Missouri Local Technical Assistance Program (Misouri LTAP) is pleased to announce a new training opportunity for local government agencies and engineering consultants with a new class, Introduction to Materials: Concrete, Asphalt & General Materials. There are three main reasons a project fails prematurely: inadequate design, poor construction and/or poor materials. This class focuses on materials and covers the basic properties of materials used in road and bridge projects. It also explains why it is important for an agency to care about materials. Agencies do not want to have to rebuild projects for many years. If an agency can add even five years to the life of a road, bridge or sidewalk, they may easily recoup the cost associated with the testing and inspection of materials. Time and money spent ensuring that quality materials are used will be returned with better performing and longer lasting products or in this case projects. Therefore, it is critical to determine the properties of materials correctly and what the proper frequency of testing is to ensure that what is being incorporated into a project meets the specification limits. The first class is being scheduled for August in Rolla. This will be a Level II class under the new structure in the Missouri LTAP “Show-Me” Road Scholar Program. The following is an overview of the class:

- Acceptance methods for materials
- Concrete
- Asphalt
- General materials
- How to get testing done
- Having a quality plan
- Conflict resolution
- Specifying what you need

Watch for this class in your area or request one by contacting the MO-LTAP office.
The Missouri LTAP Advisory Committee met April 18 on the Missouri S&T campus for its spring 2013 meeting. The Advisory Committee is made up of selected county commissioner, MoDOT and FHWA representatives, and individuals from various organizations affiliated with agencies throughout the state. The committee provides input and feedback on strategic planning and program goals throughout the year. The MO-LTAP staff meets with the Advisory Committee twice per year: once in the spring and once in the fall. The intent of the committee is to evaluate the performance of the program and offer suggestions that will improve the best services possible. The committee also discusses potential areas for participant improvement and how to increase the overall cost-benefit of the program. Eleven committee members attended along with the MO-LTAP staff. Those members included Larry Benz, Patrick Bonnot, Ken Foster, Bonnie McCard, Sean McGonigle, John Miller, Bonnie Prigge, Bill Stone, Mike Thomasbury, Kenny Vois, and Skip Wilson. MO-LTAP was represented by Health Pickerill, Director, Kristi Barr, Program Coordinator, Doreen Harkins, Administrative Assistant, and Nicole Annis, Graduate Assistant. See the complete list of committee members in the column to the right.

The meeting included updates on recent activities and current or recently completed projects as well as a discussion of various topics. Pickerill reported there has been continued development and improvement to the new MO-LTAP website, and class attendance has increased from last year. The average class size in 2012 was 22 people per class compared to 25 in 2013 thus far. Other news related to training included a slight training fee increase for 2013 from $30 to $35/person for Road Scholar Level I classes, $50/person for Level II and $75/person for Level III classes. Road Scholar Level II and III classes are now held from 10:00 AM to 3:00 PM with lunch provided. He also reported on a few operational changes. With the new electronic eNewsletter available, several hundred fewer printed copies are being mailed, which has added up to a huge cost savings on printing and postage. In addition, training flyers for all upcoming classes are now emailed which also has helped to reduce postage. It has also meant a much better and quicker response rate for class registration. Bimonthly training flyers for all upcoming classes are now emailed which also helps save on postage. $75/person for Level III. In addition, all Road Scholar Level II and III classes are now held from 7:00 AM to 4:00 PM with lunch provided. Finally, he mentioned that a postcard was mailed to each agency on the first of each month with updates that include a two-month class schedule and all related conferences and events. Flyers are also being emailed. Finally, he mentioned that a postcard was mailed to each agency on the extensive contact list. The postcard gave agencies the option to receive the newsletter by mail, email or both.

An update on current or recently completed projects was given. The Traffic Practices: A Guidebook for City & County Agencies, which was funded by the Missouri Blueprint Coalition for Safety, was completed in 2012. Follow-on training was provided in ten locations to local agencies throughout the state last year and concluded early this year. A free copy of the Guidebook was given to each attendee. APWA Conference books are also now available for free by downloading it from the MO-LTAP website or requesting a hard copy by contacting the MO-LTAP office. Another project being finalized is the Chip Seal Showcase in partnership with MoDOT. It will consist of five different training locations and will include a short 1-2 hour classroom portion followed by an onsite demonstration of a chip seal project. Lunch will be provided. The exact locations are being finalized for late July and August.

Missouri LTAP Accreditation Update

Continues on page 13.

About LTAP

LTAP is a well-empowered of a national network of centers - one in every state, Puerto Rico and regional centers in tribal governments. The LTAP centers enable local counties, parishes, towns, cities and towns to improve their roads and bridges by supplying them with:

• a variety of training programs
• an information clearinghouse
• new and existing technology updates
• personalized technical assistance newsletters

Through the core services, LTAP centers provide access to training and information that may not have otherwise been accessible. Centers are able to provide local road departments with:

• work force development services
• resources to enhance safety
• information on solutions to environmental, construction, maintenance and other issues
• technical publications
• training videos and materials

Missouri LTAP

Missouri LTAP is an annual meeting that brings together officials from local road agencies, state DOTs and FHWA divisions in Missouri, Iowa, Nebraska and Kansas. The agenda covers timely and practical management, safety, maintenance and funding topics, and concludes with a gala dinner and awards ceremony. For more information see the www.moltp.org website after August 1st for a registration form and meeting agenda.

