



moving FORWARD

SPRING 2012

A quarterly review of news and information about Pennsylvania local roads.

Bridge to Success

Bridge replacement technology saves township time and money

by G. Randy Albert, PE, Municipal Services Supervisor, PennDOT Engineering District 2-0

Huston Township had no choice but to close the deteriorating bridge on Mount Pleasant Road. Hoping to reopen the bridge as soon as possible, the township turned to its PennDOT district office, which suggested a solution that would be quick and not too expensive—an alternative bridge technology called Geosynthetic Reinforced Soil–Integrated Bridge System.



In July last year, Huston Township in Clearfield County faced a dilemma that many municipalities in Pennsylvania encounter on a regular basis. The bridge on Mount Pleasant Road, T-522, was closed due to its deteriorated condition that made it unsafe for vehicles to cross. Since the bridge was less than 20 feet in length, it had not been inspected on a regular basis, yet the condition of the structure was evident. Following an engineering inspection, the township’s supervisors, Tamara McClintick, Nellie Bundy, and Larry Knisley,

had no choice but to close the bridge and look for an economical and timely solution to replace it.

Time was of the essence. For starters, the bridge was on a school bus route, and the alternate bus route was a steep road that could prove treacherous in the winter months. Due to safety concerns, the school district decided not to use the alternate route after

October 31. This meant some residents would have to deliver their 16 children to a common location to be picked up by the bus.

A second issue was that the stream that flowed under the bridge was popular with spawning trout.

In discussions with DEP, the township learned that to accommodate the trout spawning season, no work surrounding the bridge replacement could be performed in the stream after October 1.

The supervisors knew they had to find a way to reopen the bridge, and fast, but their experience in funding and replacing another bridge in 2005 had them worried. After all, the Munn Road bridge project took several years and had a price tag of \$800,000. This was not a process they cared to or could afford to undertake again.

In an effort to find solutions, the supervisors sought the advice of their local PennDOT Municipal Services unit, which suggested a concept called Geosynthetic Reinforced Soil–Integrated Bridge System or GRS-IBS, a bridge alternative technology that could be constructed in a short period of time at lower costs using municipal equipment and forces. The Municipal Services representatives had learned about this system a few years ago, and although not PennDOT approved, it was a potential solution that fit the immediate needs of the township: a quick and cost-effective bridge replacement alternative.

“I was a little hesitant because it is a new process in Pennsylvania and this would be the first project (in Pennsylvania), and we were using our General Fund monies for the project,” Supervisor McClintick said.

After investigating the concept, the supervisors

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Q&As about Commercial Motor Vehicles and Drug and Alcohol Testing

by James Wheeler, Manager, PSATS CDL Program

Congress passed the federal Commercial Motor Vehicle Safety Act in 1986 with two goals in mind: first, ensure that drivers of large vehicles are qualified to operate them, and second, get unsafe and unlicensed drivers off the road.

These safety requirements were taken a step further in 1991 with passage of the Omnibus Transportation Employee Testing Act, which requires employees with commercial driver's licenses to submit to regular, random drug and alcohol tests.

Following are some frequently asked questions about commercial motor vehicles and commercial driver's license (CDL) requirements.

Q: What is the definition of a commercial motor vehicle?

A: The Pennsylvania Vehicle Code at Title 67 Pa. Code Chapter 231.8(1) defines a commercial motor vehicle as any motor vehicle, or combination, that transports passengers or property on public roadways and meets any one of the following conditions:

- has a gross vehicle or combination weight rating or a gross vehicle or combination weight of 17,001 pounds or more, whichever is greater;
- is designed to transport more than 15 passengers, including the driver, and does not transport passengers for compensation;
- is a school bus; or,
- transports hazardous materials that must be placarded in accordance with PennDOT regulations.

Q: How long may municipal employees operate commercial motor vehicles each day?

A: PennDOT recently changed its intrastate commercial motor vehicle safety regulations, 67 Pa. Code Chapter 231.8(15), to specifically exempt state and local government drivers from having to comply with time limits when driving commercial motor vehicles for the following reasons:

- 1) Roadway maintenance
- 2) Snow plowing operations
- 3) Traffic control support operations

Although neither legislation nor regulation explicitly defines the full scope of the specific actions of these exempt functions, compliance with the outlines of such actions in PennDOT's Maintenance Manual (Pub 23) means that local government employees who drive commercial motor vehicles are exempt from daily or weekly driving time limits when performing any of these

exempt functions.

