disabled on the job. The TDF also provides a national platform annually to recognize industry excellence through the “Roadway Work Zone Safety Awareness Awards,” and “Contractor Safety Awards.”

“It was a great success and the training provided by your organization will have a long lasting impact on the lives of the workers... The training conducted was instrumental in ensuring the safe passage for motorists and safe worksites for workers.”

—September 18, 2014, letter from Ken Nishiyama Atha, OSHA Regional Administrator in San Francisco, regarding the ARTBA Foundation’s safety training

To learn more about how the safety programs and services detailed in this publication can help your firm or public agency, contact ARTBA Senior Vice President of Safety & Education Brad Sant at bsant@artba.org, or 202-289-4434.
**ARTBA’s Comprehensive Safety Program**

**ARTBA Safety Staff**
A team of four full-time safety and three contract administration professionals manage ARTBA’s comprehensive safety programs and services. Together, this team has more than 100 years of combined safety and management experience.

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**Professional Training**
ARTBA-TDF offers more than a dozen safety training courses, targeted directly at the needs of transportation construction professionals. These include management-level academies, OSHA 10- and 30-hour classes, a selection of 35 topics through the Roadway Safety+ curricula, Internal Traffic Control Planning, and a new Backing/Spotting certificate course.

**Master Instructors**
ARTBA-TDF maintains a cadre of highly qualified master instructors who each average more than 35 years of safety management experience and expertise in occupational safety and health, and temporary traffic control.

**The National Work Zone Safety Information Clearinghouse**
The Clearinghouse (www.workzonesafety.org) provides the world’s most comprehensive online source of training, education, research, data, video resources and more. Fulfiling over 200,000 requests each year, this ARTBA-TDF project is supported with resources from the Federal Highway Administration. The Clearinghouse also provides products, webinars and hosts major conferences.

**Contract Services**
Through contracts and agreements with the Occupational Safety and Health Administration (OSHA), the Federal Highway Administration (FHWA), and the National Institute for Occupational Safety and Health, ARTBA provides a wide array of training and services at no cost to participants.

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**Traffic Safety Industry Division**
ARTBA’s TSID is home for companies that provide products and services to the transportation construction industry including signs, pavement markings, temporary traffic control devices, guardrail, and crashworthy road hardware.

**Transportation Safety Advisory Council**
Members from each of the eight ARTBA divisions participate on this council to set association safety policy that is used in helping develop legislative recommendations or providing feedback on proposed regulations.

**Safety & Insurance Committee and Professional Development Section**
Comprised of safety professionals, primarily from ARTBA’s Contractor and Planning & Design Divisions, they help create policies, training courses and products to protect the safety and health of industry construction workers.

**Safety Products**
ARTBA and ARTBA-TDF have developed and gathered a number of high-quality products to support your safety education efforts, including videos, posters, brochures, dictionaries and more—available to members at discount prices.

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**Lanford Family Highway Worker Memorial Scholarship**
This program provides college scholarships to children of roadway construction workers who are killed or permanently injured on the job. More than 100 students have received scholarships.

**Contractor Safety Awards**
This annual award recognizes outstanding safety performance and programs for small, medium and large contractors.

**Work Zone Safety Awards**
Presented annually to firms who have outstanding education and outreach programs or innovative products that improve roadway work zone safety.
ARTBA-TDF opens its online Learning Management Systems through the FHWA Work Zone Training Grants program. This educational portal provides credentialed training on a number of key temporary traffic control and work zone safety topics.

A new “Safe Backing & Spotting” course is launched. It is the first certificate program offered through ARTBA-TDF and educates workers and supervisors on safe backing procedures and standardized backing signals.

Releases a series of eight animated safety training videos, highlighting incidents based on NIOSH reports that explain worker deaths, and providing recommendations to avoid and prevent similar fatalities. Each three-minute animated video can be helpful if watched alone, but is even more effective in group training sessions with a master safety instructor.

Hosts a successful Work Zone Safety Conference in conjunction with World of Asphalt in Baltimore.

ARTBA's legislative and regulatory advocacy on safety matters on behalf of its members reaches Capitol Hill and the White House where we regularly put forward policy recommendations in transportation bills, and it extends to federal agencies where we make sure officials understand the practical impacts of proposed rules or standards. The Traffic Safety Industry Division, Safety Management Professional Development Section, Transportation Safety Advisory Council, and Safety & Insurance Committee serve as vehicles for communicating the industry’s views on these matters.

Over the years, ARTBA actions have resulted in successful efforts to ensure that Congress devotes increased investment to improve safety during transportation construction operations.

On the regulatory front, ARTBA stays in regular contact with federal agencies including OSHA, FHWA, the Environmental Protection Agency (EPA) and many others to make sure the industry’s voice is heard. The association strives to ensure new standards and regulations support our members’ interests, are easy to understand, and enable member companies to remain competitive at home and abroad.

The Team

ARTBA's safety team has nearly 100 years of combined experience, which is unmatched by any other transportation construction association.

For decades, ARTBA has made a commitment to hiring and retaining some of the best qualified safety professionals in the industry. The association’s multi-lingual team has served—and continues to serve—as advisors on government and private sector safety committees, work groups, councils and advocacy centers. The staff is regularly asked after to advise and guide these groups as they create programs and policies to improve safety for our industry. ARTBA augments its in-house capabilities with leading consultants who assist in training and program development.

Legislative & Regulatory Advocacy
Traffic Safety Industry Division

ARTBA member concerns in traffic safety and temporary traffic control come into focus through the association’s Traffic Safety Industry Division (TSID). Since 1979, the division has promoted the economic importance of infrastructure-related transportation safety products and programs. TSID members serve as ARTBA’s “safety conscience” and underscore the association’s commitment to this integral component of transportation development and improvements.

