

KEEPING YOU UP  
TO DATE WITH ALL  
OF PENNDOT'S  
PROJECTS AND  
INNOVATIONS  
THROUGHOUT  
THE YEAR



## PennDOT Completes Bridge Project in Four Weekends



## Memorial Honors Fallen Employees



## Adding New Life to Bridges Economically



# PennDOT Completes Bridge Project in Four Weekends via Accelerated Replacement

The superstructure of the Route 581 bridge over 10th Street in Lemoyne, Cumberland County was nearly 60 years old and structurally deficient. It had outmoded clearances for 10th Street and had reached the point where it had to be replaced. But Route 581 represented a critical link in the Capital Beltway carrying more than 86,000 vehicles a day.

Replacing a bridge such as this could have taken as long as a year and a half. But forcing drivers to endure that level of inconvenience on such a busy highway for that long was not the way we wanted to approach our business.

PennDOT Secretary Leslie S. Richards who announced the accelerated project schedule in May, noted that completing the project with full closures over four weekends saved motorists from many traffic headaches

“If all goes well this weekend, we will have replaced a 60-year old, structurally deficient superstructure in just four weekends,” Richards said. “While not all of our projects can be done this way, we are pleased that we could use innovative technology to dramatically reduce impacts to the 86,000 vehicles traveling through this area each day.”

At PennDOT, our employees work hard every day to deliver transportation as efficiently and effectively as possible.

This project was a prime example of ways we look to improve the highway and bridge network in a way that keeps disruptions to a minimum.





# Little Touted Accomplishment Brings Big Improvement to Harrisburg Region

By Greg Penny, Community Relations Coordinator, District 8

It took two construction projects to make it happen, but at the end of May, Interstate 83 passing through the interchange with Route 581 west of Harrisburg became two lanes instead of one. This improvement finally addressed a major traffic bottleneck in the Harrisburg area that for decades had made the northbound commute on I-83 - one of the most congested traffic corridors in the region.

The first project necessary to alleviate congestion started in 2012; the replacement of the Lowther Street Bridge over I-83. The second lane for northbound I-83 couldn't be addressed until the Lowther Street Bridge was replaced with one that had a wider underclearance.

In late 2013, the current \$22.1-million project to make several safety and congestion mitigation improvements to the I-83 interchange with Route 581 got underway.

The project involved construction of a longer acceleration lane for eastbound Route 581 to southbound I-83, and reconfiguring ramp movements to eliminate the traffic conflicts that existed with the previous, short weaving areas of entering and exiting I-83. The most significant improvement was increasing northbound I-83 to two lanes and eliminating the single-lane bottleneck.

Though local media seems to have missed the positive significance of this improvement, it was not lost on our customers. "Just wanted to say y'all did a fantastic job on widening the I-83 split," said one customer. "My commute to Harrisburg just got 100 times easier, the flow is excellent and it was really done well. Thanks so much."





# Bonded Overlay: Adding New Life to Bridges Economically

By Marissa Dechant, Press Office Intern, District 1



Members of the Venango County Maintenance Unit's bridge crew, along with members of the bridge crew from Mercer County, pour the deck on a bonded overlay project on Route 4002 (Front Street) in Sugarcreek Borough, Venango County. This is one of four bonded overlay projects anticipated in District 1 this year.

District 1's innovative bonded overlay process is helping to keep good bridges from going bad, and providing significant savings. An alternative to fully replacing a deteriorated bridge, the bonded overlay process is expected to add at least 50 years of life to a small bridge, and forestall much more expensive replacement projects.

"We're being proactive in taking a bridge that's in fair condition and restoring it to good condition. It's a great value. The return on the dollar is huge," said District 1 Bridge Engineer, William Koller.

The bonded overlay process involves milling off the existing bituminous pavement from the bridge deck and then removing deteriorated concrete. A new concrete overlay is placed directly on top of an existing concrete pavement. The overlay bonds to the existing concrete

to create a solid slab. Crews then add a waterproof membrane and repave the bridge deck.