MINK Local Roads Meeting

MINK is an annual meeting that brings together officials from local road agencies, state DOTs and FHWA divisions in Missouri, Iowa, Nebraska and Kansas. The agenda covers timely and practical management, safety, maintenance and funding topics, and concludes with a gala dinner and awards ceremony. For more information see the www.moltp.org website after August 1st for a registration form and meeting agenda.

Missouri LTAP Quarterly is published by the Missouri LTAP office on the campus of Missouri University of Science and Technology. The opinions, findings and recommendations expressed in this newsletter are not necessarily those of Missouri S&T, MoDOT or the Federal Highway Administration.

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Missouri LTAP

Missouri LTAP Advisory Committee

Larry Benz, Director City of Clayton Public Works Sheila Barnett Employee Development Manager MoDOT Skip Wilson, Council and Member Services Director SBMA Phil Broyles, Director City of Clayton Public Works Tony DeLong, County Council Coordinator Missouri University Extension Larry Frevert, Past President APWA Ken Foster, Bridge Engineer FHWA Missouri Division Mike Geisel, Director City of Clayton Public Works Sean McGonigle, Risk Manager Missouri Association of Counties Bonnie McCard, President Vernson County John P. Miller, Traffic Safety Engineer MoDOT Ben Prigge, Executive Director Missouri Regional Planning Commission Dan Ross, Executive Director Missouri Municipal League Greg Sagers, Director Plate County Public Works Gary Schepetier, Superintendent City of Clayton Public Works Bill Stone, Research Administrator MoTPA Marc Thomasbury, Safety & Mobility Engineer FHWA Missouri Division Randy White, Executive Director Pioneer Trails Regional Planning Committee Skip Wilson, District Bridge Inspector MoDOT

The entire Missouri LTAP staff sends our greetings from the campus of Missouri S&T. After a cold, wet spring that seemed to drag on forever, summer is finally here. It is always a busy time of year for the agencies we serve. Long summer days are spent building and maintaining road and bridge projects, mowing roadsides, and completing countless other tasks that are a part of your day to day operations. In an effort to educate agencies on the safest and most efficient ways of completing these countless tasks, MO-LTAP is continually updating existing classes and developing new training. This summer we will be offering a new class called Introduction to Materials: Concrete, Asphalt & General Materials. It covers the basic properties of materials used in road and bridge projects. It also explains why it is important to determine these properties correctly and at the proper frequency to ensure that what is being incorporated into a project meets the specification limits. The first class is being scheduled for August in Rolla. This will be a Level II class in the New Road Scholar structure. We also have several new classes that we will be rolling out in the fall. Some of these include Confined Spaces, Comprehensive Winter Planning & Organization, and Fall Protection & Personal Protective Equipment. In addition, we will be updating some of our existing classes to ensure that they have the most current information available. These classes include Snow & Ice Control, Preventive Pavement Maintenance, Gravel Road Maintenance, Defensive Driving, and Equipment Operation & Safety.

Summer also gives my staff and me an opportunity to assess the training and other projects of the MO-LTAP program for the first half of the year. As of mid-June, we have held 86 classes versus 65 this time last year. We recently completed the training for the Traffic Practices: A Guidebook for City & County Agencies. Ten trainings were held throughout the state starting last summer and finishing in May of this year. One workshop was held in each MoDOT district and the three remaining classes were held at various conferences. Each attendee received a free copy of the guidebook, which is now available by download from the MO-LTAP or MoDOT websites or by contacting the MO-LTAP office for a printed copy. Please see the article in this newsletter on page 11 for more information on how to obtain your free copy. We are currently involved in a partnership project with MoDOT called the 2013 Chip Seal Showcase. It will feature five free showcases/workshops in the state on current chip seal projects. There will be a 1-2 hour classroom portion instructed by Mike Thomasbury, who teaches many of our Chip Seal/Asphalt 101 classes, followed by an onsite demonstration. Lunch will be provided. See page 10 in this newsletter for dates and locations. As we look forward to another busy fall, we realize it is just around the corner. In addition to all of the training we will offer, will be attending several conferences around the state to promote our training and services. Some of these include the Missouri Municipal League (MML) Conference in September at the Hilton Convention Center in Branson, Missouri Association of Counties (MAC) Conference in October at Tan-Tar-A Resort in Osage Beach, MACTIO Conference in late October at Howard Johnson in Springfield, and the Fall Missouri Chapter APWA conference in early-November at The Lodge of Four Seasons in Lake Ozark. More details are provided on each of these conferences throughout this newsletter. We hope to see many of you at these various conferences in upcoming months. As always, my staff and I appreciate the support of all of the local agencies around the state. Please send us your comments and suggestions on ways we can better serve you.