TSID’s primary goals are to:

- Advocate the interests of the safety sector within the transportation construction industry and assure the availability of public resources to meet transportation safety needs;
- Monitor regulatory activity at all levels of government that may impact transportation safety; and
- Promote awareness of traffic safety as a national issue and encourage the development and use of “hard” safety solutions, which protect the health and welfare of the public.

TSID creates a number of forums to promote networking with members of other ARTBA divisions and key industry leaders and organizations, including sponsorship of the National Committee on Uniform Traffic Control Devices.

Bradley M. Sant
Senior Vice President, Safety and Education; Executive Director for Safety–ARTBA Transportation Development Foundation

Mr. Sant has more than 25 years of experience in managing high-level safety and health, and adult training programs, including serving in senior safety positions with the Building and Construction Trades Department, AFL-CIO; the National Resource Center for OSHA Training; and the International Association of Fire Fighters. He has a bachelor’s degree from Utah State University with a double major in political science and Spanish, and a law degree from Georgetown University Law Center. Mr. Sant is an accredited OSHA instructor and former director of an OSHA outreach training center.

bsant@artba.org

2014

Trains over 5,000 participants for the year through its various safety programs, setting a new association record.

2013
ARTBA-TDF signs three new contracts with OSHA and FHWA to continue safety training and education programs, and fund the operations of the National Work Zone Safety Information Clearinghouse (Clearinghouse).
Leadership Opportunities

The association’s commitment to safety provides managers of member firms the opportunity to become industry leaders in national regulatory activities, industry standard setting negotiations and development of association policies and services.

- **Transportation Safety Advisory Council (TSAC):** Carries the responsibility of developing safety policies across all modes of transportation, which in turn, guide ARTBA legislative and regulatory activities. TSAC membership is “cross-divisional,” meaning it includes members from all eight ARTBA divisions.

- **ARTBA Safety & Insurance Committee:** Partners with ARTBA’s Contractors Division and TSAC to formulate occupational safety policies and programs. The committee also works closely with the Safety Management Professional Development Section to monitor safety concerns raised by industry professionals. Through subgroups, the committee develops regulatory comments, policies and training programs to meet identified safety needs.

- **Safety Management Professional Development Section (PDS):** Offers a forum for hundreds of safety directors to directly connect with other professionals in their field. The PDS network shares “best practices” information and provides suggestions for new or improved safety products through a Safety Listserv. Safety PDS members also have access to the latest, free safety training products developed through various contracts.

**International Safety Experience**

In cooperation with the International Road Federation, FHWA and other international programs, ARTBA has developed and conducted roadway safety training programs around the world, including week-long seminars coordinated with transportation ministries in Egypt, Argentina and Spain. ARTBA’s multilingual Roadway Safety+ program has also been showcased in a number of international forums.

**2012**

- Clearinghouse uses cutting-edge technology to power an interactive “virtual conference” featuring “Best Practices in Work Zone Safety” for public officials, contractors and other transportation industry professionals.
- ARTBA-TDF begins offering “Preventing Runovers & Backovers” course through OSHA Harwood contract.
- ARTBA finishes development and begins offering a new safety video explaining safe flagging practices.
- ARTBA and partners renew groundbreaking “Contractor-Labor-Government OSHA Alliance” program to promote safety for roadway construction workers, particularly promoting safety for non-native English speaking workers.
Training & Education Programs & Services

ARTBA’s award-winning training programs approach roadway construction safety from “both sides of the barricades.”

- **Safe Backing & Spotting:** This 2015-developed certificate program focuses on training workers to avoid dangerous traffic areas on roadway construction sites, to recognize hazards surrounding equipment, and to provide clear communication between drivers/operators and spotters through the use of standardized signals and communication. During the four-hour course, crew members learn:

1. A thorough understanding of spotting signals and communications between drivers/operators and spotters. ARTBA introduces the first set of nationally-standardized hand signals;
2. Recognition of the “sphere of safety”—the hazards above, below and around moving equipment, and how to communicate those hazards to workers, operators and drivers;
3. Traffic and pedestrian routing strategies as a result of hands-on training, classroom activities and a spotting skills test; and
4. How to identify equipment blind spots, and train workers and operators how to safely navigate congested work areas.

This course is designed to meet the ANSI/ASTM E2659 standard. The ARTBA Foundation is developing additional certificate courses to address common hazards in transportation construction, including fall prevention, trenching and excavations, and temporary traffic control.

Mr. Lopez
Safety & Spanish Training Manager

Mr. Lopez has been heavily engaged in Spanish language translation and interpretation for nearly a decade. For the past seven years, he has focused on safety and health training, with a special attention to Hispanic and disadvantaged workers. He has an associate’s degree in business administration and is working on a B.S. in Occupational Safety and Health. Mr. Lopez is a certified translator through the D.C. Multicultural Community Service and has an “English as a Second Language” (ESL) certificate through Northern Virginia Community College. He is an accredited instructor for OSHA 10- and 30-hour programs, Flagging, CPR, First Aid and others.

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2011

ARTBA-TDF is awarded a three-year FHWA cooperative agreement to develop work zone safety training courses and products, with a focus on the needs of local/rural roads.

- ARTBA-TDF is awarded an OSHA Harwood grant to conduct training on prevention of “runovers” and “backovers” in work zones through use of “Internal Traffic Control” concepts.

Clearinghouse offers “Power Workshop” at International Bridge Conference in Pittsburgh.

- ARTBA-TDF launches new “Best of the Best” safety academy where leading companies explain to other industry members what they do to obtain excellent safety results.