Safety features can be updated after this process. New parapets may be added, and the bridge can be widened out over the wings. Bonded overlays increase load capacity of a bridge by 20-to-40 percent through the use of structural concrete instead of asphalt.

Bridges can have too much asphalt, or dead load, which weighs the structure down. On average, old bridges can have five to six inches of asphalt removed from their deck surface.

The primary candidates for bonded overlays in District 1 have been concrete beam or slab bridges, usually between 10 and 40 feet long.

Koller said the district has placed bonded overlays on about 20 such bridges, and about 100 more bridges are candidates for the process.

Most of the bonded overlays in District 1 are being done by department force bridge crews from county maintenance units. Each of District 1's six counties has a very active bridge crew that tackles repair or replacement projects on small, simple bridges.

Koller estimates the cost of a bonded overlay by department forces at between \$10,000 and \$50,000, depending on the size of the bridge and complexity of the job.

If a bridge were allowed to deteriorate until it needed full replacement, the cost would be between \$500,000 and \$1.5 million.

District 1 department forces have targeted four bridges for bonded overlays this year, and perhaps as many as six more in 2016.

"We're going to continue to do [bonded overlay] as funds are available. We can do them as part of other roadway projects on the contract side, and we're going to continue to do them on the department force side," Koller said. He expects the process to be used more often in the future as the worst bridges are replaced and more work shifts to rehabilitation projects.

"Act 89 funding is really helping us to keep ahead of the curve. Projects like bonded overlays will help us reduce the rate of deterioration, resulting in lower maintenance costs," said Koller. "That's our goal, and we have a good, sound, fiscally efficient strategy to get there."



# Equipment Sharing Plan: District 2 Innovation Underway

By Marla Fannin, Community Relations Coordinator, District 2



Equipment Sharing team members (L-R) Damon Wagner, Mike Bennett, Kristin Smeal & Sharon Hay with District Executive, Kevin Kline.

District 2 is always looking for ways to maximize its resources and identify innovative ways to optimize our equipment fleet and scheduling. Challenging economic times make these efforts especially important.

Through a team approach, the District developed an Equipment Sharing Plan to share equipment across District 2's nine counties. Implemented in spring 2015, the goal is to increase overall capital equipment utilization.

## The Plan Includes:

- Identifying types of equipment to be shared or eliminated.
- Identifying new equipment to be purchased.
- Developing a District Utilization & Management Process (DUMP) Chart for equipment scheduling.
- Setting new District fuel and hours standards measures.
- Conducting a cost/benefit analysis.
- Calculating replacement cost savings.
- Calculating repair cost savings.

## Setting Standards and Future Plans

The committee set District Minimum Fuel and Hour Usage Standards for all equipment. The minimum Fuel Standard is based on the Hours per Gallon (HPG) report and the Minimum Hour Standard. If a participating county decides to use a piece of equipment that does not meet these minimum standards, they will face a penalty of 10% of the value of a new piece of the same equipment. Counties can avoid the penalty by eliminating that particular piece of equipment.

Penalties assessed will remain at the District level for the purchase of additional shared equipment. District fleets are evaluated against the minimums and reduced as needed.

In the future, District 2 expects to continue to review their equipment fleet each fiscal year based on the committee's minimum usage standards. The committee is also developing "South to North" scheduling for the program. Equipment will be shared regionally to reduce travel time when the equipment is moved between counties. Usage Standards will be continually monitored and updated.

The Equipment Sharing Plan and the standards that support the program were created by the Equipment Sharing team. The members of the team included: Damon Wagner, Clinton County Maintenance Manager; Mike Bennett, Potter County Equipment Manager; Kristin Smeal, District Roadway Programs Manager; Denny Koozer, District Equipment Manager; Chris Maney, Centre County Maintenance Manager; Andrew Maynard, District Transportation Auto Equipment Specialist; John McGary, Centre County Equipment Manager (retired); and Sharon Hay, District Quality Coordinator. The hard work of this team led to a District Most Valuable Performer (MVP) award in the first quarter of 2015.

