



moving FORWARD

FALL 2012

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

PennDOT Hosts Nigerian Engineers

Delegation spends seven weeks learning road and bridge construction in Pennsylvania

by Amy Bobb, PSATS

Nigerian civil engineers and PennDOT representatives celebrate the end of the delegates' two-month visit to Pennsylvania.

After spending two months in Harrisburg this past summer, a group of Nigerian civil engineers returned home in August equipped with information, materials, and knowledge about how Pennsylvania designs, constructs, and maintains its roadways and bridges.

among the U.S. Department of State, Nigeria, and the Commonwealth.

The transportation system in Nigeria, an oil-producing country located on the western coast of Africa, is less standardized than Pennsylvania's, says Kathy Baddick, a consultant with PennDOT's Bureau of Project Delivery, who helped to schedule and coordinate the group's visit.

"They do not have the body of standards, rules, and regulations that we do," she says. "While they were here, the delegates wanted to get their hands on as many of our publications and manuals as they could. They just don't have the same body of knowledge yet."

This year's visit marked the second summer in a row civil engineers were sent by Nigeria's Rivers State government to Pennsylvania to learn more about highway and bridge construction. In 2011, the first group of delegates spent eight to nine weeks learning about PennDOT policies and procedures.

"The focus this year was more technical than last year," says Baddick, who arranged for the group to attend a variety of technical presentations, training, field demonstrations, and site visits. The delegates, who were most appreciative of any technical, hands-on training they could attend, also spent two days at training sessions offered by LTAP: the first on traffic signs and the second on common sense solutions to intersection problems.



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The hope of these engineers? "To recommend best practices to our government so that we can improve our roadways," says Ezekwesiri Igwe, one of the 10 delegates from the Rivers State of Nigeria who spent seven weeks meeting with PennDOT engineers and employees as part of an arrangement

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Financial Consultants — Who Are They and What Do They Do?

Financial consultants from PennDOT's Bureau of Municipal Services answer your questions about their role in preparing a municipality for its liquid fuels fund audit and assisting with year-end reports and forms

“Oh no, not another audit!”

Although we hear this a lot, it's actually not correct. We don't perform audits. The state Auditor General performs audits of liquid fuels funds. Consultants with the Financial Consulting Division of PennDOT's Bureau of Municipal Services perform monitoring reviews and financial consults for municipalities and counties.

“So what's the difference? The Auditor General auditors were just here last month and audited the last two years of our liquid fuels fund.”

Well, the biggest difference is that our reports aren't published and don't end up on an Internet site for public viewing. We are here to help you prepare for the Auditor General's audits of your liquid fuels fund and to assist in complying with any findings they may have noted in their reports. Even though the Auditor General auditors may have

just been to your municipality and audited the last two years' worth of your liquid fuels fund, we come to your municipality to help you understand their audit and look at the new year's (unaudited) liquid fuels fund year to date to find errors and communicate the importance of fixing them prior to the audits.

“OK, but a report we received in the mail after your monitoring review states that our municipality must reimburse liquid fuels fund just like one of the Auditor General audit reports does. If you are here to help, can you show me how to avoid reimbursing the liquid fuels fund? Everyone knows municipalities don't have extra General Fund money lying around to move into the restricted liquid fuels fund.”

While we will always do our best to help you however we can, we cannot and will not go against the law regarding proper liquid fuels

PennDOT Hosts Nigerian Engineers

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“The LTAP training was a new offering for the delegates this year, and the first session on traffic signs was so well-received that they requested another course,” Baddick says.

During the intersection training, the group walked through the borough of Lemoyne to observe intersections firsthand with the LTAP instructor.

“It was a good experience for them,” says the instructor, Patrick Wright of Pennoni Inc. “They liked the hands-on experience of getting out to an intersection and seeing what we were talking about. One of their observations was to wonder why we have so many signals. In their country, they use more roundabouts. As a traffic engineer, you can see that roundabouts have a lot of benefits, and we probably should use them more. The biggest opposition here is that they are different and new.”

For delegate Igwe, the Nigerians' visit became an opportunity to exchange information among engineers. “Even the best brains don't know it all,” he says. “The learning is two-way. We learn from you, and you can learn from us.”

All in all, the delegates declared the trip a success, and they returned home equipped with a CD that PennDOT provided of various transportation manuals, policies, and procedures.