Through various training initiatives, ARTBA and its partners provide safety training to over 3,500 members of the industry.
Training & Education Programs & Services, Continued

- **OSHA 10-Hour Training Exclusively for the Roadway Construction Industry:** It focuses directly on the day-to-day hazards workers and supervisors are likely to encounter in roadway construction sites. This was a pioneering effort that used the OSHA 10-hour format, but focused on the hazards unique to a specific industry. The program includes topics such as the prevention of night time construction hazards, “runovers” and “backovers,” high-visibility clothing and working next to roadway traffic.

- **Roadway Safety+:** Developed through a series of contracts with FHWA and OSHA, Roadway Safety+ is the most widely vetted, vertically integrated, comprehensive training program in the industry. It contains 35 interactive training modules on an interactive training DVD, toolbox pamphlets, five trainee booklets, 12 guidance documents, and two instructor guides. Products are available by request and through onsite training.

- **Turning Point: Work Zone Safety for New Drivers:** A unique program helps teenage drivers better understand the hazards of driving through road construction zones, it comes with a training video, interactive CD-based driving simulator, searchable CD-library, and other classroom instructional materials.

- **Preventing Runovers & Backovers–Internal Traffic Control:** Developed in partnership with the National Institute for Occupational Safety and Health, (NIOSH) and OSHA, this course explains in detail the concept of “Internal Traffic Control.” It is designed to train contractors and their employees how to safely navigate around workers and equipment in work zones to avoid runovers and backovers of workers on foot.

- **Roadway Safety Academy:** Offered through ARTBA-TDF’s “Transportation Builder Institute” (TBI), this academy is aimed at giving your construction firm highly qualified safety training professionals. Attendees become accredited as instructors for the roadway construction-focused OSHA 500 Instructor Course, which qualifies them to teach your workforce the OSHA 10- and 30-hour outreach classes. It also includes flagger instructor certification and a package of high-quality training materials for use when participants return to the job.

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**Robinson Vasquez**
Safety Training & Business Development Manager

Mr. Vasquez is an experienced trainer and business manager, with responsibilities for a variety of safety training contracts and liaison with the Hispanic Community. Prior to joining ARTBA, he served as an attorney, specializing in construction law, international business, and labor relations in his native Peru. Mr. Vasquez graduated cum laude from the Pontifical Catholic University of Peru where he earned his law degree. He holds a master’s degree in comparative law from Brigham Young University, and an M.B.A. from the University of Utah. He is qualified as an OSHA instructor, having completed both the OSHA 510 and 500 courses.

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**2010**

- Clearinghouse “Power Workshops” continue at World of Asphalt and International Bridge Conference.
- More than 2,000 industry professionals participate in Clearinghouse webinars.

- ARTBA develops and begins offering a new safety video on “Avoiding Runovers & Backovers” at roadway construction sites.
- FHWA extends ARTBA Clearinghouse contract for additional two years.
- ARTBA becomes founding member of the “Highway Safety Partners Venture,” a group of 20+ organizations focused on roadway safety who gathers quarterly to share ideas, coordinate activities and work to promote highway safety.
- Through various training initiatives, ARTBA and its partners provide safety training to over 4,000 industry professionals.
• **“Best of the Best” Academy**: It features winners of ARTBA-TDF’s “Contractor Safety Awards” sharing the “secrets” of their success. Using real scenarios and case studies, senior safety and project management executives from some of the nation’s leading firms interact with participants and explain how to troubleshoot site and project safety challenges.

• **Flagger Training**: ARTBA is an authorized training center for flaggers certified training through the National Safety Council. Upon completion of this program, workers understand the procedures for directing traffic along with key personal safety practices.

• **Language Training**: ARTBA has developed a comprehensive Spanish-language training course for roadway construction. Using “safety” as the background for teaching key phrases, vocabulary and basic sentence construction, the program is geared to foster communication between English and Spanish-speaking crew members. English speakers learn basic Spanish phrases while Spanish speakers learn basic English. Both languages are taught simultaneously to improve communication and cultural awareness.

• **Safety Products**: ARTBA has many safety products such as training manuals and videos on personal protective equipment, flagging, avoiding “runovers” and “backovers” that are available at [www.artbastore.com](http://www.artbastore.com). Most products are available in both English and Spanish.

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**FHWA Local/Tribal Technical Assistant Program (LTAP/TTAP)**

ARTBA’s master instructors coordinate safety training programs with LTAP/TTAP Centers across the U.S. The FHWA LTAP/TTAP Clearinghouse is managed by the ARTBA Foundation. This unique partnership allows for free training to thousands of local government employees, consultants and small-business contractors who would otherwise find it difficult to obtain such quality information. ARTBA’s Foundation has also worked closely with the LTAP community to develop guidance documents to address safety challenges during construction and maintenance of local/rural roadways.

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**2009**

Hundreds participate in Clearinghouse Work Zone Safety Conference, held in conjunction with World of Asphalt in Orlando.

- Clearinghouse launches “Power Workshop” at the International Bridge Conference.

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**2008**

ARTBA and partners renew ground-breaking “Contractor-Labor-Government OSHA Alliance” program where all sectors of the industry work together to promote safety for roadway construction workers.

- More than 500 industry professionals participate in Clearinghouse webinars.

- ARTBA asked to represent the transportation construction industry for development of the National Occupational Research Agenda, organized by NIOSH.

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**Sepi Fazeli**

Contracts Manager

Ms. Fazeli has 30 years of contract and financial management experience and oversees a number of safety and training contracts and cooperative agreements with federal agencies. Prior to joining ARTBA, she worked with Northrop Grumman and Lockheed Martin for 10 years supporting FAA as a business management analyst. She has a bachelor’s in political science from Boston University. Ms. Fazeli is fluent in Farsi and French.