Despite this new regulation, local governments should still carefully schedule employees who are driving commercial motor vehicles for roadway maintenance, snow plowing, or traffic control support to avoid the danger of tired drivers and to ensure the safety of employees and residents.

Any municipal commercial motor vehicle driver who is performing functions that are NOT automatically exempt by these new PennDOT regulations must still abide by the existing commercial motor vehicle driving time limits. For example, a driver performing nonexempt functions within a 100-air-mile radius of his or her departure point may only drive a commercial motor vehicle for 11 of the first 12 hours on duty. After reaching the 11th hour of driving, the employee must wait at least 10 consecutive hours before driving a commercial motor vehicle again. The employee can still be on duty but cannot operate a commercial motor vehicle.

Q: What does the new legislation (Act 1 of 2012) requiring Pennsylvania employees with commercial driver's licenses (CDL) to self-certify the status of their medical card mean to municipal employees with CDLs?

A: Municipal CDL employees are still exempt from needing to have a medical card to operate as a CDL driver. This law did not change that exemption, which can be found in Title 67 (Pa. Vehicle Code) Chapter 231.8(6).

Under the new law, CDL employees in Pennsylvania are now required to self-certify the status of their medical card when requested by PennDOT to provide such information. PennDOT will soon begin an initial data collection effort to obtain this certification from every CDL license holder on file. After that, employees will likely only need to provide such information when obtaining a new or renewing an existing commercial driver's license.

To certify the status of a medical card (whether as part of PennDOT's initial data collection effort, or when renewing an existing or obtaining an initial CDL), municipal employees should select the category "EA/Excepted Intrastate Transportation" on PennDOT's Form DL-11CD (www.dmv.state.pa.us/pdotforms/dl_forms/DL-11CD.pdf) and indicate that the CDL holder is a municipal employee and thus exempt from needing a medical card. The employee would then answer "No" to the question on the form asking if a copy of the medical card is being submitted.

Q: Are municipal employees who hold CDLs still exempt from getting a physical exam every two years?

A: Yes. PennDOT regulations, Title 67 Pa. Code Chapter 231.8(6), exempts regularly employed drivers of state and local governments and their agencies from federal regulations that require CDL holders to pass a physical exam every two years. Municipalities, however, may override this exemption and require CDL employees to pass such an exam as a condition of employment.

Q: Are all commercial motor vehicle drivers covered by the recent federal “no texting” ban?

A: The U. S. Federal Motor Carrier Safety Administration, which regulates drivers of commercial motor vehicles, recently issued a final rule that prohibits drivers of commercial motor vehicles from using a handheld mobile telephone while operating a commercial vehicle. This ban does NOT apply to municipal commercial motor vehicle drivers.

However, Pennsylvania recently enacted Act 98 of 2011, which prohibits texting while driving ANY vehicle, including a commercial motor vehicle driven by municipal employees. Thus, while in Pennsylvania, drivers of ANY vehicle are prohibited from texting while driving.

Q: Under federal law, employees with commercial driver’s licenses must submit to regular, random drug tests. Which forms should be used when administering these tests?

A: The most current version of the federal drug test chain-of-custody form, which all employers must now be using for CDL drug tests, includes “Line D” asking to “Specify Testing Authority.” No employer should administer a CDL drug test until these new forms have been obtained.

Q: Why did the drug test forms change?

A: The drug test chain-of-custody form was changed to make it easier to track the federal transportation regulations that apply to each drug test. For instance, a municipal employee who operates a commercial motor vehicle is tested under the Federal Motor Carrier Safety Administration’s random drug testing regulations. Meanwhile, another municipal employee who operates transit buses would be tested under the Federal Transit Administration’s regulations. The abbreviations for these two organizations are now listed in “Line D” of the CDL drug test chain-of-custody form.

Q: When an employee is required to take a return-to-duty and/or follow-up drug or alcohol test, may the employer require him or her to pay for these additional tests?

A: Yes. Since employers are not required to pay for these tests, the governing body can adopt a policy that requires the employee to pay the costs for all return-to-duty and follow-up tests.

