KS LTAP Newsletter

Spring 2021

A Service of The University of Kansas Transportation Center for Road, Street, & Bridge Agencies

Inside

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Do Local Agencies Need Flagger Training Tailored to Their Needs?

By Hemin Mohammed

Safe work zones depend on proper work zone design, training, and flagging procedures. The performance of flaggers is tied to the safety of the flaggers, their fellow workers, and the traveling public in all types of work zones and jurisdictions. Passing sufficient knowledge on the regulations and guidelines that pertain to flaggers in cities, counties, and townships is crucial and this article provides a pathway to reach that goal.

Flaggers' responsibility for public safety and their direct contact with the public impels them to be trained appropriately in safe traffic control practices and public contact techniques (1). Flaggers need sufficient skills and capacity to:

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Making Safer Roads

Local Road Safety Plans (LRSPs)

By Clark Rusco

KDOT is promoting a program for improving the safety of local roads, the Local Road Safety Plan (LRSP). KDOT has a goal to help each county develop a LRSP and participating in the program will help your agency have better access to funds to make safety improvements. Funding is available to develop the plans which prioritize roadway safety improvements to lower crash rates on local County Roads. A completed LRSP contains a list of potential safety improvements for the county that can then be considered for safety funding when the county applies for HSIP funding.

This article will describe how LRSPs work and finish with answers to common questions that I have been asked by counties about the Program.

The cost to a county to develop a LRSP is $5,000, with KDOT providing another $50,000 per plan with federal safety funds.

Creating and using a LRSP is a change in approach from previous safety funding programs. The previous High Risk Rural Roads (HRRR) funded improvements at high crash locations. Improvement grants were awarded based on the number of crashes reported and the damages from each crash. Instead, the LRSP prioritizes achievable safety improvements for a roadway corridor based on

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Making Safer Roads Continued from page 1

nationally recognized proven safety countermeasures. Low-cost safety improvements are studied for roadway corridors, then specific locations within the corridor are reviewed to determine site-specific project costs. Some examples of low-cost safety countermeasures include: installation of chevrons, delineators, signage, pavement markings, and removal of hazards located near the edge of the pavement. The opinion of probable cost for the improvements is calculated and shown in the LRSP. Low-cost safety improvements are now eligible for grant funding and funding is not dependent on the number or the severity of the actual crashes.

This is an advantage to counties because not all crashes get reported, even if it is obvious crashes are happening. For example, when I was with Barton County, we had two box culverts located on a ninety-degree curve with a radius of about 100 feet. The two culverts were getting damages to the culvert rail often but were not yielding any crash reports. Since the HRRR program was dependent on crash data, we were not eligible to receive funding to address the culverts. However, with the LRSP safety projects identified in the plan are eligible for HRRR funding.

Roadway departures and collisions with fixed objects are the leading causes of crashes and fatalities on our rural, non-state, roadways. The top seven categories for crashes and fatalities involving fixed objects are: trees, embankments, ditches, utility poles, barriers, fences/gates, and culverts. Low traffic roadways will benefit in a new way with the LRSP process. The systemic tools would identify safety improvements, which can then be done before accidents occur. Low-cost safety improvements allow more sites to be improved and high-cost improvements would more likely be moved toward the bottom of the project list.

Frequently Asked Questions

1. *The LRSP lists projects to be completed to improve the safety of roadways. Can this information be used against you if a traffic accident occurs before improvements are made?*

   Each page of the LRSP has a watermark "USE RESTRICTED 23 USC & 409". What this means is even though the report contains a list of roadway improvement projects, this information is for the use of each county and does not need to be disclosed to others. Listed projects cannot all be done at once. Time is allowed to implement the identified projects.

2. *When is the $5000 local share for the study due?*

   The local share is due at the time of contract award to the LRSP study consultant.

3. *Can Federal Fund Exchange dollars from KDOT be used for the local share for the LRSP study?*
   Yes

4. *Can HRRR projects be awarded without the project listed in a LRSP?*

   Yes. A county must have completed a LRSP or be signed up to complete one to be eligible to receive HRRR funding (BLP Memo 20-06). A LRSP can now be scheduled for FFY 2021 or FFY 2022.

5. *Are onsite surveys required for each project listed in the LRSP?*

   No. LIDAR, Google Earth, Mapping software, and other digital mapping sources can be used to develop the Opinion of Probable Cost.

6. *What Project Information is contained in the LRSP for each project?*

- Project Description for each Roadway Segment Improvement
- Location Description
- Project Location Maps
- Segment Information and Systemic Ranking Summary
- Opinion of Probable Cost (Short Term Improvements)
- Opinion of Probable Cost (Longer Term Improvements)
- Opinion of Probable Cost (Additional Potential Improvements)
- Crash History Along Roadway Segment

7. What is the time frame to complete a LRSP?

- About one year is needed to complete a LRSP
- Applications are being accepted for FFY 2021 and FFY 2022
- Application forms are available on the KDOT/Local Projects web page. (https://www.kdot.org/Assets/wwwksdotorg/bureas/burLocalProj/HRRR/LRSP%20Application.pdf)

8. What is required of the local agency in terms of helping the consultant develop the LRSP?

- The consultant will send out a check list for information needed for the LRSP routes. Check list items include:
  - Intersection lighting
  - Overhead/Stop Sign Flashing Beacons
  - Centerline Rumble Strips
  - Edge line and/or Rumble Strips
  - Transverse Rumble Strips
  - Pavement width and type (material)
  - Shoulder width and type (material)
  - Edge Line pavement markings
  - Centerline pavement markings
  - Curve Warning Signs
  - Curve Superelevation
  - Speed Limits

For more information about Local Road Safety Plans, see these resources:

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Local Roads Safety Plans. https://safety.fhwa.dot.gov/provencountermeasures/local_roads/

Proven countermeasures. https://safety.fhwa.dot.gov/provencountermeasures

Clark Rusco is a Local Field Liaison for Kansas LTAP, providing one-on-one technical assistance. He can be reached at KSLTAPClark@gmail.com. Clark was the county engineer for Barton County, Kansas, before joining LTAP.