## Savings: \$2.5 Million

District Executive Kevin Kline noted, "Our team has done a great job in coordinating our equipment sharing process. I believe that this will improve our efficiency of operations and save us money. We estimate the cost savings to be \$2.5 million, and we will track our progress. To date, our one-time auction funding return to the District is \$487,889, which we will re-invest in our equipment fleet."



## Multiple Agencies Team-up to Support Bike to Work Week



Deputy Secretary for Highway Administration Scott Christie addresses the media at the multi-agency launch of Bike to Work Week on May 11.



Cyclists line-up in preparation of an "Executive Ride" around the Capitol City in celebration of Bike to Work Week May 11-15, 2015.

Governor Tom Wolf issued a proclamation commemorating May 11 to 15 as Bike to Work Week as representatives from five state agencies joined other state and local officials on May 11 to kick off the week with an executive ride around Harrisburg.

Officials involved with the event included Scott Christie, deputy secretary for Highway Administration; Cindy A. Dunn, acting secretary of the Department of Conservation and Natural Resources; Martin Raniowski, deputy secretary for Health Planning and Assessment in the Department of Health; Rep. Madeleine Dean of Montgomery County, sponsor of a resolution for Bike to Work Week; Rep. David Maloney of Berks County, sponsor of House Bill 150, which provided the Share the Road license plate; Mayor Eric Papenfuss of Harrisburg; and Geoffrey Knight, director of the Harrisburg Bureau of Planning.

The event also emphasized the health benefits of commuting via bicycle in Pennsylvania, and recognized the importance of Pennsylvania's new transportation funding plan as a cornerstone of success for all multimodal efforts.

For more information on bicycle safety, visit [www.JustDrivePA.org](http://www.JustDrivePA.org).