For more information about the PSATS CDL Program, contact James Wheeler at (717) 763-0930 or jwheeler@psats.org. A brochure and membership form for the PSATS CDL Program may be obtained online by logging onto www.psats.org, choosing “Programs and Services,” and clicking on “CDL Drug and Alcohol Testing Program.” ♦



In Pennsylvania, a commercial motor vehicle is defined as having a gross vehicle or combination weight rating or weight of 17,001 pounds or more, whichever is greater, or that transports more than six paying passengers, or that transports more than 14 nonpaying passengers, or is a school bus, or transports hazardous materials requiring placarding.



The Every Day Counts Initiative

EDC is designed to identify and deploy innovation aimed at shortening project delivery, enhancing the safety of our roadways, and protecting the environment.

For more information on the EDC Initiative, please visit www.fhwa.dot.gov/everydaycounts

Future Presentation Events:

- Flexibility in Right-of-Way – April 19, 2012
- In-Lieu Fees/Mitigation Banking – June 21, 2012
- Adaptive Signal Control Technology (ASCT) – August 12, 2012

Each presentation is scheduled to last approximately 2 hours and will be simultaneously held at the following three PennDOT District offices:

- District 6-0 (King of Prussia)
- District 8-0 (Harrisburg)
- District 11-0 (Bridgeville)

Registration forms are available on the LTAP website under “News Items.”

Bridge to Success

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embraced the task of actually constructing the bridge themselves to save money and time. They enlisted the help of a local contractor to perform the excavation work they could not handle with their own equipment, and a local engineer acquired the necessary permits they would need. This included a 15-day extension from the Pennsylvania Fish Commission that gave the township until October 15 to complete the work in the stream. The township also decided to advertise for a prefabricated timber superstructure to complement the new bridge abutment concept. The Federal Highway Administration (FHWA) provided design and construction assistance on the bridge project.

“Once I read all of the available materials and investigated the process extensively, I thought it was a fantastic design,” said Keith Lilley, a subcontractor for the project who is also a Jay Township supervisor. “I knew it would be extremely cost-effective, and it could be done with township employees.”

On October 6, work on the new bridge began in earnest. The installed GRS-IBS system consisted of a Reinforced Soil Foundation (RSF) as the footer for the new abutment. The RSF was an 18-inch-thick layer of compacted stone from the township’s stockpile that was fully compacted and wrapped in geotextile fabric. After the RSF was placed, the Geosynthetic Reinforced Soil abutments began to take shape. The load of the bridge is carried by 8-inch layers of alternating compacted stone and geotextile fabric placed behind concrete masonry units (CMUs) that were used as a facing. Tested extensively by FHWA, the stone and fabric combination has been shown to be capable of carrying more than five times the legal loads required for bridges of this nature. Detailed guidelines published by FHWA guided the township through the process.

The process of alternating layers of facing blocks, geotextile fabric, and stone brought both abutments up and out of the water before the October 15 deadline. In fact, actual construction time on both abutments totaled only six days. After completion of the abutments,

the timber superstructure from Wheeler Bridge in Ohio was lowered in place. The technology is easily adaptable to many different superstructure systems and has been used effectively with steel and concrete.

The GRS concept did not stop at the abutments but was also used in the backfill of the bridge approaches, a concept that has proven to reduce or eliminate the “bump” commonly experienced when entering or exiting a bridge. The GRS concept used at the bridge approaches provided a smooth ride across the bridge.

Huston Township’s Mount Pleasant Road bridge was finished in typical municipal cooperation fashion. Sandy Township, Huston’s neighbor to the south, assisted with the project by placing the bituminous paving on the structure. A work crew from Brady Township also helped with construction of the abutments themselves. Finally, a guide rail contractor installed the bridge approach guiderail.

“I have received numerous calls from the residents of Mt. Pleasant, as well as other residents who traveled the bridge to see for themselves



BEFORE: The bridge had deteriorated to the point that it was unsafe for vehicles to cross it.



DURING: With the help of neighboring municipalities and local contractors, Huston Township used its own equipment and workforce to employ the Geosynthetic Reinforced Soil-Integrated Bridge System alternative technology.

At a time when funding is at a premium and finding funding sources is next to impossible, Huston Township supervisors had the courage to try a new technology.

what was accomplished in such a short period of time,” McClintick said. “Everyone I talked to said they think the bridge is beautiful and they can’t believe it was built in just over a month.”