Flagger Training Continued from page 1

- Receive and communicate specific instructions, firmly, and courteously.
- Move and maneuver quickly to avoid danger from errant vehicles.
- Control signaling devices (such as paddles and flags) to provide clear and positive guidance to drivers approaching a TTC zone in frequently changing situations.
- Understand and apply safe traffic control practices, sometimes in stressful situations or emergencies; and
- Recognize dangerous traffic situations and warn workers in an adequate time to avoid injury.

According to KDOT standard specification Section 805 on work zone traffic control and safety, the required certification and training for flaggers who work on state highways in Kansas are (2):

- Provide courteous, competent flaggers, able to communicate with the traveling public, to direct traffic in a one-way traffic operation.
- Flaggers must be trained once every three years on the flagger procedures outlined in Part VI of the MUTCD and on the flagger procedures outlined in the KDOT Flagger Handbook, latest version. Flaggers must also watch the KDOT flagging video. Additional highway flagger information can be found on the KDOT website for public.
- Trained flaggers are expected to behave following the previously stated flagger procedures regardless of the source of the training.
- Once trained, flaggers shall carry certification cards showing the flagger's name and date of the training, as shown in Figure 1.

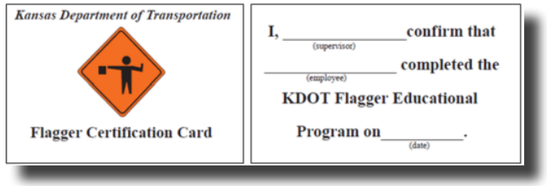

Figure 1. Frontside and backside of a sample of the Kansas Flagger Certification (3).

Examples of Flagger Training in Local Governments

Jaci Vogel, Former Deputy Public Works Director in the City of Topeka, stated that flaggers are the first line of safety in controlling the safety of the traveling public as well as the crews in work zones. (4). Regarding their required training, Vogel said that flaggers in Topeka are required to take a short course on the flagger operation to improve, update, and unify their skills and avoid any confusion to the traveling public. Doug Stephens, Operations Division Manager for Douglas County Public Works, mentioned that most of their field crew members perform flagging operations from time to time. Stephens stated that most of their employees have received some type of formal training and for newer employees, if the required training is not immediately available, they are trained in the field by more seasoned employees. Tim Can from the City of Lawrence said that their employees are "required to attend a Traffic Control Specialist Class and attend a Work Zone Safety monthly meeting provide by Safety Consultants, which touches on flagger responsibilities." He emphasized that flagger training and safety matters are vital to his organization, and he said that although the provided training is adequate, a more focused flagger-training would be even better (5). Stephens said: "Flaggers perform a very important role for our organization. I would like to have all employees formally trained in flagger basics. A flagger certification class would be beneficial to our organization, although this type of training is not offered very often" (6).

> "Flaggers perform a very important role for our organization. I would like to have all employees formally trained in flagger ba sics. A flagger certifi cation class would be beneficial to our orga nization, although this type of training is not offered very often."

Available Materials for Flaggers in Kansas

Several organizations provide flagger training through online

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Do your public works employees need training or technical assistance?

By Connor Mountford

In 2009 we published an article on this topic, and it is time for a refresh. There have been many changes between then and now. Below is the most up-to-date information on this topic.

Kansas Local Technical Assistance Program: Kansas LTAP is housed in the University of Kansas Transportation Center and partners with several agencies and professional associations, including KDOT, FHWA Kansas Division, KCHA, APWA Kansas Chapter and KAC to provide training. One of the main training programs offered by LTAP is the Kansas Roads Scholar Program. This program is a partnership activity of KCHA, APWA Kansas Chapter, Kansas LTAP, KAC, KDOT and TASK that provides three levels of training:

- Level One: Technical Skills
- Level Two: Supervisory Skills
- Level Three: Executive Development

In response to the COVID-19 pandemic, Kansas LTAP has developed a virtual learning platform that currently offers ten online training courses. Included in these trainings are courses that can be applied to the Roads Scholar Program. LTAP plans on further developing this program.

Additionally, Kansas LTAP administers the ***Local Field Liaison Program***, which provides on-site technical assistance and road safety training to local governments. Kansas LTAP also works with the county engineers and LTAPs in neighboring states, in partnership with FHWA, to plan and host the MINK local roads meeting each fall. For more information visit http://www.kutc.ku.edu and http://www.ksltap.org.

Traffic Assistance Services to Kansas (TASK) Program: is funded by the Federal Highway Administration and Kansas DOT and operated jointly by KU and K-State. The program has provided traffic safety training around the state since 1980. Courses cover topics such as the MUTCD, traffic engineering for technicians, geometric design for very low volume roads, and others. Some of the TASK courses are offered as part of the Kansas Roads Scholar Program. Visit TASK for more information or contact mefford@ksu.edu with questions on registration.

The Mid-America Transportation Center: MATC is a USDOT-designated University Transportation Center (UTC) comprising Iowa, Kansas, Missouri and Nebraska. MATC is a consortium of nine universities within the region: University of Nebraska-Lincoln (UNL), University of Omaha, University of Nebraska Medical Center, University of Iowa, University of Kansas, University of Kansas Medical Center, Lincoln University, Nebraska Indian Community College, and Missouri University of Science and Technology. Its theme is improving safety and minimizing risk associated with increasing multi-modal freight movement on the U.S. surface transportation system. MATC currently offers a webinar series, seminars, and repository of research reports. For more information, visit the MATC website.

KU Certified Public Manager Program: Established in 1993, the KU Certified Public Manager Program is a partnership between the Kansas Association of Counties, League of Kansas Municipalities, and Mid-America Regional Council. This program provides professional education to managers working in government and non-profit organizations. The program takes a mixed approach to learning, blending classroom, online, and outside assignments to make up its 300-hour requirement. For more information, visit the Kansas CPM website.

Kansas Association of Counties: The Kansas Association of Counties (KAC) provides some of the trainings for levels two and three of the Kansas Road Scholars Program. Additionally, the KAC has a Local Road Engineer who provides a twice-monthly newsletter with information on regulations affecting local government road and bridge operations. However, due to the COVID-19 pandemic, the KAC is currently restructuring their course offerings. To learn more about what KAC will offer in the future contact their education coordinator, Kimberly Qualls, or visit the KAC website.

American Public Works Association: The national chapter of the American Public Works Association provides multiple opportunities to advance your education including certifications, continuing education credits, conferences, and operator training. Additionally, the APWA maintains a resource library that provides curated materials on a variety of subjects. Learn more at the APWA website.

