



moving FORWARD

SUMMER 2009

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

Making Pennsylvania's Roads Safer

PennDOT's Local Safe Road Communities and Walkable Communities Programs Strive to Enhance Safety on Local Roads

by Stephen R. Thompson, Mark M. Hood, P.E., Patrick M. Wright, T.E. Pennoni Associates, Inc.



PennDOT's Local Safe Road and Walkable Communities Programs strive to reduce crashes on local roads by about 20 percent.

In 2007, almost 3 million people were injured in crashes on roads across the nation. Approximately 42,000 people died in crashes nationwide, and an estimated 15 to 20 percent of those fatalities happened on local roads. In Pennsylvania, about 1,500 traffic-related fatalities occur each

aim to reduce crashes on local roads by about 20 percent in Pennsylvania.

Under the Walkable Communities Program, participating communities examine several pedestrian safety locations and develop a Pedestrian Safety Action Plan. Under the Local Safe Road Communities Program, problem areas within a community, such as intersections or winding roadway segments, are examined and a specific Roadway Safety Improvement Plan is developed.

Through LTAP, PennDOT has crafted a methodology that allows traffic safety engineers to quickly identify high-crash locations, specifically on local roads and local road intersections with PennDOT roads, and to develop low-cost solutions to mitigate the crash potential at those locations. The process of identifying and evaluating high-crash potential locations and implementing safety improvements is later transferred from traffic safety engineers to municipal officials.

Low-cost safety improvements are safety countermeasures to address specific crash causes at an intersection or roadway. The countermeasures may be implemented at relatively little cost by municipal forces as part of a comprehensive strategy to improve safety on roads.

In addition to low-cost safety improvements, longer-term solutions are identified, if appropriate. These typically more expensive solutions may include roadway widenings, roadway realignments, roundabouts, new sidewalks, and traffic signals.

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year, with approximately 10.4 percent of these traffic fatalities involving pedestrians.

To improve safety on local roads, the U.S. Federal Highway Administration and PennDOT have identified a number of strategies centered on three safety issues: intersections, roadway departures, and pedestrians. For each of these risk areas, transportation officials have identified a comprehensive safety strategy that includes good road design, consistent enforcement of laws, and sustained education of drivers and pedestrians.

As part of a plan to reduce crashes and the severity of crashes and to meet its overall safety goals, PennDOT has created the Local Safe Road Communities Program and the Walkable Communities Program. In helping municipalities to achieve safety improvements, these programs

PennDOT Releases Additional Guidance for the Installation and Inspection of Traffic Signal Supports

by PennDOT's Bureau of Highway Safety and Traffic Engineering



Traffic Signal Support – Mast Arm



Traffic Signal Support – Strain Pole

Recently, there have been structural failures of some traffic signal supports within the Commonwealth. The Pennsylvania Department of Transportation (PennDOT) has investigated and conducted appropriate testing for each traffic signal support failure involving mast arm or strain pole installations.

These events and follow-up activities have led PennDOT to conclude that there was a need for additional guidance on proper installation and inspection procedures for traffic signal supports. This guidance was recently developed by PennDOT's Central Office and disseminated internally to each of PennDOT's eleven Engineering District Offices.

The supplemental installation and inspection procedures may be found at [ftp://ftp.dot.state.pa.us/public/Bureaus/HighwaySafety/Supplemental Installation & Inspection Procedures for Traffic Signal Supports.pdf](ftp://ftp.dot.state.pa.us/public/Bureaus/HighwaySafety/Supplemental%20Installation%20&%20Inspection%20Procedures%20for%20Traffic%20Signal%20Supports.pdf). The supplemental *installation* procedures apply when installing new traffic signal supports. The supplemental *inspection* procedures apply when inspecting new traffic signal support installations, when inspecting traffic signal installations in conjunction with the initial signal turn-on and the 30-day test, and when recommended annual routine traffic signal maintenance

and inspection activities are conducted by the municipality or their authorized representative. These procedures supplement the information found in:

- PennDOT Publication 191, "Guidelines for the Maintenance of Traffic Signal Systems."
<ftp://ftp.dot.state.pa.us/public/PubsForms/Publications/PUB%20191.pdf>
- PennDOT Publication 408, "Specifications."
<ftp://ftp.dot.state.pa.us/public/bureaus/design/pub408/pub%20408-2007.pdf>

The collapse of the traffic signal support occurred when anchor bolts failed. PennDOT has responded with new procedures for installing and inspecting these supports.