Best wishes,

Heath Pickerill
Director, Missouri LTAP
EXPERTS OFFER TIPS TO CONTROL CONCRETE CRACKING

It's natural for concrete to crack, but the potential for cracking in bridges and pavements can be minimized by the design, materials selection and construction practices used, experts explained during a Federal Highway Administration web conference.

The event, "Control of Concrete Cracking in Bridges and Pavements," was part of the free "Innovation" series sponsored by Highways for LIFE and the National Highway Institute. The web conference was based on Control of Cracking in Concrete: State of the Art, a Transportation Research Board research circular.

"Cracks can occur for many reasons, but the key is to control the cracks to assure durability and long-term performance," said Mynt Lwin, director of the FHWA Office of Bridge Technology, who moderated the conference with Ben Graybeal, FHWA research engineer.

Causes and Effect

"Concrete cracks just by its nature," said Dr. Mohammad Khan, senior vice president of Professional Services Industries Inc. Mechanical loading, environmental factors and harmful reactions such as freezing and thawing, corrosion of reinforcing steel and sulfate attack can produce tensile stresses in concrete. These stresses can result in cracking, both during construction of a bridge or pavement and over the life of the structure.

"Careful structural and materials design can keep cracks to an acceptable level," said Khan. "Keep in mind that cracks caused by one factor can promote cracking by other factors. It's a domino effect."

Moisture is the common ingredient in most cracking related to chemical reactions. "If you can control moisture, you can control a lot of the problems associated with concrete," Khan said. Understanding the causes of cracking is "absolutely critical," he said. "Finishing should be completed in a timely manner because concrete that sits exposed to the environment both before or after the finishing is subject to cracking."


TIPS FOR MAINTAINING UNPAVED ROADS

1. To remove washboarding, cut the corrugations to their full depth, then regrade the area with moist material that will compact. Corrugations filled with loose, dry material will reform quickly in areas of high vehicle traffic. Corrugations are best removed by using a scarifier or a serrated cutting edge.

2. Articulating the road forward toward the toe of the moldboard by 2 to 5 degrees helps reduce motor graders' tendency to bounce, and is extremely effective when cutting out washboards. This places one front tire slightly ahead of the other and allows one tire to be on top of a corrugation while the other is in the bottom. As the tires roll up and down through the washboard, the front axle will pivot up and down keeping the front mainframe stable.

3. Be sure not to use the crab mode when scarifying washboarded areas. This can bend the scarifier shanks and/or linkage.

4. To eliminate potholes, cut to the depth of major potholes. Filling holes with loose dry material is ineffective, as traffic quickly displaces the loose material and the holes reform.

5. For the widest possible pass width on the travel surface, tip the moldboard further forward than the start position. When finishing work, tip the moldboard forward or back to obtain and maintain the desired cutting-rolling action. Tipping the moldboard forward will increase moldboard throat clearance. Generally, a wider throat opening allows better material flow along the moldboard in a wide variety of soil types. Maintaining a rolling action on the material while working reduces horsepower required and provides maximum productivity.

6. Apply only enough downward pressure to accomplish the tasks. Excessive downward pressure on a hard, surface causes rapid cutting edge wear, requires more horsepower and fuel, and reduces productivity.

7. The blade's tip angle should be positioned with the cutting edge at 90 degrees to the road surface. In this position, downward pressure on the moldboard places less stress on the cutting edge and retaining bolts. The edges also tend to ride over objects, which helps prevent machine damage.

8. For minimum machine stability when maintaining roadways, the motor grader's main frame should be straight with the drawbar and circle centered under the frame.

9. For the widest possible pass width on the travel surface, keep the moldboard angle as close to the blade angle as possible. If material starts to flow around the leading edge of the moldboard, or the rolling action dies, increase the blade angle.

10. Keep motor travel speed as high as possible for maximum productivity but low enough to prevent machine bounce (generally 4-7 mph).

11. Moldboard angles of 10 to 30 degrees are normally used in light, free-flowing material. Higher moldboard angles of 30 to 50 degrees are required when processing wet-sticky material, mixing large windrows and downgrading.

12. To cut hard material or for finishing work, tip the moldboard further forward than the start position. When finishing, tip the moldboard top 4 to 5 inches of the cutting edge so the cutting edge is approximately 90 degrees to the cut surface. This moldboard tip position will generally position the drawbar parallel to the finished grade.

As always, road conditions and your fleet are factors in your agency's road maintenance. Contact the operator training experts at a local dealership to learn more about equipment options available to help you and your operators maintain your unpaved roads in the most efficient manner possible.

Resource: Governmental Solutions 2012

Resource: Missouri LTAP - Page 4
PROTECTING EMPLOYEES FROM FALLS
Pam Donnewald, Risk Manager for Illinois Municipal League Risk Management Association

Fall: A downward rapid and free movement from a higher level to a lower level such as falling off an overhead platform, an elevated workstation, or into holes in the floor and walls. Falls can be caused by a variety of factors, including equipment failure, human error, and environmental hazards. Fall protection programs are essential to prevent serious injury and death.

What you must do as an employer?
- Recognize the Missouri Department of Labor (MODOL) standards relating to falls.
- Recognize the various types of falls that can happen in your workplace.
- Develop, implement, and commit to a fall protection program.
- Conduct a baseline fall evaluation of your workplace.
- Identify actions you and your employees can take to prevent falls.
- Provide training to employees and supervisors.