Kansas County Highway Association: The KCHA provides technology transfer through its Fall and Spring meetings. The association is also a partner, representing counties, in the Kansas Roads Scholar Program. Learn more at the KCHA Website.

National Association of County Engineers: The National Association of County Engineers is a non-profit organization that represents the interests of county engineers, transportation directors, highway superintendents, public works directors, and road supervisors. In addition to their advocacy work, the NACE hosts an annual conference and provides curated resources on their website.

American Traffic Safety Services Association: ATSSA provides work zone safety training and certifications. The ATSSA provides a list of training requirements by state to help ensure compliance with regulations and minimize search time. ATSSA trainings have traditionally been offered in-person, but many are now available online due to COVID-19. For more information on course offerings, visit the ASSTA website.

POCKET GUIDE TO TRANSPORTATION TRAINING, TECHNOLOGY TRANSFER, AND RESEARCH IN KANSAS

TRAINING

Kansas LTAP	Website: http://www.ksltap.org Contact: ewilder@ku.edu
Traffic Assistance Services to Kansas (TASK)	Website: https://transport.engg.ksu.edu/task Contact: mefford@ksu.edu
American Traffic Safety Services Association	Website: https://www.atssa.com/ Contact: customerservice@atssa.com
Kansas Department of Transportation	Website: http://www.ksdot.org/
Kansas Road Scholar Program	Website: https://kutc.ku.edu/roads-scholar-home-page Contact: kutc_training@ku.edu

TECHNOLOGY TRANSFER

Kansas LTAP	Website: http://www.ksltap.org Contact: ewilder@ku.edu
Mid-America Transportation Center	Website: https://matc.unl.edu/ Contact: jrenoe2@unl.edu
Kansas County and Highway Association	Website: https://www.kansascountyhighway.org/
American Public Works Association	Website: https://www.apwa.net/ Contact: https://www.apwa.net/MyApwa/Apwa_Public/About/Contact_Us.aspx

RESEARCH

K-State UTC	Website: http://transport.ksu.edu/about Contact: ce@engg.ksu.edu
Mid-America Transportation Center	Website: https://matc.unl.edu/ Contact: jrenoe2@unl.edu
Kansas Association of Counties	Website: https://www.kansascounties.org/about-kac/staff Contact: qualls@kansascounties.org

Training and Technical Assistance Continued from page 5

ADDITIONAL PROFESSIONAL DEVELOPMENT OPPORTUNITIES

CONFERENCE	SPONSORING ORGANIZATION	DATE
National Association of County Engineers Annual Conference	National Association of County Engineers	April 20-22, 2021
Public Works Expo	American Public Works Association	August 29-September 1, 2021
KAC Annual Conference	Kansas Association of Counties	October 18-20, 2021
2022 Structural Engineering Conference	KU Department of Civil, Environmental, & Architectural Engineering	March 3, 2022
Safer Roads International Conference	American Traffic Safety Services Association	May 16-18, 2023
Kansas Transportation Engineering Conference	Kansas State Transportation Center	TBD
Kansas County & Highway Association Spring Conference	Kansas County & Highway Association	TBD

Flagger Training Continued from page 3

and/or in-person courses by certified instructors. These organizations include state DOTs (for flaggers on the state highway system) and organizations such as the American Traffic Safety Services Association (ATSSA), National Safety Council (NSC), American Road & Transportation Builders Association (ARTBA), and Kansas Workers Risk Cooperative for Counties (KWORCC). The most common training in Kansas is the ATSSA training, which costs $75 for online and $125 for classroom training per attendee based on the selected training options More related information can be found at www.atssa.com.

Kansas LTAP is considering developing some online or webinar flagger training content to address local needs. When we asked if something like this would be helpful, Vogel replied that "I believe this [would be] helpful because things change regulation-wise, as well as a refresher, [and] should be given to remind employees of the rules for flagging." Stephens said it would be beneficial to have access to content that fits their needs. For instance, a webinar format could provide time to ask the participants specific questions about issues they have experienced in the field and could go over situations that many local agencies will face in work zones on two-lane narrow roadways (6).

Regarding currency of the existing documents related to flagger training on the KDOT website (i.e., KDOT Flagger Safety Training Video and Flagger Handbook), we asked Vogel, Can, and Stephens if they have ever used those resources, and if not, why? Vogel said that the Flagger Handbook is from 2008 and still useful, but the old flagger video should be updated to the new standard of Personal Protective Equipment (PPE) and MUTCD regulations. Stephens said that an updated manual may be beneficial for in-house training when a more formal training opportunity is not available (6). Can said that the priority should be given to updating the KDOT Flagger Handbook and video as well as providing in-person courses and flagger-supervisor training (5).

Regarding information that should be included in a flagger training course for local agencies, Stephens wants courses to address local-specific topics such as: How to handle traffic when a county route intersects a state highway network; permissions needed to set up traffic control on a state highway to perform maintenance on a county route near an at-grade approach to a state highway; how much sight distance is required for drivers to visually see the flagger; and whether it should it be required, similar to some DOT requirements, for flaggers to wear Type 3 fluorescent clothing during daytime operations, including pants, to increase the safety of all (6)?

Flaggers are crucial for road user and worker safety on our roadways. It is important to have up to date guides and training content that speaks to an agency's experience on their own roads. Kansas LTAP is considering developing some flagger training content to address local agency issues. Look for an update on this in a future Kansas LTAP newsletter.

References

[1] TEEX, Texas Engineering Extension Service, and ITSI, Infrastructure Training & Safety Institute. Reference Guide to Work Zone Traffic Control.In, OSHA, 2011. p. 71.

[2] The National Work Zone Safety Information Clearinghouse. Flagger certification and training. https://www.workzonesafety.org/. https://www.workzonesafety.org/practice/flagger-certification-and-training-48/. Accessed February 23, 2021.

[3] KDOT, Kansas Department of Transportation. Information For Highway Contractors. https://www.ksdot.org/hwycont.asp. Accessed February 23, 2021.

[4] Vogel, J. Importance of Flaggers in the City Level.In, Kansas LTAP, 2021.

[5] Cast, T. Flagger in Cities.In, 2021.

