Team Selected for Compressed Natural Gas Fueling Stations
Public-Private Partnership

Ride Your Bike to Work!

Traffic Fatalities in 2015
Second-Lowest Since 1928

I-80 Automated Queue Warning System
Transportation Secretary Leslie S. Richards recently announced that Trillium CNG team, which includes Larson Design Group of Williamsport, has been selected for the department’s Compressed Natural Gas (CNG) transit fueling station Public-Private Partnership (P3) project.

Through the $84.5 million project, Trillium will design, build, finance, operate and maintain CNG fueling stations at 29 public transit agency sites through a 20-year P3 agreement. Stations will be constructed over the next five years and the firm will also make CNG-related upgrades to existing transit maintenance facilities.

As part of Trillium’s proposal, CNG fueling will be accessible to the public at seven transit agency sites, with the option to add to additional sites in the future. PennDOT will receive a 15 percent royalty, excluding taxes, for each gallon of fuel sold to the public, which will be used to support the cost of the project. The team has guaranteed at least $2.1 million in royalties over the term of the agreement.

PennDOT also expects transit agencies and the department to see significant savings due to the project. Based on current CNG, diesel and gasoline prices as well as fuel usage, agencies can save a total of more than $10 million annually. Due to these expected savings, transit agencies’ sustainability is increased and dependency on state operational subsidies is reduced. After 10 years, the department estimates that the project will pay for itself with the estimated $100 million in savings.

Using the P3 procurement mechanism allows PennDOT to install the fueling stations faster than if a traditional procurement mechanism were used for each site, resulting in significant estimated capital cost savings of more than $46 million.

When the project is completed, the fueling stations will supply gas to more than 1,600 CNG buses at transit agencies across the state.

To learn more about this and other P3 projects visit www.P3forPA.pa.gov.

Agencies participating in the P3 project, in order of construction-start timeline, follows:

- Cambria County Transportation Authority, Johnstown Facility (2016), includes public fueling.
- Centre Area Transportation Authority (2016)
- York Adams County Transportation Authority, York Facility (2016), includes public fueling.
- Mid Mon Valley Transportation Authority (2017)
- Cambria County Transportation Authority, Ebensburg Facility (2017)
- Indiana County Transportation Authority (2017), includes public fueling.
- Lehigh and Northampton Transportation Authority, Allentown Facility (2017)
- Westmoreland County Transportation Authority (2017)
- County of Lackawanna Transportation System (2017), includes public fueling.
- New Castle Area Transportation Authority (2017), includes public fueling.
- Altoona Metro Transit (2017)
- Beaver County Transportation Authority (2017), includes public fueling.
- Lehigh and Northampton Transportation Authority, Easton Facility (2017)
- York Adams County Transportation Authority, Gettysburg Facility (2017)
- Luzerne County Transportation Authority (2017)
- Crawford Area Transportation Authority (2017)
- Erie Metropolitan Transportation Authority (2018), includes public fueling.
- County of Lebanon Transportation Authority (2018)
- Schuykill Transportation System (2018)
- Monroe County Transportation Authority (2019)
- Area Transportation Authority of North Central PA, Bradford Facility (2019)
- Area Transportation Authority of North Central PA, Johnsonburg Facility (2019)
- Butler Transportation Authority (2019)
- Mercer County Regional Council of Governments (2019)
- Fayette Area Coordinated Transportation System (2019)
- DuBois, Falls Creek, Sandy Township Joint Transportation Authority (2020)
- Transit Authority of Warren County (2021)
- Capital Area Transit (2021)
- Port Authority of Allegheny County (2021)
In fall 2014, District 2 kicked off the Potters Mills Gap (PMG) project with a groundbreaking ceremony. Over three phases, the PMG project will create a divided, four-lane roadway from the top of Seven Mountains, near the Centre/Mifflin County line, to west of the Route 144/322 intersection near the village of Potters Mills in Centre County.

More than 13,000 vehicles travel on this section of roadway every day and that number increases to approximately 20,000 during Penn State home football games.

But this high-profile project is about much more than the construction of new roadway.