Fall Protection Programs
The most effective fall protection programs are those that are specific to your workplace and take into account the equipment and special training needed for a particular area. Fall prevention and protection programs are also developed in stages, with the planning stage surveying the work environment to identify potential hazards. An engineering control is the best risk management answer, as it provides an appropriate control measure such as trench relocation or altering the work environment.

Levels of Protection
Options for addressing fall hazards fall into three categories:
1. Engineering controls that eliminate the hazard
2. Administrative controls such as training and procedures
3. Personal protective equipment such as fall arrest systems

Equipment requirements include:
- Use, inspection, maintenance and storage
- Communication of the program to employees
- Training and retraining of the workforce
- Documentation and recordkeeping (e.g., equipment inspections, training)
- An enforcement and disciplinary policy
- Review and update procedures

Fall Safety Rescue Plan
Even with the fall protection pieces in place, if there is an accident, everyone needs to be prepared to act. Even if the person doesn’t fall, the worksite within a few minutes. Prolonged suspension in a full body harness is associated with a serious health risk called orthostatic intolerance or “suspension trauma” that can occur in only a few minutes. Your rescue plan should take into account the equipment and special training needed for a prompt rescue under all foreseeable conditions. If the rescue will be from a confined space, the standards for confined space rescue must be followed.

Training
Affected employees and their supervisors should be trained by a competent person before using any fall protection products. Hands-on training for all users is best for helping them understand the capabilities and limitations of their equipment. Training should be repeated periodically for review and additional practice.

Conclusion
As a municipal employer, it’s up to you to prevent tragedies and encourage employees to be safety smart about fall hazards. Value your competent person, and to register for the conference.

Don’t Get PINNED: SAFE OPERATION STARTS WITH THE BASICS

The accident: The contractor instructed an excavator operator to move dirt, clear debris and fill a trench, and then left the job site. Upon his return, he saw the excavator operator – which was an older model that had been purchased used – positioned over the trench with the operator pinned to a tree and crushed by the machine. The contractor reached into the cab and pushed the joystick to free the operator; however, the cab rotated, pinning him to the tree as well. Although the contractor was able to free himself, the operator was already dead.

The bottom line: A post-accident investigation determined that although the excavator had a lock lever that disabled the boom and arm movements as well as the swing function, the lock had not been activated. The cab door was open, indicating the employee was exiting the cab and the bucket had not been lowered to the ground. Investigators reached the conclusion the victim had inadvertently bumped the excavator’s left control joystick with his leg, causing the machine to rotate counterclockwise and pin him to the tree. The cause of death was determined to be asphyxia from crush injuries and thoracic compression.

Value your competent person
Your company’s competent person will have evaluated the site prior to work to identify potential issues. For the accident, a planning stage survey could have pinpointed the tree as a safety hazard because of its proximity to the trench. An appropriate control measure such as trench relocation would have prevented the accident. Ask if any risks were found during site evaluation, and if so, what control measures were taken to protect you and your fellow workers.

Resource:
Better Roads - Sponsored by BRIDGESTONE

For more information and resources at www.labor.mo.gov/dls/workplacesafety.

MML Annual Conference
September 15-18, 2013 in Branson, MO
Hilton Branson Convention Center
Go to www.mocities.com for more information and to register for the conference.
Most people don’t want to lead or be called “the boss” because leadership is hard. According to Mike Colestock, leadership positions shouldn’t be giving the very difficult job, and you can’t do it well if you don’t really like people. Colestock, an instructor with Hennepin Technical College, presented “Leadership Skills for New and Upcoming Supervisors” during a general session at the 2012 Minnesota Fall Maintenance Expo and Snow “Roadeo” at the St. Cloud Public Works Facility, held October 3-4.

Colestock provided an overview of what it takes to prepare for a leadership or supervisory role. His presentation focused on the challenges and difficulties associated with taking a leadership position. Colestock also offered tools, tips, and techniques needed to build personal influence and succeed as a leader.

“Leadership is about people because it’s about influence—understanding what’s important to people, what motivates them, why they get out of bed everyday, Colestock said. “Can you motivate your people?”

Colestock began the presentation by saying that employees who aspire to leadership need to know why they want to be leaders. “The best bosses are the ones who are good leaders,” he said. “Supervision is about tasks—leadership is about people. People want to be led well.”

To lead well, Colestock continued, a supervisor must be aware of his or her own leadership style. Along with educational and technical competence, leaders need to understand the kinds of people they are and the way they best communicate. Colestock then introduced the importance of supervisors knowing the communication styles of their employees. “Part of leadership is knowing how you communicate and how your people communicate,” he said. “Don’t take [your workers] for granted. You need to get to know them.”

Though leaders may be unable to change the attitudes of their worker, Colestock said, leaders can create an environment where people can be fully engaged in their work. An engaged employee is someone who has a larger perspective on what the company is trying to accomplish, knows the most efficient ways to do the work, and thinks for the organization. “Good leaders engage their people,” Colestock said. “I want to hire what’s between their ears, not just their hands.”