HOW KDOT TRAINS THEIR FLAGGERS

BY LISA HARRIS-FRYDMAN

We recently asked Jeff Henry of KDOT s Bureau of Transportation, Safety, and Technology what KDOT requires of flaggers who work on state highways. He said KDOT requires KDOT employees and contractors on the construction site to carry a certification card saying they have completed the KDOT Flagger Education Program.

The KDOT Program has four steps:

- Read & understand the KDOT Flagger manual
- Watch KDOT s Flagging video
- Read & understand Flagger procedures from Part 6 of the Manual on Uniform Traffic Control Devices (MUTCD) https://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part6.pdf
- Complete and carry a KDOT Certification card

All the materials are online and free of charge. The KDOT handbook, video, and card template are available for download at KDOT s website. http://www.ksdot.org/hwycont.asp

The certification card is signed by the flagger and the flagger s supervisor and is dated. A flagger must complete the training every three years and obtain a new card.

The above KDOT flagger requirements are codified in KDOT s standard 800-19 thru 800-20 in its 805 specs on work zones and traffic control, Henry said.

Henry said KDOT s flagging program is under discussion for a refresh. We noticed its flagger manual is from 2008 and the video is a bit grainy. But for now, combined with reading Part 6E Flagger Control from Part 6 of the MUTCD, these resources provide solid information about how flaggers can increase safety for themselves, the driving public, and their fellow employees in a work zone.

While local agencies are not required by law to complete training for flagging, it makes good sense to make sure your flaggers are properly trained in terms of safety for your personnel, safety for your traveling public, and reducing the risk of liability for the local government. "Flagging is not just jumping out on the road and stopping people. There are many safety aspects at a work zone that a flagger is responsible for, said Henry.

Another option for flagger training is through ATSSA (American Traffic Safety Services Association). ATSSA training costs $50-100 per attendee. The 4-hour classroom flagger training includes instruction, hands-on demonstrations, and a certification test. Upon completion of the course, the attendee is a Nationally Certified ATSSA Flagger. There are eight ATSSA Certified Flagger Training Instructors in Kansas, listed with contact information, at www.atssa.com. Class size is limited to 20 people, and multiple agencies can participate in a class. An instructor can train up to 40 people per day, 20 in the morning and another 20 in the afternoon, said Henry, who is himself certified as a Master Instructor for ATSSA. Currently, ATSSA classes must conform to ATSSA s COVID-19 procedures for masking and social distancing, which are described on their website.

Kansas LTAP also has some resources about flagging on its website. LTAP has recently updated its Resources section to provide a searchable collection of resources with direct links. Go to www.ksltap.org, in the left column click on Resources, then click on LTAP and then choose from the topic menu: Work Zone Traffic Control. You will find a few resources there, including a flagger training video from the Iowa DOT that describes flagging from the perspective of what can go wrong in a work zone, especially in higher-risk situations, like at curves and hills. It is called When Luck Runs Out."

If you have questions about KDOT or ATSSA training, contact Jeff Henry at jeffhenry1218@gmail.com or at (785)-230-3482 mobile.

Kansas LTAP Training Update

By Kara Cox

2021 SPRING WEBINARS

MARCH

17th: Conflict Resolution, *Emily Wilder*

24th: Wednesday Welding Webinar, *Anthony Stampe*

31st: Wednesday Welding Webinar, *Anthony Stampe*

APRIL

7th: Wednesday Welding Webinar, *Anthony Stampe*

7th: Managing Employee Performance, *Emily Wilder*

14th: Wednesday Welding Webinar, *Anthony Stampe*

21st: Communication Skills for Effective Supervision, *Emily Wilder*

Welcome Megan Hazelwood, Kansas LTAP's new Events Coordinator!

Megan is the new events coordinator for the University of Kansas Transportaion Center, taking on LTAP tasks previously carried out by now-LTAP Communications Coordinator, Kara Cox. Megan will coordinate workshops and webinars for the Kansas LTAP and RTAP programs.

Megan graduated from the University of Kansas with a Bachelor of Science in Journalism. She began her career in the event industry in 2012 working for Entercom Communications where she assisted with events such as Rockfest, Buzz Under the Stars, and Buzz Beach Ball. Megan most recently worked for the KU Memorial Union as the Event Manager where she coordinated multiple student meetings, banquet dinners, and graduation ceremonies. She is eager to diversify her event management skills and looks forward to planning educational workshops for the University of Kansas Transportation Center.

Training Update

A year has come and gone since Kansas LTAP unexpectedly halted all in-person training due to COVID-19. KS LTAP has taken full advantage of this time to examine the training program and make strides in the program's advancements.

When it became evident last year that classes would not be returning to in-person anytime soon, KS LTAP set out to build a virtual learning platform so that people could still have access to training. In a matter of months, KS LTAP instructors were able to restructure their in-person classes to better suit the virtual classroom and nine classes were added to the platform.

Because KS LTAP is still unable to offer regular in-person classes currently, more training options will be added to the virtual platform in the coming months. Most recently added was the Asphalt Road and Street Maintenance course that is typically taught annually every spring. At this time the virtual platform is still being offered 24/7 at no cost and can be accessed at the KS LTAP website.

In addition to adding classes to the virtual platform, KS LTAP will host several webinars this spring including a "Wednesday Welding Webinar" series running from March 24th—April 14th. KS LTAP Director, Emily Wilder, will also lead three webinars including Conflict Resolution (March 17th), Managing Employee Performance (April 7th), and Communication Skills for Effective Supervision (April 21st). Registration for these webinars is now open and can be accessed on the KUTC Training Calendar Event Finder.

KS LTAP is eager to announce a new Learning Management System that will be

Continued on next page

introduced later this spring/early summer. This system will be a one-stop-shop for all things related to KS LTAP training. Participants will be able to access online courses, register for in-person classes, and access their student records. More details will be released about the system closer to the launch date.

Once the new system is up and running, registrations for fall in-person classes will open. KS LTAP plans to offer several in-person training workshops around the state from September through December. See the sidebar for our planned classes and locations for this fall. Several COVID-19 safety protocols have been implemented to ensure that these in-person classes remain safe options. Classes will be capped to allow social distancing, so early registration is encouraged once registration is open. Registration is anticipated to open later this spring/early summer—a specific date will be announced in the upcoming LTAP bi-weekly update emails.