“We picked up a lot of knowledge and techniques here that we can take back to Nigeria and if the government implements them will help us to maintain our roads,” says Igwe. “We came to understand that we need to spend more time on maintenance. Maintenance is the key to engineering projects.” 🚧

Facts about Nigeria

Location: Along the western coast of sub-Saharan Africa; about the size of California, Nevada, and Arizona

Population: 160 million (the most populous country in Africa)

Language: English (official) and various African languages

Government: Federal republic; gained its independence from Great Britain in 1960

Subdivisions: 36 states plus a federal territory; states divided into a total of 774 local government areas

Economy: Petroleum and petroleum products account for 99 percent of the country's exports; agriculture (cocoa, palm oil, yams, cassava, sorghum, millet, corn, rice, livestock, groundnuts, and cotton) accounts for 40 percent of its gross domestic product

Religions: Muslim, Christian, indigenous African

Source: U.S. Department of State website, www.state.gov

“We come to your municipality to help you understand the Auditor General’s audit of your liquid fuels fund.”

fund expenditures or attempt to help avoid a valid reimbursable finding. What we can do is help to avoid similar mistakes in the future. In limited circumstances, we can also look at other qualifying expenditures made from other funds and recommend an offset to the reimbursable finding.

“What is the difference between the monitoring reviews and the financial consults that you provide?”

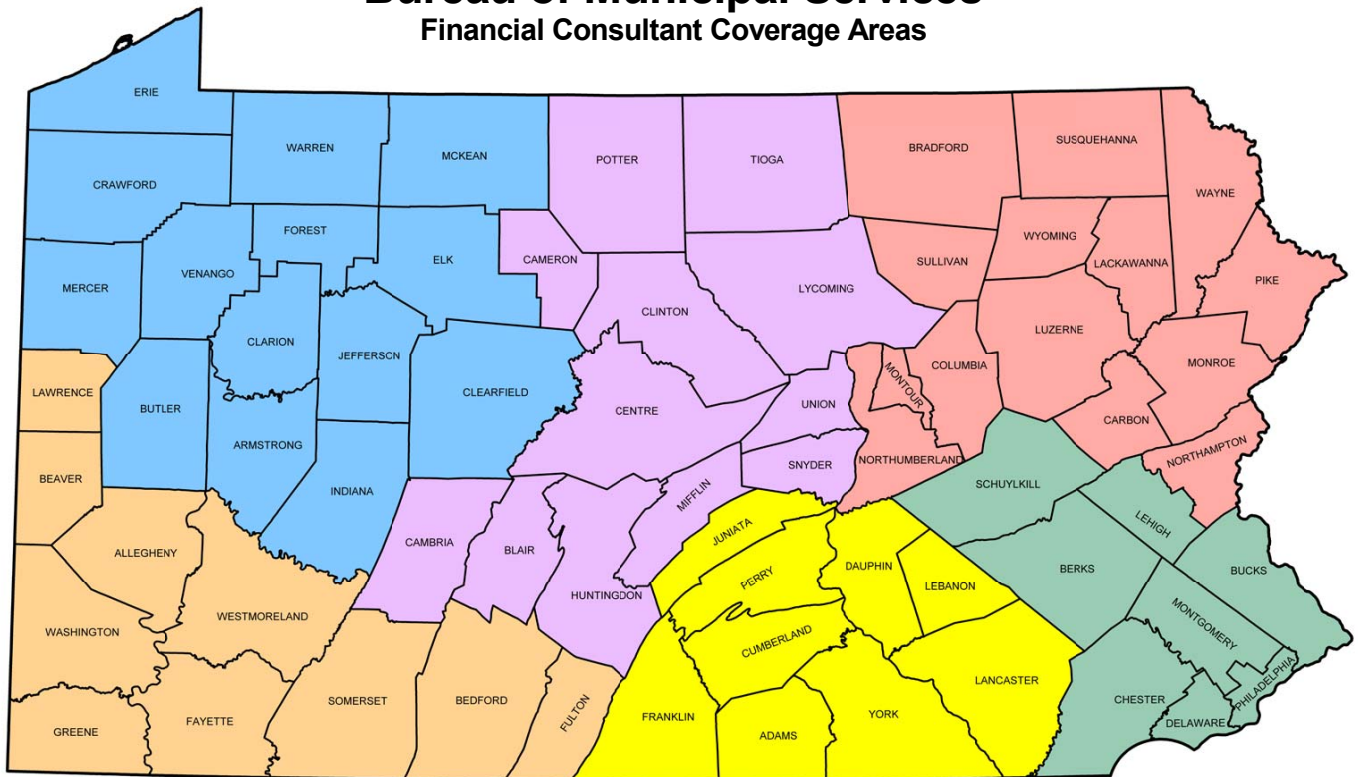
In addition to monitoring reviews, we financial consultants conduct what we call financial consults. Financial consults differ from monitoring reviews in that they focus on very specific issues. Most financial consults are done at the request of municipalities who call