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Master Instructors

The master instructors ARTBA provides for the training sessions have literally written the book on work zone safety. They have been developing safety programs for ARTBA and key federal agencies for more than a decade and weigh in with some 300 years of collective transportation and construction experience.

(We highlight some of them on the following pages.)

Other Programs:
In addition to the programs referenced above, ARTBA offers customized on-site training programs and auditing services such as:

- Management Commitment to Safety
- Trenching and Excavations
- Competent Person
- OSHA 30-Hour Courses
- Safety Benchmarking
- Safety Site Audits

The ARTBA-TDF administers safety educational programs and services through contracts and cooperative agreements with the federal government and other industry allies.

- National Work Zone Safety Information Clearinghouse: The Clearinghouse is the world's largest online resource (www.workzonesafety.org) for all things related to roadway construction safety, fulfilling 200,000 information requests annually. It provides free access to interactive educational events such as live conferences and webinars, virtual meetings, Listserv email lists, posters and other educational materials. Our information is available in more than eight different languages. The Clearinghouse is owned by the ARTBA-TDF and operated in partnership with FHWA and the Texas Transportation Institute.

2007
Clearinghouse hosts the National Traffic Management and Work Zone Safety Conference at Intertraffic North America.
Clearinghouse launches new image and marketing campaign including a completely redesigned website: www.workzonesafety.org.
ARTBA and RAI Amsterdam host second Intertraffic North America exhibition in Fort Lauderdale.

ARTBA-TDF expands safety services and staff to begin offering on-site training and auditing services.

ARTBA-TDF and CNA launch contractor safety award program to recognize excellence and industry-leading achievement in construction employee safety and health programs.
Partnerships & Alliances

The following federal government agencies, unions, companies and construction-related groups are ARTBA safety partners and alliance members:

- Federal Highway Administration
- Occupational Safety & Health Administration
- American Association of State Highway & Transportation Officials
- Associated General Contractors of America
- International Association of Bridge, Structural Ornamental and Reinforcing Ironworkers
- International Union of Operating Engineers
- Laborers' Health and Safety Fund of North America
- Laborers' International Union of North America
- National Asphalt Pavement Association
- National Institute for Occupational Safety and Health
- U.S. Department of Labor
- CPWR – The Center for Construction Research and Training

Neal Carboneau, who leads the Transportation Training Institute, a regional education and technical assistance firm based in West Lafayette, Indiana. He previously managed the research and implementation program at Indiana’s Local Technical Assistance Program in Purdue University’s School of Civil Engineering.

2006

ARTBA-TDF is awarded OSHA Harwood grant to expand “Roadway Safety” program to include Disaster Response and Deployment and Retrieval of Temporary Traffic Control Devices.

ARTBA-TDF is awarded contract from the D.C. DOT to teach Spanish, English, safety, and basic work skills to minority and disadvantaged workers.

ARTBA-TDF and partners are awarded a four-year contract from FHWA to develop and deliver work zone safety training courses.
Coalitions

ARTBA builds coalitions and networks to leverage its safety and health activities and forge consensus on behalf of industry professionals.

- **Roadway Work Zone Safety & Health Alliance:** An OSHA-led and industry-supported alliance, it is designed to improve safety and health for roadway construction workers, particularly Hispanic and other non-English speaking employees.

- **National Safety Council Partnership:** It seeks mutually-advantageous opportunities to promote safe driving in roadway work zones and improve worker safety on roadway construction sites.

- **International Safety Equipment Association Roadway Construction Outreach:** Advances greater understanding of the need for and appropriate use of personal protective equipment in the roadway construction industry.

- **National Committee on Uniform Traffic Control Devices:** ARTBA is a sponsoring partner of the National Committee on Uniform Traffic Control Devices (NCUTCD), which assists in the development of standards, guides and warrants for traffic control devices and practices used to regulate, warn and guide traffic on streets and highways. NCUTCD develops public and professional awareness of the principles of safe traffic control devices and practices and provides a forum for qualified individuals with diverse backgrounds and viewpoints to exchange professional information.

- **Highway Partners Safety Venture:** This ad hoc group focuses on improving communications between the federal government, national associations, practitioners, and private sector groups representing the collective interests of national, state, and local stakeholders in the traffic safety arena.

- **Decade of Action for Road Safety:** Launched by the United Nations, this effort brings together governments and public and private sector organizations to promote safer roadways around the world, including motorists, cyclists and pedestrians.
Donald Elisburg, a former executive director of the Occupational Health Foundation, and retired principal investigator and project director for the Center to Protect Workers’ Rights. Mr. Elisburg helped develop the Roadway Safety+ program.

“I wanted to thank you once again for bringing the Roadway Safety+ course to Mississippi for several MDOT maintenance supervisors, safety officers and engineers. We have received nothing but positive feedback. The material and resources were found to be outstanding and have already been put to good use in our districts statewide.”
—March 2015, Cookie Leffler, safety director, MDOT
Meetings & Conferences

Since 1985, ARTBA’s Foundation has organized and conducted national conferences to promote roadway work zone safety. Since 2000, the conferences and related trade shows have been offered at least every two years and grown into a major industry event.

The 2015 event in Baltimore, Maryland, held in conjunction with the “World of Asphalt,” featured topics such as “Preventing Falls During Bridge Construction, Inspection and Maintenance” and “Preventing Motorist Intrusions in Roadway Work Zones.”

The Foundation’s comprehensive safety conferences cover all aspects of transportation construction safety, ranging from traffic control best practices to cutting-edge ideas to promote occupational safety and health. In recent years, ARTBA began offering conferences and workshops through its National Work Zone Safety Information Clearinghouse—and with other industry partners—to provide multiple educational forums. In 2012, the broad conference added a “virtual” platform allowing participants from around the world to participate from their personal computer or tablet.