In the meantime, be sure to take advantage of the virtual platform, participating in upcoming webinars, and requesting in-person on-demand courses for agencies. Current on-demand courses include Snow and Ice Control, Gravel Road Maintenance, and Workplace, Jobsite, and Equipment Safety.

If your agency is interested in scheduling an in-person class or you have questions regarding training in general, please contact Megan Hazelwood at kutc_training@ku.edu.

LTAP TRAINING

FALL 2021

SEPTEMBER	9/1	WELDING	LAWRENCE
	9/2	WELDING	EMPORIA
	9/13	GRAVEL ROAD MAINTENANCE	GARDEN CITY
	9/14	GRAVEL ROAD MAINTENANCE	COLBY
	9/15	GRAVEL ROAD MAINTENANCE	SALINA
	9/16	GRAVEL ROAD MAINTENANCE	WICHITA
	9/17	GRAVEL ROAD MAINTENANCE	BURLINGTON
	9/22	CONFLICT RESOLUTION	SALINA
	9/28	CULVERT INSPECTIONS	LAWRENCE
	9/29	CULVERT INSPECTIONS	MANHATTAN
OCTOBER	10/5	ASSET MANAGEMENT AND COST ACCOUNTING	LAWRENCE
	10/6	SUPERVISOR'S ROLE IN ENHANCING COOPERATIVE WORK RELATIONSHIPS	MANHATTAN
	10/11	SNOW & ICE CONTROL	COLBY
	10/12	SNOW & ICE CONTROL	HAYS
	10/13	SNOW & ICE CONTROL	MANHATTAN
	10/14	SNOW & ICE CONTROL	WICHITA
	10/15	SNOW & ICE CONTROL	BURLINGTON
NOVEMBER	11/2	BRIDGE MAINTENANCE	HAYS
	11/3	BRIDGE MAINTENANCE	WICHITA
	11/4	BRIDGE MAINTENANCE	MANHATTAN
	11/16-17	PUBLIC WORKS 1 & 2	EMPORIA
DECEMBER	12/7	OVERVIEW OF ENGINEERING FUNCTIONS	BURLINGTON
	12/8	FOUNDATIONS IN CUSTOMER SERVICE	LAWRENCE

Traffic Data Collection in Ness County

By Hemin Mohammed

Ness County submitted an online application to our Equipment Loan Program (ELP) to borrow a radar traffic counter that records traffic counts and vehicle classifications. They used it on a county gravel road about four miles east of Ness City and about a half-mile north of K96.

The county wanted to check the accuracy of KDOT traffic counts taken at that location by obtaining updated traffic counts. A power pole on the Right of Way, about 35 feet off centerline, was used to mount the radar counter unit. The radar counter was installed in September 2020 for a week to collect new data. Afterward, the collected data were reviewed and analyzed by Kansas LTAP and sent to the county for their use.

‘Field Guide for Rural Roads’ Has Been Updated

A Safety Guide for Road Workers’ Safety

By Nikhila Gunda and Lisa Harris-Frydman

In 2020, Kansas LTAP completed an update to the “Field Guide for Rural Roads”, in partnership with the Kansas Association of Counties. The guide is currently available online on the Kansas LTAP website.

Compiled by Norm Bowers, the guide provides assistance to local government officials and workers responsible for maintenance and safety of rural roads. The glovebox sized guide is designed to be carried in a vehicle, providing a convenient reference when addressing safety concerns commonly encountered in the field.

We have printed hundreds of these guides, with the goal of getting it into road and bridge vehicles across the state. You can order FREE printed copies at the Kansas LTAP Resource collection. Go to www.ksltap.org, and click on Resources in the left column. To order printed copies, register and/or login and then click on LTAP to access the LTAP collection. Quick-Search for the “Field Guide for Rural Roads and you will see the listing. Click on Add to Cart and you can then specify the quantity.
First come, first served!

(More detailed information on Resource Collection and steps to order can found in the article ‘Resource Collection Now Available of this Spring 2021 Newsletter Edition)

Reprinted below is the information from the first two pages of the 40-page guide. These pages provide basic safety tips for county crew employees out on the job.

Roadway Safety Considerations

One of the major duties of a road department is to provide a reasonably safe road system. This section offers some suggestions on major items that will help make your road system safer. Many solutions to safety problems are obvious and can be handled in the daily course of business. More difficult problems may need to be referred to a supervisor to make the decision, or you might need to seek advice from experts. Technical help is available from peers in other agencies, the Kansas Department of Transportation (KDOT), Kansas LTAP, and KAC, as well as consultants.

Think Safety

In all your decisions, “think safety.” If something you are about to do could adversely affect the safety of the public, it is likely not the right decision. On maintenance work where there are no plans or design, the project should be thought-out in terms of safety for the traveling public. For instance, it may not be a good idea to cut a deep road ditch if the only reason for the deeper ditch is to drain a farmer’s field. Road ditches are for road drainage, not for field drainage.

Follow Agency Policies

If policies are adopted, you should follow those policies; failure to follow those policies may be negligence. For instance, if your agency has a policy that brick mailboxes are not allowed, and you allow one to be constructed, the agency may be negligent if a vehicle hits the brick mailbox and someone is injured.

Uniform Road Surface

Drivers have a tendency to drive with speeds in accordance with general road conditions. It is a good policy to maintain roads so that road conditions do not surprise a driver. For instance, a rough spot in a good road is more likely to surprise a driver and lead to a crash than a rough spot in a bad road. Areas of loose gravel, potholes and washboards are the most common irregularities that may cause an issue with drivers.

Report Problem Areas and Items Needing Attention

Field personnel are the eyes and ears of the agency. All employees should keep an eye out for road hazards and unusual situations that can affect the road or road right-of-way.

Following are items that should be reported to your supervisor:

- Downed, damaged, and faded signs
- Signs obscured by brush and trees
- Collapsed or damaged bridges and culverts
- Oil field or other activity that is damaging the road or leaving debris on the road
- New driveways, culvert headwalls and landscaping

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- Blocked ditch or change in drainage by a landowner
- Ornamental mailboxes that could be a safety hazard
- Utility work
- Oil or chemical spills
- Dumped trash
- New fences closer to the road

Public Contact

Field personnel are the most visible representatives of the agency and an important link between the citizens and the agency. Listen to all requests and comments and treat citizens with respect. Take the name and phone number of the citizen and follow agency policy in reporting citizen requests to supervisors.