or write with a specific question or who need help filing proper liquid fuels reports.

Have a liquid fuels related issue you just can’t seem to find the answer for? Need help figuring out how to fill out your MS-965? Did you just receive a notice from the Auditor General that an audit of your liquid fuels fund is scheduled in the near future?

Let your PennDOT district office’s financial consultants help you. To reach us, contact your PennDOT district office and ask for the Financial Consulting Division. Each district financial consultant’s name and contact information are listed on the map below. 📍

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It pays to know how federal agencies administer disaster recovery programs

When Disaster Strikes

When disaster strikes in your municipality, do you know the difference between the Federal Highway Administration (FHWA) and the Federal Emergency Management Agency (FEMA) and when each of their specific disaster recovery programs come into play?

The best time to know which agency is responsible for what type of aid and when to contact an agency for specific help is before a disaster strikes, says R. Craig Reed, director of PennDOT's Bureau of Municipal Services. "That way, when a disaster does occur, you'll be more efficient and effective in your own response to the disaster and its recovery efforts."

First of all, he says, municipalities must pay attention to who declares the state of emergency. If the emergency is declared by FEMA or the Pennsylvania Emergency Management Agency (PEMA), municipalities should work directly with those agencies. However, if the FHWA declares the emergency, municipalities would work directly with PennDOT.

Municipalities may have roadways that are designated as "federal



Know what to do when disaster strikes your roads.

aid" routes. Because these roadways are under the jurisdiction of the FHWA, Reed says, FEMA will not reimburse local governments for damage to any of these routes.

When a disaster declaration is imminent, Reed advises that municipalities contact their PennDOT municipal services representative to identify federal aid routes and to request assistance with recovering damage costs.

He also notes that the FHWA's rules differ from those of FEMA or PEMA. To be eligible for reimbursement for damage to federal aid routes, municipalities must follow FHWA's rules. *(See accompanying box for eligibility requirements for both agencies.)*

The two agencies also differ in their approach to reimbursement.

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Eligibility Requirements for Disaster Aid

FHWA	FEMA
Must be a federal route	Must be a non-federal route
Must exceed \$5,000 in federal participation	Must exceed \$1,000 in damages
Not on Transportation Improvement Program (TIP) for federal-funded project (3 years)	Not on Transportation Improvement Program (TIP) for federal-funded project (1 year)
Must be approved disaster by either governor's or president's proclamation	Must be approved disaster by presidential proclamation
Municipalities work through PennDOT	Municipalities work through local emergency management agency with help of PennDOT
Only applies to damage from eligible event to road or bridge structures	Applies to other eligible non-road or bridge structures, including snow removal, equipment damage, and property damage

News from LTAP's Planning Partners

Williamsport Regional Airport to Receive New Terminal Building

If all goes according to schedule, by the spring of 2014 the Williamsport Municipal Airport Authority should boast a newly constructed \$13 million terminal building that will better serve the increasing air traffic at this regional transportation hub.

The new terminal will take the place of an existing building originally constructed in 1947. The current structure, which has undergone several renovations over the years, has substantial structural deficiencies and can no longer adequately serve the region's growing aviation-related needs, says Mark Murawski, the airport authority chairman. Recurring problems with the terminal building include heating and air conditioning, electrical, plumbing and roof systems. In addition, the building exterior is cosmetically unappealing and in poor condition with cracked stucco and rusted steel showing in multiple locations.

The existing terminal also lacks the necessary space to handle current and expected increases in passenger volumes due to accelerated regional economic development activity, such as Marcellus Shale business and other types of commerce and leisure travel.