Municipalities should ensure that these supplemental procedures are followed when traffic signals are installed, inspected, or maintained within their jurisdiction. PennDOT recommends that municipalities share this information with engineers, consultants, inspectors, maintenance contractors, and others that are engaged with municipal traffic signal work.

Questions concerning these new procedures can be directed to PennDOT's

Bureau of Highway Safety and Traffic Engineering or PennDOT's appropriate Engineering District Office. ♦

Before he bids 'adieu' to public life, Ebensburg's Mayor Urges Municipalities to Seek the Benefits of LTAP

During the 36 years that Charlie Moyer has been in public office at Ebensburg Borough, he has seen a tremendous change in the way the Pennsylvania Department of Transportation operates.

"About 10 years ago, I saw a major turnaround in PennDOT policy," says Moyer, who has been mayor of this Cambria County borough since 1993 and who served as a borough council member for 20 years prior to that. "I refer to it as PennDOT coming out of the closet. Before they were more reactive, now they are proactive."

He begins to make a list of the positive changes he's observed in PennDOT, which has a maintenance office located in the county seat of Ebensburg. "They have held open houses where the public can come in and take a look at their equipment and meet the PennDOT supervisors," he says. "They pretreat roads before a storm, their employees work shifts and are available right away to respond to a storm, they have better equipment, and they track the materials that they use.

"And, in one of the best moves ever, they started the Agility program to work hand-in-hand with municipalities and school districts and save everyone money," says Moyer. "The bottom line is PennDOT is more involved now than ever with local governments."

Some of that openness can certainly be traced to the advice that the LTAP Advisory Committee members provide to PennDOT. The committee functions as a program advocate and adviser to the state agency on issues related to LTAP and municipal roadways.

"As representatives of municipalities, we on the Advisory Committee know best what municipal officials need and what they should be trained in," says Moyer, who has served on the committee since 2005. "Without LTAP's advice, someone else would be guiding the decisions in PennDOT about the needs of municipalities."

Moyer, who has decided not to seek reelection as mayor, will be leaving public office at the end of this year. As a Pennsylvania State Association of Boroughs representative on the LTAP Advisory Committee, his service on the advisory board will also end in 2009.

But, before he leaves office, he wants municipalities to understand the benefits of turning to LTAP for training and technical assistance. "For years, it was left to municipal officials to figure out their road maintenance needs, and too often, they would simply do, right or wrong, what the previous guy had done," he says. "The phrases 'We always used this' or 'We never did that before' are not always the right approach.

"There is so much new information out there related to roads that municipal officials can learn and put to use," he says. "And, LTAP can help you do that through its large array of classes and the technical assistance it brings directly to municipalities."

In addition, the evaluation of road-related materials, signs, and products for lower-volume roads that PennDOT's New Products Evaluation Committee provides opens up even more options for municipalities. "So many innovative products have changed the way we



In his 36 years in public office, Charlie Moyer has seen PennDOT become more proactive and thus more responsive to municipalities' needs. Moyer, who serves on the LTAP Advisory Committee, has decided not to seek reelection as mayor of Ebensburg and will leave public office at the end of the year.

do business on our roads," says Moyer. "These products work better, save money, and make our roads safer. What can be better than that."

He believes that LTAP is a good marriage for everyone involved in the program. "LTAP benefits PennDOT, it benefits Ebensburg and other municipalities, and it benefits the local government associations," he says. "In the end, we all come out of our association with LTAP with something valuable."

One thing he especially admires about LTAP is its recognition that different areas of the state have different needs. "How conditions are and how things are done in Cambria County are not the same as in Allegheny or Lancaster or Potter counties, and LTAP is aware of this," he says. "Yet even if the road we use to get there is not the same everywhere, the final product we hope to achieve is — we all want safer, more durable roads constructed quickly and cost effectively. LTAP can help us achieve that."

After 36 years of public service to Ebensburg, Moyer is looking forward to returning to a more private life at the end of the year. "I've never considered my service as mayor as anything but a privilege," he says, "but it's time to move on and get some new ideas in here. I've always said the secret to life is knowing when to grab hold and when to let go. I think it's time for me to let go." ♦

Making Pennsylvania's Roads Safer

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PennDOT seeks the participation of about 10 communities a year in each of these statewide programs. Reports for approximately 15 participating communities were delivered in 2008 and early 2009, and responses from individual community leaders have been enthusiastic. Many low-cost countermeasures have been implemented. A long-term study is expected to reveal reductions in crashes at the locations studied, but the immediate result of these efforts is that municipal officials have sharpened their focus on improving roadway safety and making plans with the most appropriate tools and methods to accomplish their goals. ♦



Communities participating in the Walkable Communities Program examine pedestrian safety locations and develop a Pedestrian Safety Action Plan.