The project involves considerable inter-agency coordination. Throughout the environmental and design phases of project development, PennDOT and a team of design and environmental consultants, including McCormick Taylor, have worked with the Pennsylvania Fish & Boat Commission, Pennsylvania Department of Environmental Protection, Centre County Conservation District, the Federal Highway Administration, U.S. Fish and Wildlife Service, Department of Conservation and Natural Resources (DCNR), Forestry Bureau, Pennsylvania Historical and Museum Commission, the Pennsylvania Game Commission, and the Army Corps of Engineers.

Public outreach for the project also has been widespread and included many public meetings, one-on-one meetings with residents in the project area, presentations to civic groups like the State College Rotary, and a formal educational presentation at the Osher Life-Long Learning Institute at Penn State.

With impacts to nearly 57 acres of forest, the project team needed to address a number of environmental concerns. Those concerns included:

- A lengthy consultation on the research and preservation effort to manage the potential presence of Indiana and Northern long-eared bats.
- Research to avoid disturbance of a burial ground.
- Wetland & stream mitigation, which has resulted in plans to convert an old fire pond at the DCNR Penn Nursery site into wetlands and stream restoration.

Cultural resource mitigation is also a large part of the project’s environmental component. Cultural resource mitigation includes a web-based storyboard, a roadside kiosk and context sensitive design/visual screening/vegetative plantings within the Penns Valley/Brush Valley Rural Historic District.

The web-based storyboard will offer rich details of the history of the area, taking viewers on a journey that lets them travel through time and experience life in the Penns Valley from the prehistoric period and from 1759 through the present day.

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During my career at PennDOT, I have enjoyed every position I have ever held. Moreover, I have worked with outstanding people. With their support, I have been a part of many accomplishments - and for that I am very grateful. With that in mind, I view my overarching role as that of communicating the goals of the Governor and Secretary to my Highway Administration team, and providing the team with the support they need to accomplish those goals. As you can see below, we are working on major initiatives. It is important to me that employees know that they can elevate issues to ensure that any obstacle can be overcome.

What was your top highlight of 2015 and why?

It is very difficult to select one thing that I would say is my top highlight. I can say I am extremely proud of PennDOT as an organization and my entire Highway Administration team. That said, a short list of examples would be that PennDOT continues to excel at winter services. We had a record winter in 2015 and performed extremely well. In addition, the record freeze/thaw created an extreme number of potholes in 2015 that we repaired in exemplary fashion. We continue to improve our bridges and have reduced our deficiencies by over 2000 bridges. With a record bridge bundling P3 project in place, we have achieved some of the highest letting totals in PennDOT history. We're very happy to report that we've seen fatalities decrease over the past five years; and Highway Administration is partnering with the Administration Deputate to implement new IT initiatives that will save countless dollars. Every employee in the Department should be proud of these accomplishments.

What are your priorities for 2016?

My overall priority for 2016 is to simply continue to demonstrate that PennDOT is improving and meeting our commitments in all areas. The Governor and Secretary have outlined several priorities and we continue to be on a positive track. We saved millions of dollars over the winter season and performed well during the Jonas Storm. Our bridges continue to improve, we are implementing several specifications meant to improve the quality of construction, and we continue to work on many IT improvements. In addition, we are meeting with every District Maintenance Unit to continue the County Transformation effort. I am extremely appreciative of the Highway Administration staff throughout the entire state for accomplishing so much.

What is your favorite sport and why?

My favorite sport has to be golf. I started playing the sport when I was 8 years old and was on my college team all four years. But there are three reasons it is my favorite: One because I meet so many different people, two because I can still compete as I get older, and the third is because I am also able to play with my family.
When PennDOT planners were considering whether to replace an aging steel-truss bridge in rural Moreland Township in eastern Lycoming County, they evaluated the community needs for the bridge to determine if it should be eliminated, rehabilitated, or replaced.

The timber-decked bridge, which spanned Little Muncy Creek on Route 2069 (Moreland Township Road), was built in 1904 and averaged only about 40 cars per day. An alternate route was available for the few people who did use the bridge.

According to District Bridge Engineer Lloyd Ayres, it was classified both as structurally deficient and, due to its narrow width and poor approach geometry, functionally obsolete. The district performed several emergency repairs on the structure in an effort to keep it open, but it was getting to the point where repairs would no longer be effective.

The district’s initial thoughts were to remove the bridge based on the low traffic volumes and relatively short alternate route; however, after extensive community outreach, the district did something it typically does not do with steel-truss bridges. They decided to replace it.