## New Motorcycle Training Technology Helps Develop Riding Skills



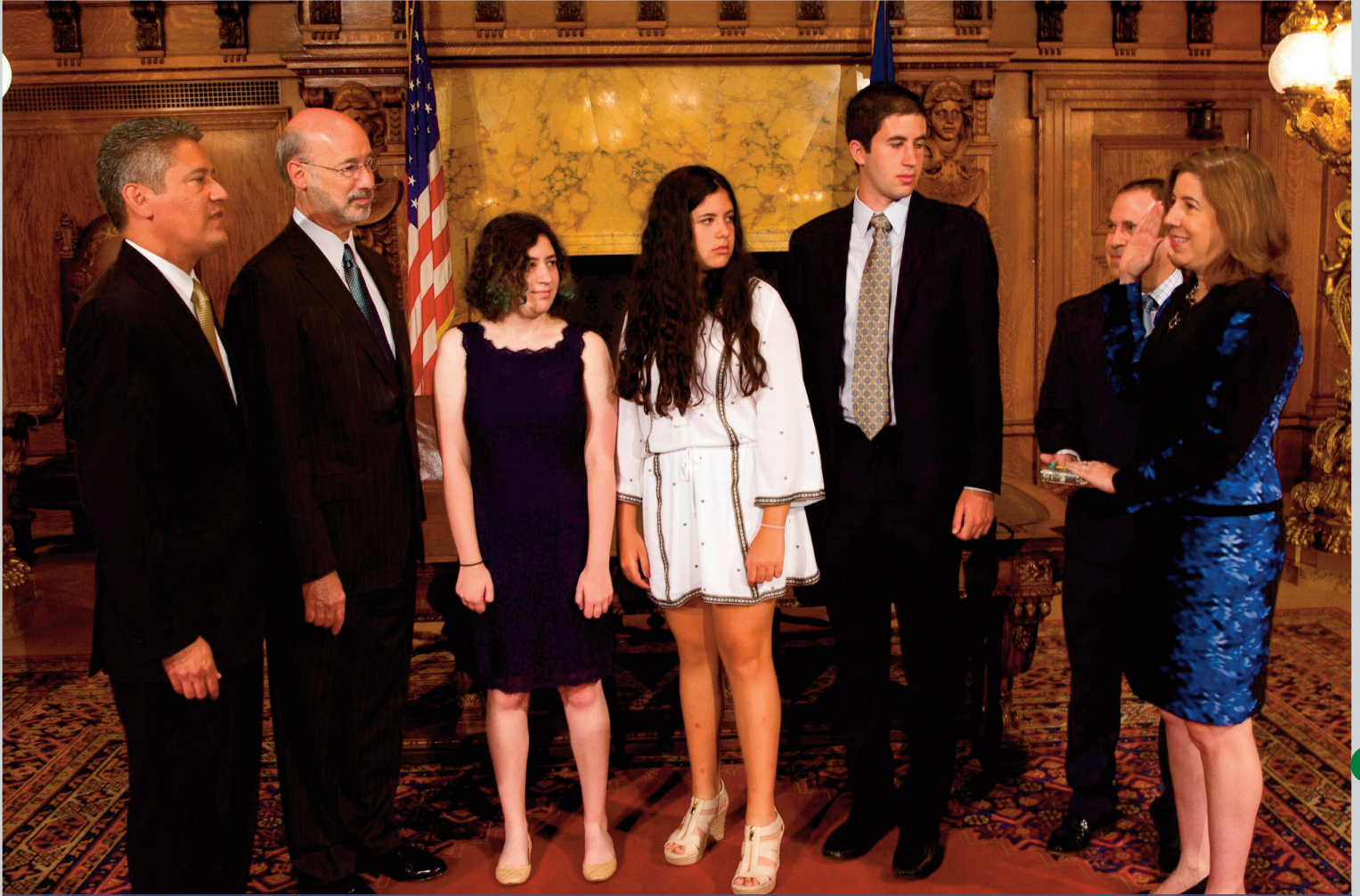
PennDOT added a new attraction to its Live Free Ride Alive motorcycle safety outreach this summer to highlight a new feature of the Motorcycle Safety Training Program. The SKIDBIKE™ is being introduced to the training program and visitors to the Live Free Ride Alive booth at summer motorcycle rallies were given a chance to see and test it.

Through a series of attachments to a motorcycle's frame, the SKIDBIKE™ can be used to teach basic techniques for shifting, braking and cornering to new riders without the risk of injury to the rider or damage to the motorcycle. Try out SKIDBIKE™ at Lansdale Bike Night in Lansdale, on September 12 or York Bike Night, September 25 in York.





## Transportation Secretary Leslie S. Richards Sworn In July 15, 2015



Left to right are Acting Secretary of State Pedro Cortes, Governor Tom Wolf, daughter Sophie Richards, daughter Rebecca Richards, son Ben Richards, husband Ira Richards, and Secretary Richards.



Secretary Richards, newly sworn in, poses for a group photo with the Governor, Acting Secretary Cortes and her family.

Transportation Secretary Leslie S. Richards was sworn in on at the Governor's reception room on Wednesday, July 15, 2015.

Richards commented, "I am so honored to be officially sworn-in by Governor Tom Wolf. I look forward to serving the people of Pennsylvania."



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DEPARTMENT OF TRANSPORTATION



# Flyover Bridge and Tunnel Solution Paves the Way for Safety

By Ray Deep, Community Relations Coordinator, District 12



Flyover Bridge and Tunnel



Flyover Bridge

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District 12 undertook the redesign of the I-70/79 South Junction Project in Washington County to improve the safety of an older junction of I-79 North and I-70 West. The result? Innovative design and construction techniques involving two main components: a flyover bridge design and the replacement of two, four-span bridges with a tunnel structure.



Tunnel from Route 70

## Flyover Bridge

First up: the construction of a large flyover bridge to allow I-79 North traffic to merge onto I-70 West without having to reduce speed. The previous merge ramp at the south junction consisted of a very severe curve that required traffic to slow to speeds of less than 25 mph in order to merge onto I-70 West.