Did you know?

Fascinating facts and useful trivia

Data from PennDOT's report *2007 Pennsylvania Crash Facts and Statistics* reveals that crashes involving pedestrians may be more common in cities in Pennsylvania, but that pedestrians involved in crashes in less urban settings are more likely to die. In 2007, approximately two-thirds (66.9 percent) of pedestrian crashes happened within Pennsylvania cities; however, almost half (46.5 percent) of pedestrian fatalities occurred in rural municipalities.

SPOTLIGHT

Working Together to Patch Up the Roads

Luzerne County municipalities join forces to purchase equipment

When Salem Township in Luzerne County recently considered buying a pothole spray patcher through a state contract, officials automatically thought of their colleagues in nearby Berwick Borough in Columbia County.

The two communities had shared equipment, such as a chipper and a leaf vacuum truck, in the past and understand the benefits of working together. So, it didn't take much convincing to get the borough on board with the idea of jointly purchasing a spray patcher that can fill potholes in one to two minutes.

The two municipalities passed resolutions authorizing the joint purchase and outfitted their trucks to attach the new equipment. Although Berwick houses the new equipment, the cost and use of the patcher and the oil and stone that's needed to make the road repairs will be split evenly between both municipalities.

Salem Township and Berwick Borough are enjoying their partnership and are making plans to cooperate on projects even more in the future. They currently are devising a plan to enable township residents to take their brush and yard waste to the borough's composting facility.

"Just because a line separates you doesn't mean you can't work together to make things better in both places," says Judy Boudman, Salem Township's manager.

New Training Offered

LTAP introduces three newly revised courses

Three recently developed LTAP courses, two addressing safety and the other maintenance, will provide municipal officials and road and street employees with new insights into several common roadway management issues.

The **Roadside Safety Features** course uses the latest PennDOT crash statistics to provide an overview of the extent of the problem of run-off-the-road crashes and the importance of the clear zone concept. After introducing common and not-so-common roadside hazards, the course moves to a discussion of ways to mitigate those hazards, including the proper use of guiderail. The guiderail section offers information on types, features, and performance expectations of guiderail as well as provides circumstances for when guiderail is warranted. The course is laced with short research video clips showing vehicles hitting such roadside hazards as mailboxes, signs, trees, drainage structures, and guiderail. These clips provide compelling glimpses into the consequences of run-off-the-road crashes and the importance of properly mitigating them.

Many problem intersections are plagued by poor geometry that developed over time and is now expensive to change. **Commonsense Solutions to Intersection Problems** focuses on identifying intersection problems that can be mitigated using low-cost countermeasures. Intended for a broad audience from elected officials and law enforcement officers to roadmasters and public works personnel, the course offers a basic understanding of intersection safety

issues and provides guidance about which common safety tasks require the expertise of an engineer and which do not. The course, which is based on one developed by the Michigan LTAP Center, is presented as a series of easy-to-digest modules that cover intersection evolution and resulting geometric problems, intersection-related signs and traffic signals, clear sight triangles, pedestrians and crosswalks, and low-cost safety improvements.

Stormwater management practices are always evolving, and federal and state regulations related to stormwater management have seen significant changes in recent years. (*See the article “Changes in Stormwater Management Policy” below for more information on these regulation changes.*) LTAP’s newly revised **Stormwater Management** course is intended to make municipal stakeholders aware of revised permit and maintenance requirements for locally owned storm sewer systems. It also addresses revisions to local ordinances, the unwanted impact on development patterns, and the increased time and costs for approving permits. Municipal planners and decision makers will like how the course devotes significant time and attention to regulatory issues, and operations personnel will be attracted to a module on contemporary operations and maintenance issues.

For more information on these courses, including a class schedule, log onto www.ltap.state.pa.us and click on “Current Courses,” or call LTAP at 1-800-FOR-LTAP (367-5827). ♦

Changes in Stormwater Management Policy Could Affect Development in Municipalities

by Scott A. Brown, P.E., Pennoni Associates, Inc.