The district learned that members of a local congregation used it to get to church on Sunday, and closing the bridge also would cut off an important route for township maintenance vehicles and farm machinery.

“It would have been a huge inconvenience, not only for the township, but for the farmers who run their equipment back and forth,” Township Supervisor Scott Wertz said. “The detour would just be a few miles, but over the course of a year that would have a big impact. Some of the farmers farm on each side of the creek and they would have to move their equipment over much longer distances.”

“When we looked at the options, we found the community needed the bridge,” said Ayres. “That’s when we decided to either replace or replicate it.”

The bridge was within the Smith/Wallis Grist Mill Historic District, the remnants of a once bustling mill that provided the area’s farmers with a means to grind their grain from the late 1700’s into the latter part of the 20th century. The mill was built in 1796 by Col. George Smith, a Revolutionary War veteran who relocated to the area from New Jersey. The mill also served as the community Post Office in an area then known as Smithtown.

Although it was within a historic district, the bridge was ineligible for an individual listing on the National Register of Historic Places. It was of historic value to the township, however, and the decision was made to replicate the bridge.

“The bridge contributed a great deal to the character of the area,” said District Architectural Historian Matt Hamel. “The local community was strongly in favor of keeping the truss,” Ayres added. “It was a local landmark in that area.” Anita Wagner, vice president of the East Lycoming Historical Society, agreed.

The bridge was an endearing fixture to generations of township residents. Couples had their wedding photographs taken at the bridge and high school students posed on it for their senior pictures. “You just have so many memories going over (the bridge),” Wagner said. “I’m from Moreland Township and if I want a photo taken that is memorable, I want it taken on that bridge.”

The replica cost about the same as a modern alternative. Construction costs were kept to a minimum by first assembling the bridge, and then using a crane to lift it and set it in place. “It was such a light truss, you could do that without having to put it together in pieces,” Ayers said. “That was one of the aspects that made it economical compared to a modern concrete bridge.”

The other great cost savings with the replica option was that the existing foundations could be reused. An all-concrete bridge option would have required the foundations to be replaced. Portions of the old bridge live on in the new structure.

The contractor was able to salvage lattice work or railing elements from it. A sign that had been attached to it when it was originally built was found on the roadway by a local resident. When the replica was completed, the resident returned the sign to PennDOT and it was reattached to the new bridge.

One thing that was not replicated was the timber deck. That was replaced by an open-grate steel deck. The modern steel used to build the new bridge also is of much higher quality and consistency than the steel manufactured in the early 20th century. The use of new steel to replicate the truss and using open steel decking will provide a safe and reliable bridge for the community for a much longer period of time.

“Local residents had hoped that the bridge could be saved, but any disappointment they felt about its demolition was tempered by the district’s decision to replicate it,” said Wagner. “We treasure our history and it was such a landmark,” she said. “Our residents were excited that it would be rebuilt in the same form.”
Warmer Weather Means More Motorcyclists Our Roadways

With the warmer weather comes an increase in motorcycle riding on Pennsylvania roadways, and with that, Governor Wolf has proclaimed May as Motorcycle Safety Month.

The safety of all Pennsylvania motorists is an issue of the highest consequence, and all highway users should unite in the safe sharing of roadways. It is especially important that all motorists be aware of motorcycles on the streets and highways and recognize the importance of staying alert, practicing safe driving techniques and promoting motorcycle safety.

Though the Pennsylvania Motorcycle Safety Program (PAMSP), PennDOT offers riders a series of free courses designed to provide the skill levels they need to stay safe while enjoying the sport.

Taking an approved motorcycle safety training course provides riders the opportunity to learn or refine skills that may reduce the chances of being killed or injured in a crash. New and seasoned riders can take advantage of free basic, basic rider 2, advance rider and three-wheeled motorcycle training courses offered at locations around the state through the PAMSP.

For more information or to register for a course, visit www.pamsp.com or call 1-800-845-9533

Ride Your Bike to Work!


An executive bike ride around Harrisburg and a press event were used to kick-off Bike to Work Week on the Capitol steps in Harrisburg on May 16. The venue was used to raise awareness of the physical and environmental advantages of riding a bicycle to work, and to build awareness of bicycle safety and laws. Six state agencies participated in the Ride Your Bike to Work week festivities on some level.