According to Colestock, good leadership traits are critical to success. Indecisiveness, lack of direction and organization, vindictiveness, and micromanagement are all signs of bad leadership, and these methods disengage workers. Colestock explained that in conflict, good leaders shouldn’t be frustrated by their people, but instead should focus on the behavior that needs to be changed. “Good leaders focus on the tangibles—here’s what’s wrong, and this is the behavior I need corrected. You have to get to the bottom of the issue,” Colestock said.

Fostering respect in the workplace is also critical for engaging employees. Colestock believes that when leaders respect their employees, employees will respect their leaders. “We have to realize that we’re both professionals and we’re here to do our jobs. I can’t get away from a worker if he doesn’t respect me. Without respect, that worker is disengaged,” Colestock said.

Instead, Colestock suggested leaders practice “window-and-mirror” maturity with their employees. When something goes well, good bosses should look out the window and give credit to their workers. When something goes wrong, good leaders should look in the mirror and take it upon themselves to fix the problem. “Your reputation as a leader shows up before you do and disappears after you walk away,” Colestock said. “You need to know what creates success.”

Ultimately, when leaders can demonstrate to their employees that they are valued, Colestock said, it helps motivate those employees to engage in their work. “Good leaders fight for their folks,” he concluded. “The more people who understand that I care about them as a human being, the more they will engage and give all of their effort.”

Resource: Minnesota LTAP Technology Exchange, Winter 2013 Vol. 21 No. 1

Related MO-LTAP RSP Level III classes that can be scheduled upon request this fall and winter:
- Enhancing Cooperative Work Relationships
- Managing Employee Performance
- Supervisory Communication Skills

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**Creating a Diverse Working Relationship**

**Terri Troup, Contract Specialist from City of Nashville, Tennessee**

The world has changed so much over the past several decades from technology to people. People have adjusted to the changes in technology; however, there are still some difficulties with the changes in people. The world is made up of a large diverse group of individuals after years of changing. In a diverse population there are still issues with building strong relationships. As the world changes, individuals need to be able to drop assumptions and walls in order to create a diverse working relationship. Having a strong diverse working relationship will help an organization become successful. This article will provide some examples as to how to create a diverse working relationship portfolio and the benefits of doing it.

Establishing a diverse working relationship can make an organization extremely powerful and profitable. There are many ways that an organization can generate diverse relationships. The main one is to reach out to individuals that can make up teams of different ages, races and ethnic backgrounds. If committees are being formed, it might be requested to seek out individuals of a variety of views. This will allow for more open discussion and brainstorming between team members. It is good to have individuals with numerous years of expertise; however, it is not good to have a committee made up of individuals that are over 45 years and have 15 plus years of experience. This prevents the younger individuals from being able to learn from the more experienced individuals. It is always a good idea for committee chairs and members to think about selecting future nominees on the basis of what is missing within the team. The team might need to ask themselves, “What can make this team better?”

Many times it is a great idea to select fresh individuals that will be successful; therefore, their positive drive and enthusiasm are overflowing. A fresh individual can have a variety of ideas which can make a committee very successful.

The same concept can be used by organizations trying to develop working relationships. Many times organizations are in a comfort zone with doing business with certain firms because that is who they have always done business with. This is not always the best theory to have, especially when an organization is trying to become successful.

It might be a good idea to reach out to smaller organizations, minority-owned organizations or women-owned organizations on a regular basis. Reaching out to these types of organizations will improve networking skills. It will allow organizations to get a better understanding as to services provided by others. Conducting business with smaller organizations, minority-owned organizations or women-owned organizations can help promote and support equal opportunities while stimulating economic development.

It is important for organizations to use the outreach in order to develop or modify their portfolio. Many times when reached out to, organizations will realize that past relationships might not be providing the right service for the right price. There are many times when organizations build strong relationships from a simple desire that this relationship could be the first step for a new business—the breakthrough that an organization needs to be successful.

This is exactly what the City of Nashville has done by creating the Procurement Nondiscrimination Program. According to the City of Nashville (2012), “the Procurement Nondiscrimination Program is a procurement-based program designed to increase purchases from minorities and women.” According to Metro Nashville Ordinance NO. BL-2002-161, it is the policy of the Metropolitan Government of Nashville and Davidson County to promote full and equal business opportunities for all persons doing business with the Metropolitan Government by increasing the purchase of goods and services from minority- and women-owned businesses with the area of the Metropolitan Government that firms seeking to participate in contracting and procurement activities with the Metropolitan Government are not prevented from doing so on the basis of the race or gender of their owners and that the Metropolitan Government not be a passive participant in any private scheme of discrimination. This program has increased women- and minority-owned participation steadily over the past several years. This shows that reaching out to certain classifications can be beneficial to all parties involved.

This same concept is true for individuals within an organization. Developing relationships with coworkers or individuals within an organization can help build a portfolio for references. These relationships could provide an opportunity for career growth. Individuals need to get involved with groups in order to gain important knowledge and skills while providing back to the group. Every group needs to have a variety of knowledge, skills, and experience. People want to be led well.