In addition to the above safety considerations, this guide also includes individual sections on right-of-way issues, traffic control devices (signs), w-beam guardrail and handrail, and additional resources that could help in mitigating and eliminating safety issues to provide a safer road environment.

Conclusion

The original version of ‘Field Guide for Rural Roads’ was published in March 1997 by the Wyoming Technology Transfer Center in cooperation with the Wyoming Department of Transportation. Later, this guide was updated and revised by Kansas Local Assistance Program (LTAP) in 2004, 2013 and latest in 2020. The current updated edition provides some useful information for the local road agencies in Kansas to keep and maintain the road system safer by understanding the major items related to traffic control devices, road maintenance and other road worker safety guidelines. This guide can be used in mitigating or eliminating road safety issue which is currently available online on Kansas LTAP website.

Technical Resources from Kansas LTAP, at Your Fingertips

By Lisa Harris-Frydman

Are you looking for resources on culvert maintenance and don’t know where to start? Do want to find some new worker safety resources to share at your weekly safety meetings? Do you need a Kansas LTAP fact sheet from a few years ago and can’t remember where it is?

We can help with these… and a lot more.

Resources Collection

Kansas LTAP has a new searchable resources collection at its website that houses over 300 resources. Resources include training videos, publications, webinars, factsheets, and websites.

This replaces our website’s “Resources to Download” section and our former physical copy lending library—combining both in an easier to use format.

With nearly 30 searchable topics, the “Quick Search” feature allows you to type in a word or phrase to easily find a resource. There is also a filter for type of resource, if you are looking for just videos, for example.

How to Use It

To use the collection, go to www.ksltap.org and click on “Resources” in the left column. This will take you to the Resources “landing page.”

Registration is not necessary for browsing and accessing links. Just click on “LTAP” at the landing page, and begin browsing the LTAP collection. Click on a resource name to see a description and link to the full source.

All resources are digitally available online, and a few publications offer a physical copy option. A shopping cart icon notes which publications have physical copies available. For those of you who might want to carry a resource in a vehicle, like the Field Guide for Rural Roads and manuals on gravel road maintenance, physical copies can be ordered. Most physical copies are offered at no cost. To place an order, you will be required to set up a profile with your mailing information. Profiles can be set up by selecting “Register” on the Resources landing page.

I hope you and your staff will take a few moments to browse around the different topics and see what can be

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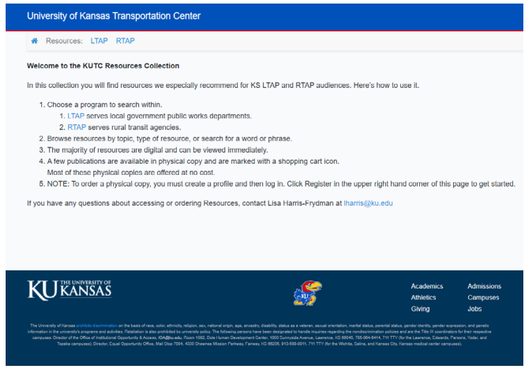
useful to you.

Adding New Resources is Easy

We will add resources as we become aware of them and will review the collection annually for material that becomes outdated.

If you know about a resource that would be good to have in the collection , please email me with the title and a link.

Questions? Comments? We'd love to hear from you! Contact Lisa Harris-Frydman at lharris@ku.edu



Director's Update

By Emily Wilder

On March 17, 2020, we packed up our offices and began working from home. What we expected to end in May has now stretched over the one-year mark! While last spring appeared bleak, this spring holds promise of new and exciting projects that we've been working on at the center. This letter will give you a brief teaser of our new learning management system and LTAP app which are set to go live by June.

The learning management system is a long-awaited improvement that will have benefits for all of our training workshops, the Roads Scholar Program, and event registration. Some highlights of the new system include an improved calendar function, record tracking, training management, and Roads Scholar tracts. The new system will allow each user to view future and past registrations, class certificates, and a training record transcript. Agency training coordinators or clerks will have access to their agency's user records and can register multiple registrants, for multiple courses, with one simple purchase. With even more to offer, we're quite excited to launch!

We're also looking forward to sharing our new Kansas LTAP app. This app can be accessed via smartphone or tablet for easy access to useful KS LTAP resources. The app will hold information about our Roads Scholar program, upcoming events, and resources in the new resource collection. It will also allow for direct requests of equipment from the equipment loan program and applications to the Build a Better Mousetrap competition. Most importantly, it will include an interactive work zone and materials calculator. The interactive work zone will make it easy to find the right temporary traffic control setup based on your unique parameters in the field and the materials calculator gives you a quick quote of how much material is needed for any given project. It's essentially an interactive field guide on your phone!

We'll be sharing more information about these projects and other resources in our bi-weekly emails and on social media. Be sure to subscribe to our mailing list and follow us on Facebook so you don't miss out!

Road & Bridge / Public Works Officials See Big Benefits in Leadership Training

By Lisa Harris-Frydman

This article will highlight ways that the Kansas Certified Public Manager (CPM) Program at the University of Kansas provides valuable leadership and management professional development for public works officials. We interviewed three public works officials who share some thoughts about their experiences. They are:

- Seth Snyder, Assistant Road Manager, Lyon County Highway Department, 2020 graduate
- Jim Brull, Assistant County Engineer, Lyon County Highway Department, 2014 graduate
- David Lee, Public Works Director, Franklin County Public Works, 2020 graduate

First, some background.

What is the CPM Program?

The Kansas CPM program, established in 1993, advances excellence in public service. It is a professional education opportunity for managers working in government agencies, nonprofits and organizations that contract to provide public services and meet community needs. CPM is a nationally accredited management program and certification in which participants develop and strengthen their management skills through a competency-based curriculum. Close to 1,800 CPM graduates have graduated to date.

The CPM program can fill a training gap for staff with significant technical expertise who seek to further their knowledge of current management practices. The Kansas program offers a blended learning approach of classroom hours, online learning and outside assignments to meet 300 hours of structured learning. The curriculum addresses personal and organizational integrity, managing work, leading people, developing self, public service and leadership during times of change. Along the way, each participant completes a capstone project focused on an opportunity for cost savings, revenue generation, process improvement or innovation in their workplace.

The class hosts 3 different groups of students, or "cohorts," in different cities. In 2020 the cities were Topeka, Wichita, and Olathe. Classes meet two days a month. There is some flexibility built into the program if you have to miss a class.