“As an owner of the company, I would like to express my gratitude for the excellent class presentation that [ARTBA’s] Omar [Lopez] presented to our company. As I observed our employees in the different sessions, Omar kept their attention and I feel the training was very successful. We have been members of ARTBA for many years and our membership has been very good for us. With instructors like Omar, we will seek out more services in the future. Our goal is to keep everyone safe at all times. Thank you.”
—February 2015, Mike Alex, Cook Paving in Cleveland, Ohio, about ARTBA’s safety training

2003
Olympic Gold Medal Gymnast Dominique Dawes is selected as ARTBA spokesperson on work zone safety program for teen drivers, participates in media event for National Work Zone Awareness Week.

ARTBA-TDF, NSC and CNA are awarded OSHA contract to conduct safety training to educate workers and supervisors about roadway work zone hazards.

ARTBA and industry allies formalize alliance to develop awareness training and education programs aimed at improving the health and safety of workers and motorists in roadway construction zones.


ARTBA signs a “Work Zone Safety Alliance” agreement with OSHA, the National Institute for Occupational Safety & Health, NAPA, LIUNA and IUOE.

ARTBA and IRF launch international training program, “Executive Seminar on Roadway Safety.”
Van Arden Howell, an associate director at the OSHA Training Institute Education Center at the University of California San Diego. His 35-year career in safety and health training that has included key roles with the U.S. Navy and the U.S. Department of Labor.
Awards & Scholarship Programs

The ARTBA-TDF offers these scholarship and awards programs:


- **Lanford Family Highway Worker Memorial Scholarship**: Created in 1999, this first-of-its-kind program provides post high school financial assistance to help the children of highway construction workers killed or permanently disabled on the job. More than 100 scholarships have been awarded to worthy students from around the country.

- **Roadway Work Zone Safety Awareness Awards**: Established in 2001, the awards recognize outstanding public and private sector initiatives aimed at improving safety in roadway construction zones.

- **ARTBA Contractor Safety Awards**: Launched in 2007, the awards recognize transportation contractors that demonstrate outstanding commitment to worker safety at all levels of corporate management.

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**Emmett Russell**, a retired safety and health director at the International Union of Operating Engineers. During his long career, Mr. Russell has participated on numerous committees and workgroups established by OSHA.
ARTBA enters strategic alliance with the NSC to jointly develop, promote and implement programs designed to reduce accidents in roadway construction zones.

ARTBA releases landmark study “The Federal Highway Program & Highway Safety: An Economic Analysis,” the first-ever research to quantify the public health economic benefits of federal highway investment.

ARTBA-TDF begins offering customized, on-site safety courses on a range of topics in addition to existing OSHA course offerings.

1998

ARTBA secures language in “National Highway System Designation Act,” directing the U.S. Secretary of Transportation to initiate creation of a clearinghouse dedicated to addressing roadway work zone-related accidents.

Lanford Family Highway Worker Memorial Scholarship

1995
1994
ARTBA organizes second National Conference on Highway Work Zone Safety in Washington, D.C.

1993
An ARTBA task force and CNA develop and publish the first comprehensive manual on safety topics tailored to highway construction firms.

1992
ARTBA works with CNA to develop the first-ever comprehensive business insurance product tailored to highway construction firm needs.
1985

1979
ARTBA establishes Traffic Safety Industry Division.

1977
ARTBA establishes Transportation Safety Advisory Council, charged with developing and recommending expanded policies and programs.
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Washington, D.C. 20007
(t) 202.289.4434
(f) 202.289.4435
www.artba.org
www.workzonesafety.org
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Only use electronics in safe areas.

Don’t pace while talking. Anchor yourself by touching a nonmoving object.

Look up, around, and often. Every 2 seconds.

Mount electronic devices or use hands free devices.

Have a spotter.
Alert & Alive: New worker safety initiative

By Gerald Ullman
G-Ullman@tti.tamu.edu

Working while excessively fatigued can be as dangerous as working while intoxicated. With more road projects being done at night, the effects of fatigue are a growing safety concern for highway agencies and contractors.

At the same time, technological advances are resulting in more electronic devices being utilized for various tasks on the job site. These devices can distract workers and keep them from maintaining good situational awareness of worksite risks.

To combat these dangers, a new initiative has been developed to raise awareness and educate both workers and managers/supervisors about the risks of worker fatigue and the distractions caused by electronic devices. It suggests ways to minimize both.

The theme of the initiative is “ALERT & ALIVE.” The premise is that, unlike video games, where players can be virtually reborn after being killed, there are no “do-overs” if an accident occurs at a real-world jobsite.

Tip cards have been developed to help spread information on ways workers can reduce and prevent the effects of fatigue or electronic device distraction from increasing their risk of an accident. For example:

- Take short 10- to 12-minute naps during breaks to help combat the effects of fatigue;
- Watch for signs of fatigue in others, and notify supervisors if you start seeing unsafe behaviors occur; and
- Practice looking up and scanning for risks every few seconds while using a work-required electronic device on the job site.

Posters summarizing these tips are inserted on the previous page in a size suitable for pinning to bulletin boards in break rooms, job trailers, and other locations.

Online training modules also have been created for workers and for supervisors/managers to further educate them on these risks and strategies to combat them. These resources can be accessed at the National Work Zone Safety Information Clearinghouse at https://www.workzonesafety.org/work_zone_topics/alertness.

Visit the site today and see how you can better protect yourself and your workforce! TB

Gerald Ullman, Ph.D., P.E., is senior research engineer & program manager at the Texas A&M Transportation Institute.

Fall fact sheets help to inform and protect

By Bradley Sant
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Falls are the second-leading cause of death and injury in the transportation construction industry, behind run overs and backovers. According to the Occupational Safety and Health Administration, almost 40 percent of all construction fatalities are fall-related.