When all was said and done, Huston Township completed the entire bridge project in 35 days, from the beginning of the excavation to the installment of the guiderail and opening the bridge to traffic. The project totaled \$102,000, which included the paving and guiderail installment. For a township with an annual budget of just over \$300,000, the project cost was a big investment, but the GRS-IBS technology ultimately saved the township time and money. The bridge replacement cost at least 50 percent less than what other municipalities in Pennsylvania have spent building comparable structures.

At a time when funding is at a premium and finding funding sources from state or other agencies is next to impossible, the Huston Township supervisors took the initiative and had the courage to try a new technology tested and promoted by the FHWA. By working creatively with its district PennDOT office, neighboring municipalities, local contractors, and FHWA, Huston Township found a solution to one of its transportation problems and in the process effectively and economically met the needs of its citizens, its budget, and the environment.

“We could not have done this project without the help of our PennDOT District 2 personnel led by Randy Albert, our neighbors

Brady Township and Sandy Township, and Murray Lilly of Jay Township,” McClintick said. “This project is a prime example of just what can be done when municipalities work together and have the guidance from the FHWA and PennDOT to complete it the right way.”

Although the Mount Pleasant bridge in Huston Township is the first GRS-IBS structure to be built in Pennsylvania, many of these structures have been successfully built in other states. As of the time of the Mount Pleasant project, more than 68 similar projects had been built in 28 states, including 25 bridges in Ohio with one spanning 140 feet, the longest bridge built to date with the technology. Following on the heels of Mount Pleasant’s success, the concept is being considered for a pedestrian bridge at Shippensburg University in Cumberland County and a bridge in Sandy Township, Huston Township’s neighbor, in Clearfield County.

GRS-IBS is part of the Every Day Counts initiative of the FHWA to develop and implement new and cost-saving technology and deploy the technology to transportation agencies. For more information, go to www.fhwa.dot.gov/everydaycounts/.

PennDOT is considering granting approval of GRS-IBS for Publication 447, New Products for Low Volume Roads, a program managed by the Bureau of Municipal Services that considers new and innovative products for approval and use by municipalities. ♦



AFTER: After 35 days of work for the price of \$102,000, Huston Township was able to reopen the bridge in record time.

April is National Safe Digging Month

Get in the Habit: Call Before You Dig

Every minute, an estimated 680,000 utility lines across the United States are damaged when someone excavating or digging accidentally strikes an underground line or cable. Such mistakes can be costly in terms of service disruption, construction delays, and possible injuries.

For the past four decades, Pennsylvania has been doing all it can to minimize damage and related injuries caused by unregulated digging:

- In 1972, the commonwealth became one of the first states in the nation to make a serious effort to minimize damage and injuries caused by digging when it established the **Pennsylvania One Call System**, one of 62 centers in operation across the country today. The system provides a toll-free number for anyone planning on excavating to call before digging. In turn, the center staff notifies affected facility owners, who must mark the location of their underground lines with paint or flags.
- Thanks to Act 287 of 1974 and subsequent amendments, all excavators, including municipalities, must **notify the state's 24-hour One Call Center** at least three business days before digging, and all underground facility owners, including municipalities, must belong to a One Call system. Those who don't comply face jail terms and fines up to \$25,000.
- In 2007, the Pennsylvania One Call System teamed up with Common Ground Alliance to participate in the nationwide standardized "**Call Before You Dig**" phone number, **8-1-1**. Now, municipalities, contractors, and do-it-yourselfers can dial the easy-to-remember three-digit number to alert the center before any digging.

April is National Safe Digging Month, and in recognition of the importance of calling before excavating, *Moving Forward* examines some common questions and answers that municipalities and their road crews may have about the Pennsylvania One Call program:

Q: How does the requirement to call before digging affect our municipal road crew?

A: Whether it's a municipal road crew digging trenches alongside the roadway, an excavator installing a deck or patio, or a homeowner planting a tree, anyone who is planning to do any type of excavating with powered equipment must call 8-1-1 at least three days before digging. The call center is manned 24 hours a day, seven days a week, every day of the year.

Municipal road crews should note that there is one notable exception to the call-before-you-dig mandate. Under Pennsylvania's One Call Law, municipalities performing minor

April is National Safe Digging Month



**Know what's below.
Call before you dig.**

routine maintenance in their right-of-way at a depth of less than 18 inches are not required to alert the system. However, One Call recommends you make the call anyway since gas and other utility lines can and have been found at these shallower depths.

Q: What happens when I call 8-1-1?