In conclusion, the development of diverse relationships can have an enormous impact on organization, governments, nations and even the world. The economy can be stimulated by repeating out to certain business classifications in order to promote and provide business opportunities. Careers can be advanced within associations or organizations by allowing people the opportunity to get involved if there is an organization or association that you would like to be involved in, contact them because the more involvement that exists the greater success that organization will have.

Resource: APWA Reporter, April 2013

**Preparing for Leadership and Supervisory Roles**

**Michael McCarthy, LTAP Editor**
MoDOT Receives Funds for Innovative Safety Projects

JEFFERSON CITY - The Missouri Department of Transportation has received a federal grant to try an innovative pavement treatment that will help keep motorists safer on Missouri highways.

The $150,000 grant will allow the department to test a pavement application on curves and intersections that provides more traction for vehicles. MoDOT will use the innovative safety tool - called High Friction Surface Treatment - on Routes S4 and 179 in Jefferson City. Depending on the results and how much the money stretches, the agency may also treat two sites on Interstate 44 near Rolla.

“The High Friction Surface Treatment gives vehicles a grip on the road when travel conditions aren’t ideal, such as when it rains or snows,” said Dave Ahlvers, state construction and materials engineer. “This funding will allow us to complement the safety tools we already use, such as guard cable and rumble strips.”

The treatments will be applied to a curve on Route S4 at the Madison Street exit, as well as on a hilly curve on Route 179 just past the Route C intersection. The projects have to be designed and bid before the work can start.

Missouri is one of 13 states to receive a Highways for LIFE grant from the Federal Highway Administration for innovative highway and bridge projects that will improve safety, create jobs and enhance the quality of the nation’s transportation infrastructure. The grants encourage the use of innovative technologies and practices on America’s roads and bridges, such as accelerated bridge construction, cutting-edge building materials and advanced methods for construction project management.

Chip Seal Showcases Being Held in 5 Locations!

The Missouri Department of Transportation (MoDOT) is excited to be co-hosting five Regional Technology Showcases on chip seal technology and best practices in partnership with FHWA, MO-LTAP and Vance Brother Asphalt. The showcases are being held to transfer established best practices and procedures to city and county transportation agencies. City and county public works staff along with area contractors will be able to apply MoDOT’s best practices in using chip seal to extend pavement lives. There are new technologies related to chip seal that will be shared with state and local representatives. The course will consist of a 1-2 hour class workshop followed by an on-site chip demonstration of MoDOT jobsites. The showcases are being funded through FHWA Deployment Funds.

Lunch will be provided. All attendees will receive a FREE hardhat, reflective vest and safety glasses.


The new guidebook for Missouri entitled Traffic Practices: A Guidebook for City and County Agencies, which was developed by the Missouri Coalition for Roadway Safety (MCRS) in cooperation with MO-LTAP, MoDOT, and Missouri’s ITE Chapters, is now available to all local agencies. The new guidebook serves as a resource for individuals who have responsibility for transportation engineering decisions and services within their local jurisdiction in the State of Missouri. A free hard copy can be obtained by contacting the MO-LTAP office or can be downloaded by going to http://contribute.mdot.mo.gov/safety/documents/TrafficPracticesGuidebookforCityCountyAgencies.pdf or the MO-LTAP website at www.moltap.org.

Ten workshops were held around the state and provided an overview of the guidebook with emphasis on the transportation engineering concepts and principles which guide the day-to-day operations and longer term needs of local agencies. Funding support for the training was provided through an Accelerating Safety Activities Program (ASAP) grant from the Federal Highway Administration (FHWA). The last workshop was held on May 31 in Columbia during the Traffic & Safety Conference. A total of 178 were in attendance at all ten workshops. MoDOT would like to thank everyone who was involved in organizing these workshops or attended for making them a success. We would especially like to thank Mr. Earl Newman for his efforts in developing and instructing the training.

FHWA to Offer 2 New Initiatives in Missouri This Year

The Federal Highway Administration (FHWA) has rolled out a second wave of innovations for its Every Day Counts (EDC) initiative, an effort focused on shortening the time needed to complete highway projects through the use of new technologies and innovative processes. At the end of 2012, sponsorship of the EDC-1 innovations by the Every Day Counts initiative came to a close, and a new set of innovations, EDC-2, was selected for deployment. Some of these were hold-overs from EDC-1, while others were new to the Every Day Counts initiative. All of them provide ways of improving the work of highway planning, design, construction and operation. FHWA will promote 13 innovations to state, local and regional transportation agencies, as well as to the design and construction industries. Two upcoming initiatives tentatively scheduled for later this year include Locally Administered Federal-Aid Projects on September 24 and Intersection and Interchange Geometrics on December 4. Watch for more information as these dates get closer.

The Federal Highway Administration (FHWA) supports State Transportation Agencies (STAs) by allowing Local Public Agencies (LPAs), such as cities or counties, to administer Federal-aid projects. The LPA program, as administered by the states, provides for construction, reconstruction and improvement of highways and bridges on eligible Federal-aid highway routes. It also provides for other special purpose programs and projects for Federal-aid Highway Programs under Title 23, representing $6 to $8 billion dollars or approximately 20 percent of the program.