In an effort to help reduce incidents leading to fall injuries, ARTBA developed 13 fact sheets for the transportation construction industry. Over the next several issues of “Transportation Builder,” we will provide these fact sheets as a “tear out” so they can be used to train workers and managers in fall prevention. As an added public service, ARTBA is allowing the fact sheets to be copied and shared, as long as they are not modified from their original format.

Using illustrations, photos and plain-speaking explanations, the fact sheets are designed to help contractors and workers understand the basic concepts of fall prevention and protection. ARTBA’s goal is to provide the information in a way that anyone on the job site will understand how to work safely in a variety of conditions.

The fact sheets were developed by ARTBA in coordination with industry experts, and funded through a cooperative agreement with the U.S. Department of Transportation’s Federal Highway Administration. They are available for free download through the National Work Zone Safety Information Clearinghouse (www.workzonesafety.org), a project of the ARTBA Transportation Development Foundation and a valuable resource for industry professionals, news media and the general public.

Hard copies may be requested by emailing workzonesafety@artba.org. TB

Bradley Sant is ARTBA’s senior vice president of safety and education.
For the third year in a row, fall protection was #1 on the Occupational Safety and Health Administration (OSHA) Top 10 list of the most cited violations, with 8,241 fall protection citations issued in 2014. Now, more than ever, all bridge contractors must learn how to implement comprehensive fall protection programs.

Bridge contractors can achieve 100% fall protection by taking four key steps:
- plan
- provide
- train
- enforce/evaluate

**Leading Cause of Death**
Falls are the leading cause of death in construction. Falls took the lives of 699 construction workers in 2013 alone. The majority of these fatal falls (82%) were falls to a lower level. Of the lower level falls, about 25% were from 10 feet or less while 75% were from heights of 11 feet and higher (with 55% falling between 11-29 feet and 20% falling 30 feet or more).

The following fatalities illustrate the risks for workers on bridges throughout the United States.
- A 45-year old bridge worker fell 70 feet to his death from the Mount Hope Bridge in Connecticut.
- Two bridge workers, ages 53 and 63, fell 90 feet to their deaths from a bridge near Montgomery, Alabama.
- A 34-year old bridge worker fell 60 feet to his death from a bridge across Lake Washington near Seattle.

When bridge contractors implement effective fall protection programs, they increase worker safety and help prevent deaths and permanent injuries. OSHA, in partnership with the National Institute for Occupational Safety and Health (NIOSH) and National Occupational Research Agenda (NORA) – Construction Sector, has been waging a nationwide outreach campaign to raise awareness among workers and employers about common fall hazards in construction.

The campaign focuses on how falls from ladders, scaffolds, bridge structures, and bridge decks can be prevented. Lives can be saved through an important and highly effective 4-step process: plan, provide, train, and enforce/evaluate.

**Step 1: Plan**
A well-designed fall protection plan written by a qualified person is the first step to reducing risks and saving lives. OSHA mandates that the fall protection plan must be developed by a qualified person with relevant knowledge and training in order to successfully implement an appropriate fall protection program.

A comprehensive bridge fall protection plan developed by a qualified person should include a statement of company
policy signed by the highest level of management. The company policy must clearly state employee and supervisor responsibilities as well as enforcement measures and appropriate disciplinary actions. The bridge fall protection plan must also be site specific, with a detailed list of fall prevention measures.

The bridge contractor should designate the competent person(s) in writing. The competent person(s) must:

- Be responsible for implementing the fall protection plan
- Have absolute authority over the fall protection plan
- Have unquestioned authority to stop work and correct fall hazards
- Oversee documented inspections where fall protection measures are utilized
- Keep fall protection equipment maintenance records, records of prompt removal of defective equipment, incident reports, accident investigations records, and employee training records
- Prepare to train employees by acquiring or developing a training program

The fall protection plan must include performing a thorough hazard analysis to determine the areas of risk and methods of engineering out the hazards, if possible. (A Sample Fall Protection Plan for Bridge Work is available from ARTBA.) Selection of fall protection systems should be made at this stage. Contingency plans and appropriate rescue equipment should be selected. Finally, a method for enforcing the plan and evaluating effectiveness should be developed.

ARTBA’s Fact Sheet Guide to Selecting Fall Protection Systems for Bridge Work provides detailed descriptions of fall protection equipment and a flow chart to aid selection of fall protection in bridge work.

**Step 2: Provide**

To protect employees working at 6 feet or higher above lower levels, employers must provide the correct fall protection equipment for the job. To help prevent falls, employers must also provide the correct types of ladders, scaffolds, and safety gear.

All fall protection systems and scaffold systems must be designed and/or installed under the supervision of a qualified person. OSHA defines a qualified person as one who “… has proven knowledge, skills, experience, education, certification, or professional standing to solve or resolve problems related to the subject matter, the work, or the project.” [29 CFR 1926.32(m)]

**Step 3: Train**

At a minimum, each employee who might be exposed to fall hazards must be trained by a competent person who is qualified in the following areas [29 CFR 1926.503(a)(2)]:

- The nature of fall hazards in the work area
- The correct procedures for erecting, maintaining, disassembling, and inspecting the fall protection systems
- The use and operation of guardrail systems, personal fall arrest systems, safety net systems, and/or other protections
- The OSHA fall protection standard

ARTBA offers training products and informational documents, including an Employee Fall Protection Training Record, to help bridge contractors deliver and document required fall protection training for employees.

**Step 4: Enforce/Evaluate**

The company fall protection program must contain mechanisms for enforcing requirements and evaluating the effectiveness of the program. Enforcement mechanisms can include discipline within the normal chain of command, for example. Evaluation can include comparison reviews of training records and policy infractions as well as analysis of any accidents that might occur.