A: The call is routed to Pennsylvania's One Call Center where staff will seek information from you about the planned excavation and will then communicate it to the local utility companies. Utility representatives must visit the excavation site and mark the approximate location of underground utility lines with spray paint or flags.

Q: What do I do in the meantime?

A: Even if you have provided the exact location of the proposed digging when placing the call, it's a good idea to mark the site of the planned excavation with white paint or flags. (If you haven't given exact site information over the phone, you are required to mark the site in white.)

Within three days of placing the call, utility companies should have visited the site and marked the location of underground lines. You may then begin digging, taking care to avoid the marked areas. By law, you must begin digging between three and 10 days of placing the notification call to the One Call Center. It is the excavator's responsibility to maintain the marks while working in the area. If you vacate a work site for more than two business days and then return to dig again, you must notify the Pennsylvania One Call Center again.

Q: What do the different marking colors mean?

A: White means proposed excavation; pink, temporary survey markings; red, electric power lines, conduits, and lighting cables; yellow, gas, oil, team, petroleum, or gaseous materials; orange, communication, alarm, or signal lines, cables or conduits and traffic loops; blue, potable water; purple, reclaimed water, irrigation, and slurry lines; and green, sanitary and storm sewer lines.

Q: What type of fee is involved?

A: One Call was established as a nonprofit partnership among municipalities, utilities, and contractors, who share the cost of supporting the system. The utilities and contractors pay 85 percent of One Call's operating costs, while larger municipalities with 2,000 or more residents pick up the

remaining 15 percent. A municipality or utility that joins the system is notified by fax or e-mail when a contractor plans to dig near its underground lines. A service fee is charged for each dig notification. Municipalities with less than 2,000 population and municipal authorities that serve fewer than 5,000 customers are exempt from the service fees.

Commercial contractors who call to report a dig and are not PA One Call members must pay an annual flat fee of \$50. This funding helps to offset the costs for municipalities that are billed for the system's services.

Q: Where can I get more information about Pennsylvania One Call?

A: Visit www.pa1call.org or call 8-1-1. ♦

Upcoming Workshops

To Register:
PHONE: 1-800-FOR-LTAP (367-5827)
WEBSITE: www.ltap.state.pa.us

This represents some of our scheduled courses. Look for updates on the website.

May 1, 2012
Pike County
Bridge Maintenance & Inspection

May 8, 2012
York County
Safe Driver

May 15, 2012
Chester County
Stormwater Facility Operation and Maintenance

May 22, 2012
Lycoming County
Roadway Safety Improvement Program

May 2, 2012
Allegheny County
Pavement Markings

May 9, 2012
Lebanon County
Project Estimating Using Mathematical Principles

May 15, 2012
Lehigh County
Traffic Calming

May 22, 2012
Crawford County
Asphalt Roads Common Maintenance Problems

May 2, 2012
Somerset County
Principles of Paving

May 10, 2012
Lancaster County
Intersections: Components and Solutions for Common Problems

May 15, 2012
Columbia County
Traffic Signs

May 23, 2012
Adams County
Safe Driver

May 3, 2012
Lycoming County
Equipment & Worker Safety

May 15, 2012
Crawford County
Posting & Bonding of Local Roads

May 16, 2012
Lebanon County
Drainage: The Key To Roads That Last

May 23, 2012
York County
Intersections: Components and Solutions for Common Problems