LTAP’s newly revamped Stormwater Management course evaluates recent updates in the state Department of Environmental Protection’s stormwater management policies and the impact these changes could have on municipalities. In implementing a revised stormwater management policy, DEP has developed a Pennsylvania Stormwater Best Management Practices Manual, advanced a single-model stormwater ordinance for municipalities, and clarified existing antidegradation provisions in Title 25, Section 93.4, of the Pennsylvania Code

These regulatory changes are designed to mitigate stormwater issues resulting from land development activities. However, unless local zoning and comprehensive planning are made congruent with the new stormwater regulations, these changes could negatively affect community development patterns and community character. This article summarizes how the state’s new stormwater management policies could affect municipalities.

Increased Development of Prime Agricultural Land — The new regulations promote the infiltration of a significant portion of increased stormwater runoff volume resulting from new

impervious surfaces. The more passive and least costly stormwater best management practices require sites with deep and well-drained soils, which have historically been used as prime agricultural lands. Developers looking for good land with high infiltration capacities may be drawn to these agricultural lands. However, the development of prime agricultural land is often contrary to local community desires.

Increased Urban Sprawl — Historically, residential developers have computed the number of residential units that could be built on a parcel by subtracting some area for roads, floodplains, wetlands, and a detention basin from the total site area and then dividing the remaining land area by the minimum lot size specified by zoning. Under the new stormwater regulations, additional land must be set aside to accommodate dispersed stormwater mitigation functions. Because of the trend toward larger home footprints and increased trenching for underground utilities in prime zoning districts, which typically place single-family homes on quarter-acre or smaller lots, less land is available to accommodate many of the passive stormwater

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Five-Year Strategic Plan Sets Priorities for LTAP

Over the past year, LTAP has worked with PennDOT officials, the LTAP Advisory Committee, and the Pennsylvania State Association of Township Supervisors (PSATS) to develop a five-year strategic plan that strives, among other goals, to improve training to local governments and to reduce traffic fatalities through technology transfer.

The strategic plan has the following priority goals:

- 1) Review and adjust the training curriculum to align with state and federal transportation priorities, new technologies, and local governments' needs.
- 2) Improve roadway safety (reduce fatalities) through technology transfer on sound risk management principles and the implementation of safety improvement measures.
- 3) Strengthen existing partnerships and develop new partnerships to enhance communications, coordination, and participation in the LTAP program.
- 4) Identify the value of LTAP to local governments through performance measures.
- 5) Establish a systematic marketing program to communicate the value of LTAP to its targeted markets.
- 6) Explore and evaluate the feasibility and anticipated effectiveness of new methods of training delivery.

PSATS, the prime contractor to PennDOT for the administration of the Local Technical Assistance Program (LTAP), provided support to the department's efforts to develop a long-range plan for the future of LTAP.

Beginning with a project kickoff meeting in late March 2008, the planning process engaged a Strategic Planning Steering Committee, the LTAP Advisory Committee, and an Executive Committee made up of both department and consultant personnel. The Strategic Planning Steering Committee consisted of representatives from PennDOT and local governments, LTAP trainers, providers of technical assistance, and planning partners.

Representing all key stakeholders in the process, these groups provided validation and refinement of the planning process through a series of facilitated meetings. In addition, the opinions of roadmasters and public works directors, the direct customers of LTAP training and technical assistance, were sought in a large facilitated session at the PSATS Annual Conference in April 2008.

The implementation of the five-year strategic plan is being overseen by the Executive Committee. As implementation proceeds, the LTAP Advisory Committee, which is made up of representatives of local public works departments and roadmasters, will provide vital feedback and updates necessary to adjust the plan to any emerging circumstances. ♦

Stormwater Management Policy

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infiltration facilities being promoted by state agencies.

In the end, satisfying today's stormwater management policies often requires more land to accommodate, dispersed stormwater facilities. Any moderate-density zoning available in a municipality will be used up more quickly, leaving only large-lot rural acreage for development. The end result just might be more rural and suburban development and ultimately more expansive urban sprawl. In addition to negative environmental connotations, this development pattern will also create increased per-capita costs for providing municipal services.

More Engineered BMPs for Commercial Development —

These regulatory issues also affect commercial development, which is typically characterized by high impervious area ratios of 70 percent or higher. The high impervious ratios associated with commercial development leave little available commercial "green space" for applying the passive, more natural stormwater BMPs. As a result, engineered or structural infiltration BMPs (often located under parking areas) will usually be the economical choice for commercial developers.

Increased Size of Stormwater Facilities — Because the Pennsylvania Stormwater Best Management Practices Manual mandates that 20 percent of an existing impervious area be treated as meadow, the required size of stormwater facilities increases significantly. The resulting increased costs and land area requirements necessary to meet this standard are restrictive, and in some cases prohibitive, whenever a community's existing commercial areas are considered for redevelopment. The bottom line is this requirement may encourage the development of "virgin" land in rural fringe areas around urban centers.