Who typically attends?

Attendees represent a wide range of professions within city and county government. Besides public works professionals there have been firefighters, law enforcement officers, health officials, city managers and county administrators, Board of Regents staff, finance professionals, HR directors, and many more. The common denominator is working with the public.

Lee said, "having a wide spectrum of folks added to the benefits of class, forcing each of us to step out of our public service silos to gain a better understanding of County organizations as a whole."

How has the experience helped you in your job?

Snyder said that the CPM Program was very valuable for collaborating with other kinds of agencies and getting ideas from others who have been in the business longer than he has. He said the class on working with difficult people, which is a full day class, boosted his skills for having difficult conversations at work. He said part of the homework of that class was to initiate an actual difficult conversation with someone at your agency. Snyder said he took on the task of talking with someone who was a longtime employee who had some "bad apple" behaviors, and who needed to make changes for the good of the department. And it made a difference. "The person has in fact made improvements on what we talked about, and they are still currently employed here with us. These kinds of conversations need to happen sometimes," Snyder said.

Lee said the budgeting class was very helpful, since his background is in the private sector. He said: "Budgeting on the public side is completely different than what you do on the private side." He also benefited from learning about management aspects of county government, tips for having difficult conversations in a leadership position, problem solving, and learning about new tools and resources.

All three said they got a lot out of the first class of the program, on emotional intelligence. It was built around a system called Emergenetics to identify how you think and react in different kind of situations.

Snyder said the emotional intelligence content in that class was very well received by everyone.

Brull said "You found out what was important to you…. You also learn how other people think and what they respond to. For example, Type A people are more structured, while others might prefer to go with the flow. It helps you better understand yourself and the people you work with."

Lee said the class on emotional intelligence set the tone for the rest of the program. "It was very powerful for me, " he said. "It

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gave me a deeper understanding of how I view things. I learned that I tend to look at a wide range of data before coming to a decision and I try to fully consider all options." Lee also said it was interesting to think about which tasks give you energy and which take more effort. "I am a natural introvert," he said, "but am I responsible for 40-plus people and report to a commission. Public speaking is part of my job but does not come naturally and takes additional effort on my part. For me, working with data is energizing, while working with people takes energy."

What were some highlights for you in participating in the program?

Snyder said he enjoyed the networking with other local government professionals. He enjoyed learning their stories and realized that public officials of different professions face similar problems. "Everybody is going through the same thing," he said. He also likes that the class is accredited. "It's good on a resume," he said. Snyder is looking forward to implementing his capstone project.

Brull liked that participation in the class was required. "They put you on the spot a lot of the time. My thing is public speaking... I'm uncomfortable. The class helps you grow as a person and as a professional." Brull also mentioned the tips on how to have difficult conversations in a workplace. "Things will fester if you don't get in front of them," he said.

Lee is relatively new to public service and sees the class as a foundation to grow from. He was impressed and inspired by the level of passion for public service of his classmates, ***"whether social services or finance or law enforcement or firefighters. They had a great deal of passion for their governments and their professions. They were upbeat and forward thinking and wanted what was best for the citizens they serve," he said.*** Lee also appreciated the networking and learning about tools for local government management.

What was your capstone project?

A capstone project was initiated by each attendee to benefit their own agency. Brull's project was to develop a Google Earth GIS-based inventory of culverts in Lyon County. The geo-coded inventory includes inspection information. Brull said: "I got the idea from Dennis Baysinger who was our bridge foreman at the time. He currently is our Road Supervisor. My foremen and supervisors often sit around in their office bouncing things off each other. During one of these impromptu sessions, he had mentioned one of our larger culverts was unexpectedly discovered to have major structural damage, and unlike bridges which are looked at and inspected every other year, our culverts had never been looked at or inspected. Therefore, we had no clue of what surprises we might get in the future." Brull was glad for the opportunity to do a project to address this issue. "We came up with a system that is simple and easy. The project prompted us to dig deeper and find new ways to display data," he said.

Snyder's capstone project built on Brull's project. Snyder developed an efficient plan to clean out the culverts that were found to be 50 to 100 percent plugged when inspected. The cleaning will be done with tooling the county owns. The plan includes scheduling, staffing, tracking progress, and documenting the work in all14 sections of the county.

Snyder said Krystle Fessler, Office Manager, of Lyon County, another 2020 CPM graduate, developed a step by step process for Lyon County Road and Bridge's three office staff members to create crossover in job responsibilities and continuity of service if someone is out of the office.

Lee is implementing an asset management program for Franklin County for his capstone project. He will be purchasing software to store data and provide analysis. He said: "The program will include tracking of pavement conditions, culverts, bridges and gravel roads, plus fleet maintenance, a work order systems, and citizen work requests in real time." Lee said their current system is antiquated, and that came to light with several floods in 2019. The county was not prepared with information they needed to efficiently submit documentation for reimbursement to FEMA and FHWA. As part of his project, Lee will implement a GIS software system.

Were there any unexpected aspects of the program?

Snyder said taking the class during a pandemic was certainly unexpected, and he was impressed with how the instructors adjusted to make it work.

Brull was surprised by the amount of work required, including homework, and readings. He chose to do some of the work on his own time. ***"It was a lot of work, but it was fun and interesting," he said.***

Lee said he found the interactive elements during the in-person classes especially helpful. "We had mock difficult-discussions and spent a great deal of time interacting in small groups. It was very informative. I learned quite a bit," he said.

Was it difficult getting funding and approval to attend?

It was not. Snyder, Brull and Lee all received enthusiastic support from their supervisors to participate in the program. Each had talked with other graduates and had a good idea of how they and their department could benefit from the program. Brull said a person who was one year ahead of him in high school, Toby Dougherty, is now the city manager of Hays and has sent 27 people through the CPM program. "That's quite an endorsement," Brull said.

Brull mentioned some other Kansas road officials he knows who are CPM graduates: JR McMahon in Miami County, Alvin Perez in Riley County, and Jeff Beyer in Coffey County.

Who would you recommend attend this training?

Brull and Snyder said anyone new to being a supervisor would especially benefit from the class. But they said anyone in public service, including elected officials, would benefit.