Locally Administered Federal-Aid Projects
September 24, 2013; 1:00 - 3:00 CST*

About half of all severe crashes in the U.S. are intersection related. Left-turns represent a large portion of the intersection safety concern. As part of the safety focus area of the Every Day Counts (EDC) initiative, the Federal Highway Administration (FHWA) is promoting several proven techniques to improve the safety of intersections by strategically eliminating or relocating the left-turn conflicts. Transportation agencies that apply the intersection and interchange geometrics under this initiative can reduce crashes and greatly enhance the efficiency of moving traffic, often times with substantial cost savings and accelerated project delivery.

Intersection and Interchange Geometrics
December 4, 2013; 1:00 - 3:00 CST*
Public Works Connection

**KEEP WASTE WHERE IT BELONGS: Storage solutions for municipal solid waste**

With the current landfills reaching full capacity and the growing emphasis on recycling, it is critical that public works departments nationwide start developing their own solutions to solid waste storage. As municipal budgets are shrinking, finding a cost-effective way to store ever-increasing amounts of solid waste is not an easy task.

The term municipal solid waste (MSW) refers to common items used by the public and then discarded. Some of these items may be recyclable, while others cannot be reused. MSW comes from residences, schools, hospitals and businesses. Of the four main components of the MSW industry, three need a large amount of space for proper storage. These include land-filling, recycling and composting. Covered storage is a necessity for these forms of solid waste to protect it from the elements, such as rain and snow, which can create a waste stream and contaminate the environment.

While regulations on solid waste storage may vary, most towns and states follow the same principle. Solid waste must be stored in a way that prevents a waste stream from harming the surrounding environment. States must comply with the U.S. EPA regulations for storing MSW, which leaves few efficient storage options.

One of the most common places to store MSW is in landfills. Landfills are sections of land that are cordoned off to protect the environment from hazardous runoff and other forms of contamination. Landfills cannot be located near environmentally sensitive areas including wetlands, faults and flood plains, where there is an increased chance of contamination. They also must be constructed on top of liners, which are on top of about two feet of compacted clay. This is to be sure that no contaminants leak through the liner into groundwater below. Though landfills are very popular, they are filling up quickly and it is difficult to find new locations that meet the requirements to construct new landfills.

The first step in decreasing the amount of waste that goes into landfills is to increase the emphasis on recycling and composting. Recyclable products are now required to be sorted out from other waste in many states. By recycling paper, plastic, cardboard and other materials, the amount of unusable waste from other waste in many states. By recycling paper, plastic, cardboard and other materials, the amount of unusable waste is reduced and less space will be required for its storage.

Other than US nationals, if you are building a wood structure, ask the contractors what grades of lumber they plan to use. Lumber also needs to be checked for any defects to ensure the structure will be durable and long lasting. If you’ve chosen a metal building, the gauge of the metal is important. Most commonly, these buildings are made of 20-gauge steel sheets. For fabric structures, the highest quality manufacturers will use triple-galvanized structural steel tubing, which stands up in corrosive environments like solid waste facilities.

The last important factor to take into consideration when choosing a building is the lifetime expectations and warranties. The structure you choose will be a crucial part of your public work department, so it should be guaranteed to last for an extensive period of time. With the necessary maintenance, wood buildings have a lifespan of about 20 years, and a metal building will last anywhere from 10 to 15 years on average. Manufacturers of fabric structures consider the average lifespan of their fabric covers to be 25 years, while the frame should last a lifetime. The average warranty on fabric covers is 15 years.

Tension fabric buildings offer the longest lifespan, are highly customizable and can be built to meet the needs of your specific location. They also have an advantage when it comes to construction timelines. Most fabric buildings take less than a week to install, while wood and metal structures require longer timelines, costly foundations and frequent maintenance. Fabric structure maintenance is limited to twice yearly inspection of the building components and tightening of bolts when necessary.

Fabric structures have no internal support posts, which also makes them ideal for waste storage. Equipment can easily be moved in and out of the structure, and can be maneuvered in and out with ease.

**Missouri LTAP Advisory Committee Meets (continued from page 3)**

Other topics discussed included changes to the Road Scholar Program and new training development. Under the new structure, there are no required core classes for Level II and Level III.

The course selection is left up to each individual. There are several new Level II classes, which include Advanced Communication Skills, Construction Documents, Comprehensive Winter Planning & Organization and Fall Protection & Personal Protective Equipment. Training plans for 2013 include more ADA classes in new locations throughout the state and the newly developed Construction Documents course, which has been well received.