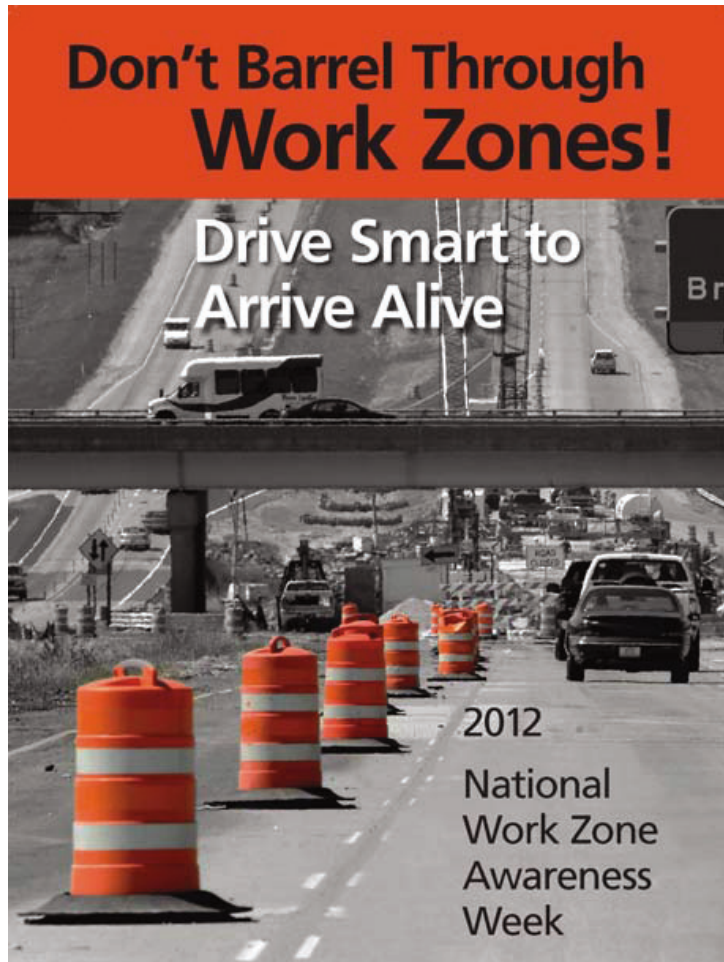
May 4, 2012
Crawford County
Traffic Signs

May 17, 2012
Huntingdon County
Road Surface Management

Congratulations to the following Roads Scholar recipients:

- Johnnie K. Bare, East Manchester Township
- Russell S. Fuhrman Jr., North Codorus Township
- Kenneth Geiger, Union Township
- Shane Haugh, East Manchester Township
- Jeffrey K. Kinsey, Elizabethtown Borough
- Michael Krebs, North Codorus Township
- Jack L. Kytte Jr., Borough of Berwick
- Keith McGowan, Caernarvon Township
- Robert Porterfield, Pequea Township
- Cory R. Smith, East Penn Township
- Jeff Suchomelly, Caernarvon Township
- Chris Totaro, Upper Uwchlan Township
- Carl Weikel Sr., Union Township
- Charles E. Yingling, East Manchester Township

The 2012 National Work Zone Awareness Week is scheduled for April 23-27. The Missouri Department of Transportation will host the national work zone kick-off event on Monday, April 23, 2012, at the Route 141 relocation project in Chesterfield, Missouri (St. Louis area).



Meet the LTAP Advisory Committee

The PennDOT LTAP Advisory Committee is comprised of an appointed group of municipal government (elected and/or appointed) officials who serve a critical role as program advocates and assist PennDOT by attending training courses, reviewing course materials and content, and functioning in an advisory role on a variety of LTAP issues. The following officials currently serve as members of the Advisory Committee:

- **Glenn A Coakley**, Chair; Patton Twp, Centre County, gcoakley@twp.patton.pa.us
- **Donald G. Sirianni Jr.**, Co-Chair; Springfield Twp (Mont. Co), Montgomery County, dsirianni@springfieldmontco.org
- **Jeff Evans**; Ebensburg Borough, Cambria County, jevans@ebensburgpa.com
- **Michael H. Fleming**; Fairview Township, York County, mike@twp.fairview.pa.us
- **Mark T. Hoke**; East Stroudsburg Boro, Monroe County, esbmaint@frontier.com
- **James J McGowan**; Wilson Borough Public Works, Northampton County, loulourules11@verizon.net
- **Marlin D. Moore**; Coudersport Borough, Potter County, coudyboro@zitomedia.net
- **Douglas A. Roth**; Penn Township, Butler County, droth@penntownship.org
- **Ann Simonetti**; Marysville Borough, Perry County, asimonetti@comcast.net
- **Paul O. Wentzler**; Muncy Twp, Lycoming County, muncytpw@comcast.net

Did you know...

you can use your CPR training for a class credit toward Roads Scholar designation?

Details: Successful completion of an approved CPR training course accepted by your employer or the Pennsylvania Department of Health earns you one workshop credit toward Roads Scholar certification. A copy of a completion certificate must be forwarded to the LTAP office in Harrisburg within the three-year training window.

Visit www.ltap.state.pa.us for more information.

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If you do not want to receive a copy of this newsletter, please send an email to tholtzman@psats.org. The newsletter is available electronically on the LTAP website under Public Resources and Documents.

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