"Airport passenger enplanements grew 19 percent during the last



U.S. Congressman Tom Marino (center), 10th District, meets with (left to right) Mark Murawski, Williamsport Regional Airport Authority chairman/Lycoming County Planning and Community Development, and Lycoming County Commissioners Jeff Wheeland, Ernest Larson, and Tony Mussare about obtaining federal funding for the airport terminal building.



Current view of Williamsport Regional Airport Terminal. The existing terminal building at the Williamsport Municipal Airport will soon be replaced with a modern \$13 million facility.

two years," says Tom Hart, the airport's executive director. "The limited security hold area and absence of a fully automated baggage claim carousel further add to the functional space problems that airlines identify as being essential to efficient operations."

"What we have here is a terminally ill airport terminal building that has exceeded its useful life," Murawski says.

With the help of federal, state, and local funding sources, the project has been placed on the fast track with tentative completion scheduled for the spring of 2014. An engineering and architectural firm is currently being sought to begin design on the new terminal facility. The selected engineer will be tasked with all aspects of building location and design, including incorporation of green technology to promote energy efficiency and help lower future maintenance costs. Attention will be given toward improving vehicular traffic and pedestrian flows surrounding the new terminal area and increasing parking availability for the convenience and safety of airport customers. Once the new building is completed, the old terminal will be demolished.

"The airport is absolutely essential to the future economic health of our county and the entire northcentral Pennsylvania region," says Lycoming County Commissioner Chairman Jeff Wheeland. "Our airport simply cannot grow and prosper with a 65-year-old building that has structural and functional problems. The time has come to seize funding opportunities to make this project happen now." 🚧

Flexible and Cost-Effective Asphalt Alternative

PennDOT transitions to Warm Mix Asphalt on its roadways

In the late 1990s, the asphalt industry changed the way hot mix asphalt was designed from the Marshall method to the Super Pave method. Less than two decades later, the latest innovation to improve the quality of asphalt for roadwork is a movement toward a product called Warm Mix Asphalt. The following article from PennDOT's December 2011 *Innovations* newsletter introduces Warm Mix Asphalt and explains PennDOT's initiative to phase the product into its operations.



more pilots were launched, involving 18 additional counties in 10 districts. Pilots used a wide variety of technologies and an assortment of contractors. Through each pilot, various aspects of Warm Mix Asphalt were measured, including cost, type of additive, application rate, durability, and performance, and the results were compared to hot mix asphalt.

In 2010, additional counties had initiated Warm Mix Asphalt pilots. Based on these trials and reports from other areas outside of Pennsylvania with considerable


experience with the product, PennDOT issued Strike-Off Letter 420-11-04, strongly urging districts to increase their use of Warm Mix Asphalt (WMA) and allow contractors to substitute it for hot mix asphalt.

“As with any new technology that challenges many years of a standard operating procedure, WMA encountered some pushback,” says Nazar. Questions were raised about long-term durability, moisture sensitivity, and high usage of reclaimed asphalt.

“The latest Strike-Off Letter addressed procedural details, and researchers throughout the United States and Europe have been focusing their work on other WMA concerns,” Nazar continues.

Presently, an implementation system team is assisting Nazar in developing a white paper that will summarize the state-of-practice in Warm Mix Asphalt applications, address its environmental impact, and provide education and training sessions for maintenance, construction, and design audiences.

In recent years, use of Warm Mix Asphalt has expanded significantly across the country, with 40 states having specifications and/or contractual language that allows its use on federal-aid or federal-lands projects. To date, 44 states have engaged in product trials or demonstration projects. Nationally, about 15 percent of asphalt tonnage in 2010 was Warm Mix Asphalt.

“Along with our counterparts in other states, we continue to monitor pilots and WMA developments,” Nazar says. 

What is Warm Mix Asphalt and why is PennDOT interested in it?

Warm Mix Asphalt has been on PennDOT's radar for about 10 years. Beginning in 2002 with scans of research in Europe and the United States, PennDOT has kept a close watch on this alternative to hot mix asphalt and followed national research studies and pilots in other states.

“PennDOT has been aware of the benefits of Warm Mix Asphalt for quite a while,” says Scott Nazar, Bureau of Maintenance and Operations Pavement Materials Section chief. “Like our counterparts in other DOTs, we have been examining its use and seeing how it fits with our paving plans.”

What is Warm Mix Asphalt?