The meeting concluded with program development ideas and closing comments from each committee member. Some possible new classes could include night-of-way acquisition and a best practices class with examples of projects where city, county, state and federal agencies have worked together successfully. It was suggested to include a rebate section on our website since MO-LTAP offers a $50/person rebate for our Defensive Driving course and MIRMA is going to start offering rebates on several MO-LTAP safety related courses. Finally the committee said they are impressed with the continual increase in the number of agencies and individuals being trained. The next meeting will be held this fall. If anyone is interested in serving on the Advisory Committee, please contact Heath Pickrell at pickerillh@mst.edu or 573-341-7637. For more information on Missouri LTAP please visit the LTAP website at www.moltap.org.
Just Added to the Library

**National Work Zone Safety Information Clearinghouse**
- Guidelines for Road Maintenance Levels
- Environmentally Sensitive Road Maintenance Practices for Dirt & Gravel Roads
- Beyond the Short Term: Transportation Asset Management for Long-Term Sustainability, Accountability and Performance
- Factors Contributing to Pedestrian & Bicycle Crashes on Rural Highways
- Development of a Speeding-Related Crash Typology
- Safety Evaluation of Transverse Rumble Strips on Approaches to Stop-Controlled Intersections in Rural Areas

**MoDOT Cooperative Procurement Program**

Become part of the joint purchasing program with MoDOT to purchase procurement items at MoDOT’s rates. Contact us to receive a Coop packet on how you can become a partner.

Call: 573.341.7200 Or Email: kristib@mst.edu
Or Go To Our Website: www.moltap.org

**Realty for Sale**

The Missouri Department of Transportation is responsible for managing realty assets owned by the Missouri Highways and Transportation Commission. Realty assets are periodically reviewed to determine if they are essential to current operations or are expected to be in the near future. When the property is no longer essential to operations, they may be available for sale to the public.

**MoDOT Savings Surplus**

Make your dollars go further with MoDOT surplus purchasing! All of MoDOT surplus items are sold at GovDeals or at local public auctions. Prices, mileage, condition and purchasing instructions can be viewed online: [http://www.govdeals.com/](http://www.govdeals.com/)

**Missouri LTAP Fax Number: 573.341.7245**

Today’s Date:

Name: 
Agency: 
Address: 
City/State: 
Zip: 
Phone: 
Fax: 
Email: 

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**Registration for Classes**

To register for a training course, please fill out the information above, indicate which class you would like below and attach a list of all attendees. Fill out a separate form for each class you would like to attend and fax all pages to Missouri LTAP.

Course Date:  
Course Name:  
Course Location:  
Attendees: (Name & Title)  

Missouri State Agency for Surplus Property  
2846 Highway 179, Jefferson City, MO 65109  
1.888.295.7796 OR 573.751.3415  
Check out the thousands of items in stock at MOSASP!  
For information about the program, visit: [www.oa.mo.gov/purch/surplus.html](http://www.oa.mo.gov/purch/surplus.html)

National Highway Institute  
Current Training:
- Web-Based Training  
- Web-Conference Training  
- Instructor-Led Training  
- Other Courses

Institute of Transportation Engineers  
ITE’s Online Learning Gateway offers transportation professionals the opportunity to earn professional development hours and to gain current, relevant training. ITE’s online courses are primarily geared toward transportation practitioners, designers and planners. Costs vary and are reduced for ITE members. Courses are available online at any time. ITE’s courses cover pedestrian facility design, capacity and safety analysis at signalized intersections, site impact analysis and traffic signal needs determinations.  
Contact: [www.ite.org/education/olg.asp](http://www.ite.org/education/olg.asp)

CITE provides more than 30 online courses providing advanced transportation training for transportation technicians and professionals. CITE also offers online certificate programs in Intelligent Transportation Systems (ITS) Project Management, ITS Systems and Traffic Engineering & Operations.  
Topics Include:  
- Systems Engineering  
- Corridor Management  
- Deploying ITS  
- Intermodalism  
- Telecommunications Technology  
- Road Safety Audits  
- Road Signals Traffic Flow Theory  
Contact: [www.citeconsortium.org](http://www.citeconsortium.org)
TRAINING INFORMATION

Please visit our website for the current MO LTAP training calendar: www.moltap.org

Road Scholar Level I
$35/person
8:00 AM - 12:00 PM

Road Scholar Level II
$50/person
10:00 AM - 3:00 PM
lunch is included

Supervisory Tract (Level III)
$75/person
10:00 AM - 3:00 PM
lunch is included

These rates apply to all government agencies. For non-government or for-profit organizations, call 1.866.MOROADs for rates.

To Register:
(choose 1 of the following)
→ Register Online at www.moltap.org
→ Call 1.866.MOROADs
→ Use the FAX BACK form on Page 11
→ Email Kristi Barr at kristib@mst.edu

2013 LTAP/TTAP National Conference
July 22-25; Boise, Idaho

2013 International Public Works Congress & Exposition
August 25-28; Chicago, Illinois

MML Annual Conference
September 15-18; Hilton Branson Convention Center in Branson, Missouri

MINK Local Roads Meeting
September 25-26; St. Joseph, Missouri

MAC 42nd Annual Conference & Expo
October 20-21
Tan-Tar-A Resort at Osage Beach, Missouri

8th Annual MACTO Conference
October 29 & 30
Howard Johnson in Springfield, Missouri

Missouri Chapter APWA Fall Conference
November 3-5
Lodge of Four Seasons at Lake Ozark, Missouri

North American Snow Conference
May 4-7, 2014
Duke Energy Convention Center in Cincinnati, Ohio

on the Horizon