Merging traffic onto the interstate highway at dramatically reduced speeds creates many issues, not the least of which is merging large trucks at low speeds at the base of a long inclined grade. Large trucks merging onto I-70 West could not attain normal travel speeds due to the inclined grade of I-70 between the south junction and the East Beau Street exit.

The construction of the flyover bridge eliminated all of the undesirable aspects of the old south junction.

The northbound traffic on I-79 now exits onto a slightly curved off ramp leading to the flyover bridge, which carries the I-79 North traffic over I-70 West and East and merges the northbound traffic onto I-70W/79N between the south

junction and the East Beau Street Exit. The flyover bridge allows traffic to exit at normal speeds and to maintain those speeds during the merging process, thus enhancing safety while maintaining the flow of traffic. It has completely eliminated the sharp curve and precarious merge conditions for travelers.

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## Tunnel Under Overpasses

The second main feature involved the replacement of the I-70 East and West overpass structures by installing a tunnel under the existing overpasses. The I-70 East and West overpass structures consisted of two, four-span bridges that were originally proposed to be

reconstructed in kind. Because the four-span bridges ultimately needed to span a single ramp connecting I-70 West to I-79 South, a unique opportunity for innovation to improve the project presented itself.

The resulting solution was the construction of a tunnel under the existing overpasses to allow traffic from I-70 West to exit onto I-79 South without disrupting traffic flow on either I-70 West or I-70 East. The tunnel eliminated the need for costly crossovers to manage

traffic flow during current construction, and also eliminated the need for a crossover system a second time -- for the future I-70 mainline reconstruction scheduled for 2016.

## Innovation Recognized

The spring 2015 issue of Highway Builder Magazine, Volume 94, Issue 1, highlights the innovative design and construction practices proposed and developed by Golden Triangle Construction, Inc. and Mackin Engineering. Highway Builder states that once the contractor and their consultant determined the tunnel project

was feasible, they contacted PennDOT District Executive Joe Szczur.

Highway Builder quotes District Executive Szczur describing the process in his own words, "When Golden Triangle first presented this concept to PennDOT, the most important aspect of the potential benefits

was safety. Eliminating the "as-designed" rehabilitation of the two mainline bridges carrying Interstate 70 over the ramp to Interstate 79 South allowed for several safety improvements. It is simply one of the best examples of innovation and partnering I have ever seen. PennDOT District 12, Golden Triangle

Construction, Mackin Engineering, and the Federal Highway Administration should be commended for a job well done!"

The \$35.2 million I-70/79 South Junction Project is due to be completed August 2015.

## "Beary" Special Event Benefits Sick Children

As host of the American Association of Motor Vehicle Administrators (AAMVA) 2015 Region I Conference, PennDOT Driver and Vehicle Services (DVS) not only met the challenge of providing an ambitious and informative program of sessions on a variety of law enforcement, licensing and vehicle registration issues for the four-day conference held in Hershey July 12-15, but also benefitted the Penn State Children's Hospital with a hefty donation through its charity event "Bears on Parade."

Though AAMVA conferences serve primarily as a platform to share innovations and ideas among jurisdictions, historically, the AAMVA Region 1 conference also provides a platform for the organization to show its benevolent side through sponsorship of a charity event.

For the "Bears on Parade" event, each participating jurisdiction or organization was asked to bring a dressed bear that best represented their jurisdiction/organization to enter into a best dressed bear competition. Conference attendees purchased tickets to cast a vote for their favorite furry ambassador, then placed the tickets in a bag next to their favorite bear.

At the awards luncheon held July 15, a ceremonial check in the amount of \$11,805 representing the donations made during the charity event was presented to the Penn State Children's Hospital. Coupled with the 40 bears donated by the jurisdictions and organizations, the total donation exceeded \$15,000.