The event was also used to launch the new PennDOT Bike Route Map that helps cyclists discover Pennsylvania’s thousands of miles of bicycle routes. It lets users view the detailed bike routes, traffic volumes and speed limits. Check out the new map and learn more about what Pennsylvania has to offer cyclists at www.penndot.gov.
Traffic fatalities in Pennsylvania totaled 1,200 in 2015, the second-lowest since record-keeping began in 1928 and five more than the record low in 2014.

Data from police reports shows that while the number of highway deaths dropped in many crash types, there were significant decreases in fatalities in crashes involving drivers older than 65, aggressive drivers and crashes at intersections. Deaths in crashes involving drivers 65 years of age and older declined to 279 from 300 in 2014. Fatalities in crashes at intersections decreased from 271 in 2014 to 251 in 2015, while fatalities in crashes involving aggressive drivers decreased from 134 in 2014 to 119 in 2015.

Fatalities increased in some types of crashes, including those involving single-vehicle run-off-the-road crashes and hit-fixed-object crashes. There were 580 fatalities in crashes involving single vehicles that ran off the road, up from 534 in 2014. Also, deaths in crashes where drivers hit fixed objects, such as trees, increased to 459 from 425 in 2014.

PennDOT has invested approximately $50 million over the last five years for low-cost safety improvements at nearly 4,800 locations. Types of low-cost safety countermeasures include rumble strips, signage, pavement markings and roadway delineators.

We also invest about $20 million annually in state and federal funds for safety education and enforcement efforts statewide.

To increase public access to and awareness of crash and fatality information in Pennsylvania, we created a Pennsylvania Crash Information Tool, which allows access to these and other types of crash data. Supporting Governor Tom Wolf’s dedication to a Government that Works, the tool allows users to search data pulled from law-enforcement crash reports involving passengers, drivers and different vehicle types.

The Custom Search Tool, which is accessible at dotcrashinfo.pa.gov can be filtered by timeframe, county or municipality, and by various crash characteristics. Additional statistics available in the site are crash, fatality and major injury statistics as well as access to annual crash facts publications. The tool does not provide access to individual crash reports.

To learn about PennDOT’s highway safety efforts visit www.JustDrivePA.com. Highway safety information is also shared on the department’s Facebook page at www.facebook.com/PennsylvaniaDepartmentofTransportation, on Twitter at www.twitter.com/PennDOTNews and on YouTube at www.youtube.com/PennsylvaniaDOT.
PennDOT Discovers and Conserves Endangered Mussel Species

By Jillian Harry, Safety Press Officer, District 1

As part of its mission to maintain the state’s highway system, PennDOT also strives to be good stewards of the environment. In PennDOT’s northwestern region, that has led to the largest threatened and endangered mussel relocation project in the nation.

The Hunter Station Bridge in District 1 stretches 1,051 feet across the Allegheny River in Forest County. The aging structure is structurally deficient and a replacement project is slated to begin this year.

As part of standard procedure for such work, the district’s environmental unit had a consultant do a study of aquatic and plant life around and under the bridge. What the environmental unit discovered was the largest known population of two endangered mussel species – Northern Riffleshell and the Clubshell.

That meant replacing the aging and structurally deficient bridge would require finding new homes for the federally-protected freshwater mollusks – a task that could be accomplished only through partnerships with other government agencies inside and outside of Pennsylvania. The relocation project got underway in 2001 with a survey of mussels in the portion of river around the bridge. At the time, the U.S. Geological Survey estimated about 65,000 mussels lived in the impact area.

In cooperation with PennDOT, agencies in other states started pilot programs to determine if relocation was a feasible solution to protecting the burgeoning endangered mussel population at Hunter Station. The Pennsylvania Fish and Boat Commission conducted a similar study to find waterways within the state that could sustain the mussels.

Areas along the Shenango River and Conewango River were chosen for the pilot study based on evidence the endangered mussels had once bedded in those Pennsylvania waterways.

The plan proved positive and a year after the small-scale study it was determined that relocation could be a suitable plan for mitigating the environmental impact of the needed bridge replacement project.