Municipalities' Response

These new stormwater regulations will clearly affect municipalities both as they regulate development within their jurisdictions and as they provide services to land users after construction is complete. Municipalities are encouraged to revisit and update zoning and subdivision/land development ordinances to make them as consistent as possible with the new stormwater requirements.

The first, and perhaps most significant, step in a municipality's response to the new regulations is to update zoning ordinances to provide more flexible and higher density zoning in exchange for open space. The open space should be dedicated to the preservation and enhancement of landscapes to provide the site stormwater management function. These land areas should be placed in easements with defined and recorded preservation and maintenance requirements.

In addition, municipalities should consider revising their zoning and subdivision/land development ordinances to encourage land development practices that create less impervious landscape and support inclusion of passive stormwater management facilities. Items to consider include the following recommendations:

- Relaxed parking requirements
- Narrower street widths

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Upcoming Workshops

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

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

June 2, 2009

Lebanon County

Drainage: The Key To
 Roads That Last
 North Cornwall Township
 Municipal Building
 8:00 AM – 2:00 PM

June 3, 2009

Clearfield County

Posting & Bonding of
 Local Roads
 Goshen Township
 8:00 AM – NOON

June 4, 2009

Potter County

Road Surface
 Management
 Coudersport Maintenance
 Facility
 8:00 AM – 3:00 PM

June 24, 2009

Lycoming County

Equipment & Worker
 Safety
 Woodward Township Fire
 Hall
 8:00 AM – 11:30 AM



June 10, 2009

Wayne County

Equipment & Worker
 Safety
 Wayne County Chamber
 of Commerce
 8:30 AM – 11:30 AM

July 1, 2009

Lebanon County

Managing Utility Cuts
 North Cornwall Township
 Municipal Building
 8:00 AM – NOON

June 10, 2009

Clarion County

Principles of Paving
 Clarion Township Building
 8:00 AM – 3:00 PM

August 11, 2009

Lebanon County

Road Surface
 Management
 South Lebanon Township
 Municipal Building
 8:00 AM – 3:00 PM

June 11, 2009

Mercer County

Traffic Calming
 Mercer County Regional
 Planning Commission
 8:00 AM – 3:00 PM

August 25, 2009

Crawford County

Bridge Maintenance
 Vernon Township Building
 8:00 AM – 2:00 PM

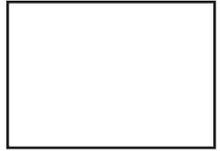
Stormwater Management Policy

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- Reduced street horizontal curvature requirements
- Permitting noncurbed streets and roadside swales
- Allowing permeable surface materials
- Reducing minimum curb radii
- Allowing smaller minimum cul-de-sac diameters or incorporating the use of cul-de-sac center islands

The new Stormwater Management course reviews these recommendations and a variety of other topics related to stormwater management. In addition to addressing key regulatory changes and

their impact on municipalities, the course offers potential solutions. Background information on the application of stormwater BMPs and their operation and maintenance is also provided. Anyone involved in establishing local stormwater policies, reviewing development plans, inspecting the construction of stormwater facilities, and operating and maintaining stormwater facilities would benefit from attending this course. Attendees will walk away with the understanding and knowledge of stormwater policies, processes, and practices necessary to efficiently address local stormwater issues. ♦



CORRECTION

The Winter/Spring 2009 *Moving Forward* newsletter included an incorrect phone number for scheduling a meth presentation with the Pennsylvania State Police.

To make arrangements for a **methamphetamine presentation** in your municipality, please call the State Police Clandestine Laboratory Response Team at the phone numbers listed below.

Western Team: (814) 332-6825, ext. 208

Eastern Team: (215) 863-3504

LTAP Contact Information:

400 North Street, 6th Floor

Harrisburg, PA 17120

1-800-FOR-LTAP (367-5827)

Fax: (717) 783-9152

Email: ltap@state.pa.us

Web site: www.ltap.state.pa.us



BUILDING BRIDGES IN THE IRON CITY

LTAP/TTAP 2009 • Pittsburgh, PA • July 27-30, 2009

Did you know that LTAP/TTAP staff members from more than 58 centers across the country will converge in Pittsburgh from July 27 to 30 to attend the 2009 National LTAP/TTAP Conference?

PennDOT's LTAP has joined with the LTAP centers of Region 3 to host this conference. For more information, visit www.ltap.state.pa.us.