## PennDOT, Department of Labor & Industry and Stakeholders Celebrate Transportation Advances in 25 Years after Americans with Disabilities Act



Joining Secretary Richards at an event marking the 25th anniversary of The Americans with Disabilities Act were (L to R) Jeffrey Iseman from the Statewide Independent Living Council, David DeNotaris, executive director for the Department of Labor and Industry's Office of Vocational Rehabilitation, PennDOT Secretary Leslie S. Richards and Deputy Secretary, Multimodal Transportation, Toby Fauver.

Secretary Richards joined the Department of Labor & Industry executive director for the Office of Vocational Rehabilitation, David DeNotaris, and the Statewide Independent Living Council to celebrate Pennsylvania's progress in transportation accessibility in the 25 years since the Americans with Disabilities Act (ADA) was enacted.

Richards and the event participants highlighted how the state has implemented the law's standards to allow persons with disabilities to lead more independent, productive lives.

To commemorate the anniversary, PennDOT developed a booklet, viewable at [www.dot.state.pa.us](http://www.dot.state.pa.us) under "Multimodal Transportation," noting the state's efforts in accessibility after the law passed. The booklet features examples of improvements in pedestrian facilities, transit vehicles and centers, passenger rail, driver and vehicle service facilities and Welcome Centers.

### Improvements Made:

- All fixed route bus fleets in Pennsylvania are 100 percent ADA-accessible, and as bus stations and transit centers are upgraded they are designed to ADA standards.
- Seniors age 65 and older and persons with disabilities ages 18-64 use shared-ride, curb-to-curb paratransit service and receive an 85 percent discount on fares.
- The approximately 100,000 curb ramps on state routes should all be ADA-compliant within the next 15 years.
- PennDOT driver-license staff are trained on testing drivers with disabilities, who may use hand controls or other adaptive equipment to safely operate a motor vehicle.



## PennDOT Recognizes Star Employees

Secretary Richards recognized 25 PennDOT employees for their outstanding performance with the Star of Excellence Award, PennDOT's highest recognition.

***“The Star of Excellence award illustrates that these employees, through their dedication, innovation and energy, keep our agency in the forefront of customer service,” Richards said. “We estimate that this group of exemplary employees has saved taxpayers roughly \$6 million through their efforts.”***

The awards are presented annually to employees who characterize PennDOT's values of service, performance and integrity, and represent a variety of organizational positions.



This year's winners in alphabetical order are:

Jeffrey L. Baker, Wendy Bowes, Brian Casey, Walter P. Checefsky, David P. Cook, LEEANNE Davis, Gary A. Farabaugh, Daniel P. Farley, Jr., Mandy Fike, Kenda Jo M. Gardner, Mary Jo Kitko, Michael Lonergan, Brian N. Malik, Scott A. McMasters, Thaddeus E. Mikolajczyk, Jr., Steven W. Panko, Tammi Popp, Edward Sadusky, Ronald D. Schreckengost, Robert D. Shirk, Kristen Sims, Michael D. Toddes, Jeffrey M. Wenner, Ronald J. Young, Charles W. Zimmerman



# Memorials Honor Fallen Employees, Emphasize Need for Work Zone Safety



PennDOT's traveling Work Zone Safety memorial honors the 85 PennDOT employees who lost their lives in the line of duty since 1970.