**ARTBA Work Zone Safety Consortium**

American Road and Transportation Builders Association
National Asphalt Pavement Association
International Union of Operating Engineers
Community College Consortium For Health and Safety Training

U.S. Department of Transportation Federal Highway Administration
Texas A&M Transportation Institute
FOF Communications
American Association of State Highway and Transportation Officials

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ARTBA wishes to thank these members of our Traffic Safety Industry Division for their sponsorship of the 2016 Summer Social!
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National Work Zone Safety Conference

The National Work Zone Safety Information Clearinghouse

workzonesafety.org
Greenhouse gas monitoring proposal threatens needed road work

By Nick Goldstein
ngoldstein@artba.org

The Federal Highway Administration (FHWA) is considering new ways to monitor greenhouse gas (GHG) emissions from transportation projects. If successful, such climate-focused mandates could be used as a pretext to delay or discourage desperately needed infrastructure construction and repair work.

The government’s proposal surfaced in April in FHWA’s Notice of Proposed Rulemaking (NPRM). Performance management regulations in a variety of areas, including freight movement and the Congestion Mitigation Air Quality (CMAQ) programs are required by 2012’s “Moving Ahead for Progress in the 21st Century” (MAP-21) reauthorization law.

FHWA is seeking comment on “whether or how” to establish a carbon dioxide emissions measure for transportation projects in the final version of its rule. Additionally, the agency is exploring which emissions to monitor if a GHG tracking measure is established, such as from road vehicles, construction equipment, or both. A GHG tracking system raises the possibility of specific emissions targets for states to include in long-range transportation plans and could be tied to federal transportation funding.

BIPARTISAN MANDATE
A GHG tracking system would exceed the bipartisan mandate from Congress in MAP-21. The law allows consideration of “environmental stability” when developing performance measures, but there is no specific directive to establish a system to account for greenhouse gas emissions. In fact, ARTBA specifically warned of this sort of “mission creep” in its Trans 2020 report shortly after the passage of MAP-21. ARTBA wrote:

“The authors of MAP-21 had the opportunity to include a host of external goals such as livability, reduction of transportation-related greenhouse gas emissions, reduction of reliance on foreign oil, adaptation to the effects of climate change, public health, housing, land-use patterns and air quality in the planning and performance process. Instead, Section 1203 of MAP-21 listed only one goal — environmental sustainability—that is not directly related to physical conditions and operational performance of the National Highway System. The same is true for the metropolitan and statewide planning processes laid out in Sections 1201-1202.

“Accordingly, the U.S. Department of Transportation (DOT) should focus on implementing the goals and standards as spelled out in MAP-21. While there may be stakeholders and perspectives that did not achieve their full objectives in the legislative process, we urge you to resist any recommendations to re-open the delicate compromise achieved in MAP-21 through over interpretation of the measure’s performance process. The simple fact is that few interest groups, including ARTBA, are entirely satisfied with every aspect of major legislation. That reality should in no way tarnish MAP-21’s meaningful policy reforms. Further, the common ground found during the legislative process is one of the main reasons MAP-21 was among the few significant pieces of legislation to secure broad bipartisan support during the 112th Congress.”

A GHG tracking system raises the possibility of specific emissions targets for states to include in long-range transportation plans and could be tied to federal transportation funding.

LATE RULEMAKING
This is hardly the only regulation the Obama Administration is trying to push through during its final months in office. As ARTBA has noted recently, new rules on worker silica exposure, employee salary records, and expanding government oversight of water quality have also caused concern.

The final version of the NPRM is currently open for public comment through Aug. 20. ARTBA is carefully studying the NPRM. We will prepare detailed comments to the agency as part of our core mission of regulatory advocacy on behalf of our members.

Please contact me at202.289.4434 with any questions. TB

Nick Goldstein is ARTBA’s vice president of environmental and regulatory affairs.
More than 3 million miles of roads and over 300,000 bridges in the United States are owned and maintained by local governments.

In 1982 the Federal Highway Administration established the Local Technical Assistance Program (LTAP). In 1991 the Tribal Technical Assistance Program (TTAP) was also formed. LTAP and TTAP help local governments improve management of their transportation networks.

There are 58 LTAP/TTAP Centers: one in each state, one in Puerto Rico, and seven regional Centers that serve tribal governments. Most Centers are housed at colleges, universities and state departments of transportation.

The mission of LTAP/TTAP is to foster a safe, efficient, and environmentally sound surface transportation system by improving skills and increasing knowledge of the transportation workforce and decision makers.

LTAP/TTAP strives to improve safety for users on local roads, help local governments build and maintain their infrastructure as well as utilize workforce efficiently, and teach road workers how to do their jobs safely.

The national program focus areas are safety, workforce development, infrastructure management and organizational excellence. LTAP/TTAP Centers help communities improve the quality and condition of their transportation network.

www.LTAP.org
Manufacturers — your partners in safety

There’s no one answer to helping ensure safety on the jobsite. That’s why the Association of Equipment Manufacturers (AEM) offers machinery customers and operators a variety of tools to help incorporate safe practices into the workplace. Manufacturers put aside their competitive differences and work through AEM to help industry workers be more alert and aware and “think safety” every day.

SAFE OPERATION SAVES LIVES
AEM produces an extensive array of safety materials, including more than 50 safety manuals, videos and other safety and training products. These materials are manufacturer-developed and consensus-written, with equipment-specific safety messages across all brands that complement (but not replace) manufacturer operator manuals. They cover operational and maintenance best practices from start-up through shut-down, and can be used for individual operator training as well as group safety sessions, either on the job or in the classroom.