Comprised of modified aggregate asphalt mixture that can be produced and compacted at lower temperatures than hot mix, Warm Mix Asphalt has three additives that distinguish it from hot mix: organic additives (wax), chemical additives (surfactants), and foaming additives or processes (water). These additives reduce the viscosity of the asphalt and enhance workability by allowing for lower mixing and compaction temperatures.

Warm Mix Asphalt has significant advantages in production and application. These include the following environmental, operational, and safety benefits:

- reduced CO₂ emissions and fuel usage
- less worker exposure to chemical fumes
- less aging of the asphalt binder
- longer haul distances
- paving at cooler temperatures
- more time for compaction and improved compaction
- higher percentages of reclaimed asphalt
- improved ride quality

What is PennDOT's experience to date?

In 2008, PennDOT began testing Warm Mix Asphalt with four pilot projects in three districts, representing three counties. By 2009,

WATCH FOR UPCOMING TRAINING

LTAP has partnered with the Pennsylvania Asphalt Pavement Association and industry experts to develop a training course specifically to aid local governments in the transition to Warm Mix Asphalt. Stay tuned for further developments in this endeavor to improve the maintenance of Pennsylvania's roadways.

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.

October 4, 2012
Delaware County
 Risk Management Strategies

October 4, 2012
Lehigh County
 Winter Maintenance

October 4, 2012
Lebanon County
 Winter Maintenance

October 10, 2012
Cumberland County
 Common Sense Solutions
 to Intersection Problems

October 11, 2012
Berks County
 Pavement Markings:
 Applications and
 Maintenance

October 11, 2012
York County
 Traffic Signals

October 11, 2012
Blair County
 Winter Maintenance

October 16, 2012
Butler County
 Asphalt Roads Common
 Maintenance Problems



October 16, 2012
Lebanon County
 Safe Driver

October 17, 2012
Blair County
 Asphalt Roads Common
 Maintenance Problems

October 17, 2012
York County
 Roadway Safety Improvement
 Program

October 18, 2012
Lancaster County
 Pavement Markings:
 Application and
 Maintenance

October 19, 2012
Clearfield County
 Winter Maintenance

October 23, 2012
Mercer County
 Drainage: The Key to Roads
 That Last

October 24, 2012
Lehigh County
 Traffic Signs

October 24, 2012
Erie County
 Winter Maintenance

October 25, 2012
Warren County
 Drainage: The Key to Roads
 That Last

October 25, 2012
York County
 Winter Maintenance

October 30, 2012
Washington County
 Winter Maintenance

October 31, 2012
Huntingdon County
 Unpaved & Gravel Roads
 Common Maintenance
 Practices

Congratulations to the following Roads Scholar recipients:

- Gary Brooks, York City
- Doug Carrathers, Berwick Borough
- Richard Deiss, East Mead Township
- Scott Hartman, Penn Township
- Jason Moyer, Upper Leacock Township
- Jeffery Shope, West Pennsboro Township
- Chris Slaymaker, East Bradford Township
- John Stuffle, Penn Township
- Chad Wagaman, Penn Township
- Artemis Walls, York City
- David Wickard, West Pennsboro Township
- Steven Wire, Penn Township
- Raymond Haas, East Pikeland Township
- Mike Jacko, West Reading Borough
- Lauren Martz, Berwick Borough
- Chad Moyer, West Reading Borough
- Kevin Mahan, Penn Township

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 Township, Centre County, gcoakley@twp.patton.pa.us
- **Donald G. Sirianni Jr.**, Co-Chair; Springfield Township (Mont. Co), Montgomery County, dsirianni@springfieldmontco.org
- **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 Township, Lycoming County, muncytwp@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.

Parting Shot



LTAP instructor Patrick Wright teaches courses on traffic signs and intersection problems to Nigerian civil engineers. See article on front page.

When Disaster Strikes

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If reimbursement comes from the FHWA, it may take up to two years to receive, and reimbursement is provided only after the work is completed and proof is submitted to the federal agency. Reimbursement from FEMA, on the other hand, will be approved regardless of project completion, and the agency reimburses 75 percent of the cost of the permanent work. Depending on the results of an audit of the costs of any permanent work, FEMA may either add to or request a return of any disaster relief funds it provides.

For more information about disaster relief, contact your PennDOT Municipal Services representative or call Jon Fleming, Emergency/ Incident Management Section chief at PennDOT's Bureau of Maintenance and Operations, at 717-772-1771. 📞

Want Off the Mailing List?

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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