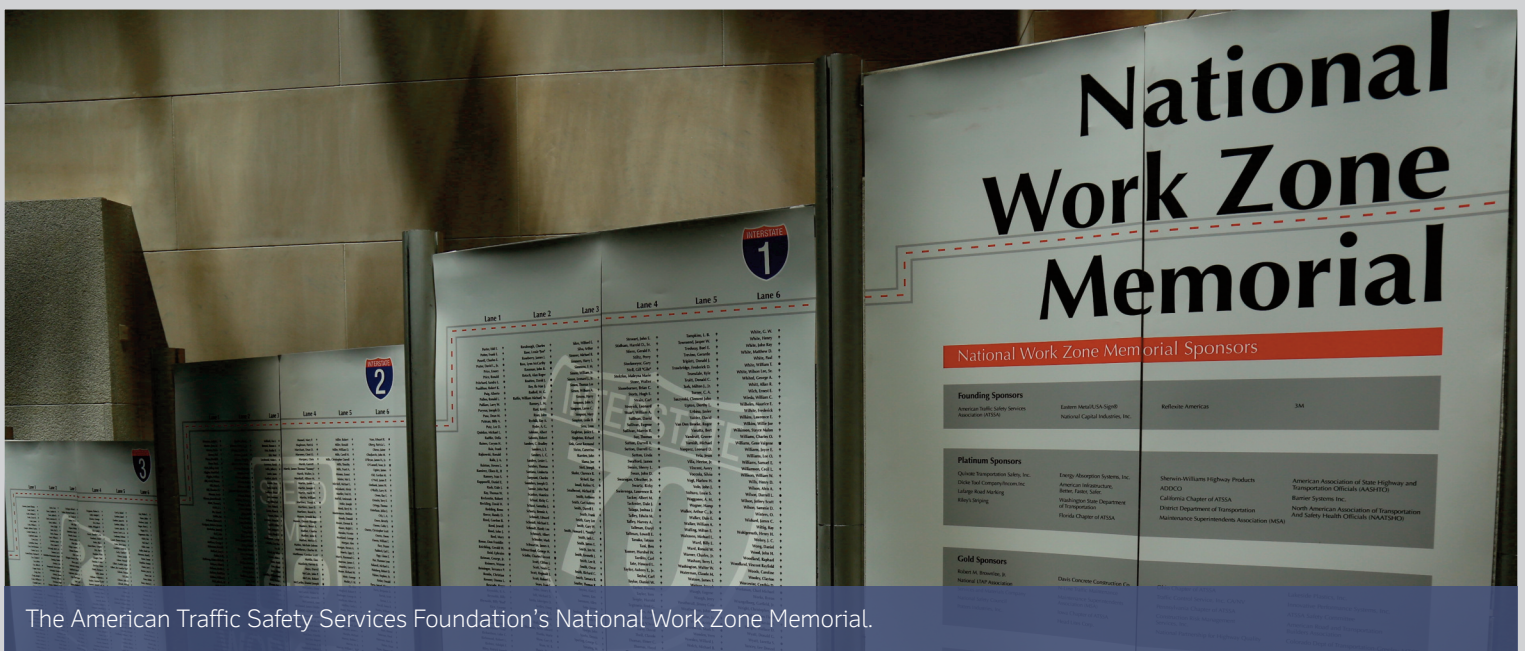
PennDOT and the Pennsylvania Turnpike joined the American Traffic Safety Services Association (ATSSA), the Associated Pennsylvania Constructors (APC), and Flagger Force to honor lives lost in work zones across the country as the National Work Zone Memorial came to Pennsylvania.

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Unveiled in April 2002, the American Traffic Safety Services Foundation's National Work Zone Memorial and its "Respect and Remembrance: Reflections of Life on the Road" program is a living tribute to the memory of lives lost in work zones. The memorial is updated each year and travels to communities cross-country, year-round to raise public awareness of the need to respect and stay safe in America's roadway work zones.

In addition, PennDOT's traveling worker's memorial includes 85 posts topped by hard hats and draped in safety vests. Each post represents a PennDOT employee who died in the line of duty since 1970.

To view testimonials from PennDOT employees who have witnessed or been injured in work-zone crashes, or who have a message for motorists, visit the "Work Zone" information center on [www.JustDrivePA.com](http://www.JustDrivePA.com) to view the department's #Slow4zone campaign. The campaign emphasizes that each employee is a mother, youth mentor or family member who wants to get home safely each day. Join the discussion on social media by using #Slow4Zone in posts.



The American Traffic Safety Services Foundation's National Work Zone Memorial.