Safety messages are conveyed in easy-to-follow formats with clear language and illustrations to assist understanding. Select materials are available in Spanish and other languages, and some are offered in downloadable files or DVD format.

AEM also has developed an online Pictorial Database to assist industry professionals in communicating effective safety messages through the use of industry-recognized pictorial representations that are not dependent on language.

COOPERATIVE ACTION TO ADVANCE SAFETY
AEM is active in many organizations, coalitions and programs advancing safety. A few examples of AEM action and cooperative efforts:

The association helped develop best-practices guidelines to reduce worker silica exposure. AEM and members were founding members and active in the Silica/Asphalt Milling Machine Partnership that studied and tested dust controls for pavement milling machines.

The Partnership’s work formed the basis for a National Institute for Occupational Safety and Health (NIOSH) document focused on engineering-control guidelines. AEM and the National Asphalt Pavement Association (NAPA) also co-produced a best-practices bulletin that provides operational guidance for water systems during milling operations related to road resurfacing.

Concrete sawing and drilling is the focus of AEM action through its Diamond Tools & Equipment for Construction Bureau (SMI), formerly Saw Manufacturers Institute. The Bureau joined with the Concrete Sawing and Drilling Association (CSDA) to develop best-practices guidelines related to buried hazards on the jobsite.

The AEM Diamond Tools & Equipment for Construction Bureau (SMI) also offers equipment safety-warning training documents and developed classifications for saw blades of various types and uses. If an incorrect cutting tool is used or the right tool but on the wrong equipment, serious injury may result.

Underground utility awareness is the subject of an AEM campaign, initiated last year, to spotlight utility jobsite safety and damage prevention. Tools in the campaign include an informational video and flyers, including a “Top 10” list of underground utility myths with accompanying facts for safe utility installation, repair and maintenance.

TELEMATICS AS A TRAINING TOOL
AEM’s new telematics standard developed with the Association of Equipment Management Professionals (AEMP) allows contractors and other machine customers with mixed fleets to input manufacturer data into their own business systems and software. In addition to improved efficiencies, telematics can help create a safer work environment.

The variety of machine performance tracking data provided by telematics offers the opportunity to enhance operator training. For example, one of the data points in the AEM/AEMP mixed-fleet telematics standard is “peak daily speed.” An operator may unknowingly drive too fast for conditions, or think this improves efficiency. Companies can use data such as this to reinforce safety messages specific to an operator’s behavior in addition to general training.

For more information on AEM safety and training-related programs and activity, visit the Safety/Technical section of www.aem.org, and go to www.safetymaterials.org.

AEM provides trade and business development services for companies that manufacture equipment, products and services used world-wide in the agricultural, construction, forestry, mining and utility sectors. AEM is headquartered in Milwaukee, Wisconsin, with offices in the capitals of Washington, D.C., Ottawa, and Beijing.
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Q&A

WITH TRANSPORTATION DESIGN & CONSTRUCTION LEADERS

The ARTBA Women Leaders in Transportation Design & Construction Council (WLC) was established in 2010 to help promote leadership and career advancement for these professionals through networking, mentoring, recognition and educational activities, both through the association and with other stakeholders.

Mary Beth Klein, a national marketing manager with Trinity Highway, recently shared her thoughts about how the WLC has helped her career, mentorship and what she would like to see over the next 10 years.

Q. Why should a woman consider a career in the transportation design & construction industry?
MK: I’ve encouraged many young people, both women and men, to pursue this industry because of the numerous career opportunities. Design, construction, manufacturing—there are many jobs that are necessary to keep the industry going. I am in marketing, and I am always thrilled when I see a new installation of one of my products. It’s rewarding to know that your efforts are making a difference, advancing roadway safety and improving transportation.

Q. Best advice for young women in college thinking about a career in this industry?
MK: Get educated, get involved and stay active. Become a reliable source for progressive ideas and accurate information. Don’t be afraid to attend meetings, join committees and network as much as possible. It’s empowering to have connections across the country, in different fields than yours. You never know when you may need to reach out to someone for help with a project or committee, or when you can help someone else.

Q. Who has been a mentor and how has that relationship helped you?
MK: When I first joined this industry, I worked for Bruce Owens of Plastic Safety Systems, Inc. in Cleveland. Bruce was the quintessential salesman, full of stories, very well-known and liked in the industry, and he introduced me to hundreds of people through the years. Even after I left PSS for Trinity Highway, Bruce and I stayed in touch. Bruce taught me a lot, but two immediate lessons come to mind: never burn bridges, and never hold grudges. Neither will get you very far, either in your career or in life.

Q. The industry is still dominated by men. Do you see this changing? What do women need to know about that?
MK: Yes, I absolutely see this changing! I’ve been in the industry for over 10 years, and it’s refreshing to see all the talented, ambitious women stepping up. Women are an important part of the industry, and their perspective is instrumental to advancing transportation. I’d like to think that anyone can make it in this industry, as long as they are knowledgeable, hardworking, and dedicated to improving the world’s infrastructure.

Q. How has ARTBA’s Women Leaders Council helped your career and/or your industry involvement?
MK: The council has opened my eyes to all the ways women have and continue to impact our industry. Webinars featuring today’s female leaders, awards celebrating legacies, and other activities all serve as reminders that women play an important role. Being a founding member of the council has given me incentive to become even more involved with ARTBA than I had previously considered. It’s thrilling to welcome other women to the industry, and inspiring to see so much talent and enthusiasm.

Q. Regarding women in this industry, what would you like to see happen over the next five to 10 years?
MK: We need to stop thinking of it as a male-dominated industry, even if, statistically, it still is. We all have one common goal. It’s time to forget about gender and, instead, capitalize on everyone’s strengths to take transportation solutions to the next level.

Edited by Mark Holan, editorial director, ARTBA.
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