But if the task of attempting to move many of the 65,000 mussels at Hunter Station wasn’t enough, additional studies of the area showed the numbers were underestimated. New figures put the population of the endangered animals in that section of the Allegheny River at 130,000. District 1 was now involved in the largest mussel relocation effort of its kind within the United States.

A large-scale operation to find homes for the thousands of freshwater animals was started with the help of consultant firm Enviro Science.

Suitable relocation spots were found in Kentucky, Illinois, Indiana, West Virginia, Ohio, New York and the Seneca Nation in New York. Each took a sampling of 50 mussels to test for viability and then they took more mussels once successful locations were determined.
A volunteer shows a handful of the endangered mussels plucked from the Allegheny River as part of a relocation project. More than 57,000 Northern Riffleshell and Clubshell mussels have been removed from the river near the Hunter Station Bridge in Forest County.

Divers from various agencies and groups helped recover the mussels from the bottom of the Allegheny River one-by-one. In some of the most densely populated areas, a diver could retrieve 300 mussels from a 10-foot by 10-foot area in only one hour and nearly all of these mussels were endangered.

In fact, biologists were amazed to find the endangered mussels drastically outnumbered the common mussels within the recovery zone.

Once plucked from the riverbed during the early studies and the later large-scale recovery effort, each mussel was marked with some type of tag, either a Passive Integrated Transponder (PIT), Halprint, or piece of glitter. This ensures that biologists are able to identify the Hunter Station mussels for years to come as they study the hopeful repopulation of the Northern Riffleshell and Clubshell.

Before mussels could be moved to their new homes, guidelines from each state had to be followed. At times this included quarantines and tests to show the Hunter Station mussels were not carrying any aquatic diseases.

In all, 40,000 mussels were moved from the Allegheny River in a one-month period in 2015.

That brought the overall total of Northern Riffleshell and Clubshell moved from Hunter Station to 57,000 since 2008. But the process is far from complete. The higher population estimate increased the relocation goal to 85,000 to 100,000 mussels.

Relocation efforts are concentrated on the planned locations of four crane pads and two water piers, which will be will slightly downstream from the current bridge. After those areas are deemed clear, recovery efforts will continue as divers switch gears to the “drop zone” areas of the riverbed that will be impacted when the bridge is taken down.

The costs of the relocation is expected to hit $750,000.

Greg Zimmerman of Enviro Science shows volunteers how to glue Halprint tags to mussels before they are relocated to another state.

Construction plans call for the Hunter Station Bridge replacement project to start in June, with work in the water to get underway later in 2017.

The current bridge will remain in service as a new structure is erected beside it at a cost of $30 million. Demolition of the current steel and concrete bridge is not anticipated until 2017.

The multi-year process of relocating the mussels has been a joint effort of PennDOT, and the following agencies: the Pennsylvania Fish and Boat Commission; Western Pennsylvania Conservancy; U.S. Forest Service; United States Fish and Wildlife Services in Pennsylvania, New York, Kentucky, West Virginia and Illinois; Department of Natural Resources in Indiana and Ohio; Department of Environmental Conservation in New York; Seneca Nation in New York; Ohio Department of Natural Resources and the Federal Highway Administration.
PennDOT recently implemented technology to provide real-time traffic information to motorists on I-80 in Clarion County. In the second year of a $25.7 million preventive maintenance project, long queues and safety sent District 10’s project team looking for innovations to inform motorists of construction work and queued traffic. The project team worked with PennDOT’s Highway Safety and Traffic Operations Unit (HSTO) to find an innovation to reduce crashes in the work zone and to inform travelers on I-80 of construction work.

Matt Briggs, traffic control specialist manager, HSTO, assisted in identifying a new technology from VER-MAC. This Automated Queue Warning (AQW) – Type 1 System was implemented early in July along the project area on I-80. The system was installed by Beth’s Barricades of Gibsonia, a company that has been proactive in working with PennDOT to make work zones safer.

“The Bureau of Maintenance Operations (BOMO) is evaluating national work zone safety efforts with the Federal Highway Administration (FHWA) and other state practioners to identify the best practices in work zone safety,” Briggs said. “We continue to collaborate with our district offices and private industry (prime contractors and their temporary traffic control subcontractors) to make our work zones as safe as possible for everyone traveling through and working in the work zones.”

The AQW system consists of speed sensors and a queue warning server. The sensors are placed along the roadway and dynamic message boards alert traffic to slow and stopped traffic ahead. Messages appear on the boards stating:

- **Work Zone 3 Miles Ahead - Your Speed is XX**
- **Caution Slow Traffic - X Miles Ahead**
- **Caution Stopped Traffic - X Miles Ahead**

In addition to those messages, traffic is also advised of high speed warnings in the work zone:

The construction project team receives alerts of slow traffic (below 45 mph) and queues. This provides real-time information that can be used to identify where the Pennsylvania State Police (PSP) trooper should be located to help monitor the traffic.

The system not only provides advance warning of the work zone with speed reminders, but also provides information on slow and stopped traffic. This innovation is being piloted to determine if it reduces crashes in the work zone. It is also providing real-time travel details for motorists to make decisions.

“This system provides a new tool to help inform motorists of upcoming construction work as well as make them aware of workers on site,” said Paul Koza, assistant district executive for construction. “The ultimate goal is to keep everyone safe travelling through the project and those working on the project.”

The AQW system is in use in other work zones throughout the state. Berks and Schuylkill counties, as well as the Pennsylvania, Turnpike are using the system with closed circuit television (CCTV) cameras; in Lackawanna County the system is used for an intersection project off of Interstate 81 to preempt signals at the bottom of the ramp.
April 13 was designated as National Go Orange Day in support of highway workers across the country. Highway workers, Department of Transportation employees, and highway safety professionals across the country were encouraged to wear orange in an effort to promote work zone safety.

PennDOT’s Carl Wesneski recently accepted Keep America Beautiful’s 2015 Agency Partner of the Year award on behalf of the Department. “I accept this award on behalf of all the hard-working coordinators and support staff that make the Beautification programs the success they are. It’s my privilege to work with all of them and everyone at Keep America Beautiful,” he said.

The Department of Environmental Resources also received a partnership award from the organization. Both PennDOT and DEP support the Great American Cleanup of PA which runs annually from March 1 through May 31.
This year’s winners in alphabetical order are:

Prizewinning Dogs are a Passion for this PennDOT Employee

Warner Barate, senior civil engineer supervisor, and his wife Debra share their lives with two prizewinning Rhodesian Ridgebacks, seven-year old Mount Ridge Sensational Spring Breeze (Breeze) and two-year old Kito’s Dazzle My Heart (Dazzle). Their dogs have sparked a hobby that has become a passion, and some might call an addiction. Fourteen years ago, Warner and Debra began competing in an American Kennel Club (AKC) event called Agility. Agility is a timed event with various obstacles such as jumps, tunnels, see-saw, and weave poles. Each course is designed by the judges of a particular competition. The handler first walks through and memorizes the course in order to decide how to get their dog partner through fast and mistake free. Agility has four levels – Novice, Open, Excellent and Masters, with titles earned at each level.

When the competitor reaches the Masters level, they can earn an AKC Masters Agility Champion (MACH). The MACHs are based on a point system for all competitions.

Between April 2014 and April 2015, Breeze earned three MACHs and was named the #1 Rhodesian Ridgeback for 2014 by the Rhodesian Ridgeback Club Of The United States (RRCUS). Her picture appeared on AKC’s Top Performance Issue in June 2015. Warner and Debra are passionate about the sport. Not only do they have fun with their dogs, but they pushed the envelope resulting in Breeze being named one of the best in the USA in the breed. Breeze finished the AKC rankings in the top five Rhodesian Ridgebacks in the US, which earned her an invitation to compete in Orlando, Florida this December at the AKC Invitational. Breeze had a phenomenal year after experiencing several setbacks the prior year.

According to Debra, “Breeze is so much fun to run Agility with; we will be going to the Rhodesian Ridgeback Club of the United States Nationals in Rhode Island to compete this fall, then on to Orlando this winter.”

“Also, Dazzle has acquired a Novice title and she looks forward to following in the huge paw prints Breeze has forged.” Warner quipped. “Debra and I both have important roles in the process – Debra runs the dogs and I am the driver, kennel help, and financier!” Warner, Debra, and the girls live in Seward.

Secretary Richards recognized 30 PennDOT employees for their outstanding performance with the Star of Excellence Award, PennDOT’s highest recognition.

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