"I would recommend it to anybody. Anyone can benefit from

Continued on next page

learning more about leading employees, doing the right thing, and being productive," Brull said. Lee echoed their comments and said someone relatively new to public service like himself would get a lot out of the class.

Lee is encouraging other department heads and senior staff from Franklin County to attend. ***"The return on investment far outweighs the cost, he said. "You gain a better understanding of how county government works."***

Conclusion

Road and bridge and public works agencies from around the state are benefiting from their department's current and emerging leaders participating in the CPM program. The training in the program helps local governments save money and be more efficient. As Brull pointed out: "Every commissioner's goal is to be as efficient as possible." If your city or county has not yet participated, ask around and see if it is for you.

For more information…

Click on the link below to access the CPM home page. The registration fee is $3,600-$3,900, depending on if you register early or late.

https://kupmc.ku.edu/programs/cpm

Source

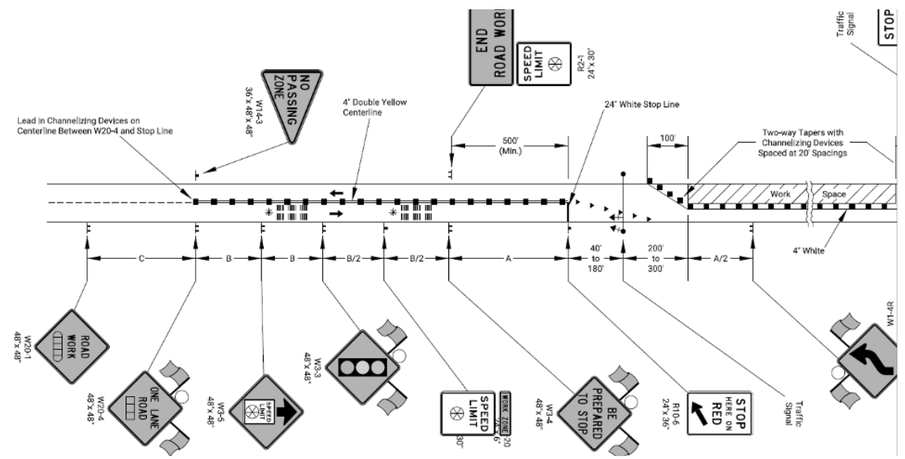
https://news.ku.edu/certified-public-managers-graduating-class-2020-announced

The Red Clearance Extension System: A New Innovation in Work Zone Safety

By Steven Schrock

I've spent most of my 26-year engineering career investigating ways to make work zones safer for workers and motorists. In the world of work zone safety there are many areas where improvements are still needed. A few of these are particularly tricky, and as a researcher I find them to be a little like a 'quest for the Holy Grail.' Some of these problem areas include:

- The end of a work zone queue when traffic approaches the rear of a line of stopped traffic (like at a flagger station);
- Preventing wrong-way movements at pilot car operations through long work zones (such as at driveways inside lo paving operations); and
- Preventing head-on crashes where a pair of portable traffic signals are used (such as at bridge repair projects).



Excerpt from KDOT Traffic Control Plan E732: "Traffic Control Temporary Traffic Signals"

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Each of these locations have the potential for high-speed vehicles to strike slow, stopped, or opposite-direction vehicles either as rear-end or head-on crashes. Work is progressing in each of these areas, but I have recently become aware of a system that intrigues me: the **red clearance extension system** for portable traffic signals. At locations where two lanes are reduced to one like at a bridge repair project, motorists follow the directions of portable traffic signals to take turns going through the open lane (see excerpt of KDOT traffic control plan TE732: "Traffic Control Temporary Traffic Signals").

While these systems provide clear instructions to motorists, there is always the potential that if a slow-moving vehicle (think a tractor or combine) arrives at the work zone and enters just before the end of their green phase, they may not make it through the work zone before the other side gets a green indication. This could happen if the slow-moving vehicle can't maintain the minimum speed that was used to calculate the time it would take to go all the way through the work zone.

In the figure shown - provided by Horizon Signal* - you can see a depiction of how the red clearance extension system works. There is a sensor that looks back into the work zone to see if there are vehicles still trying to get through the work zone. If the sensor notices a slow-moving vehicle trying to get through the work zone it feeds this information into the system. If it calculates that the slow-moving vehicles can clear the work zone before the onset of the opposite-direction green then there is no difference from normal operations. However, if the system determines that the slow-moving vehicle won't make it in time, then the red clearance extension system kicks in and keeps the opposite direction signal red for as long as it takes for the vehicle to clear the work zone. What a great safety idea!

Not much formal research has been done to evaluate the effectiveness of the red clearance extension systems, and many states are only now going through the testing and evaluation stages. I think this has real potential, and I'm asking for your help. If you have a bridge rehabilitation project or a similar project that will include temporary portable traffic signals, would you consider adding this system to your work zone? I'd like to collect some data to evaluate how these systems work in the field to quantify how they work. If you're willing to help please let me know, I can be reached at schrock@ku.edu.

http://horizonsignal.com/red-clearance-time/, accessed March 30, 2021

This is not an endorsement of their product, and I'm sure there are other vendors that can and do provide this enhancement to their portable traffic signal systems.

Kansas LTAP Build a Better Mousetrap Competition

By Erin Walkenshaw and Hemin Mohammed

Because the innovative ideas of local agencies and frontline workers are greatly sought after, Kansas LTAP is hosting the Build a Better Mousetrap competition. This platform is for transportation professionals to share their inventions which enhance efficiency of everyday work and improve the overall quality of transportation. We want to see your MacGyver inventions!

How Does the Competition Work?

Applicants simply follow these steps to enter the competition.

1. Submit a Build a Better Mousetrap Competition Entry Form before the May 31, 2021 deadline. The entry form requires a brief explanation describing the problem, development of the solution, resources and materials used, costs, and benefits to the community.
2. Submit photographs to illustrate the entry. While this step is not required, it is preferred.
3. Submit a Spotlight Video to showcase the problem, demonstrate the development, and the working solution. This step is optional as well, but can result in three additional bonus points!

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Kansas LTAP will then select the top three winners based on costs, savings and benefits to the community, environmental benefits, transferability to others, ingenuity, effectiveness, and bonus points. All winners selected by Kansas LTAP will win a prize package and be entered into the national Build a Better Mousetrap competition.

Why Participate?

While prizes and bragging rights are pleasant perks, the Build a Better Mousetrap competition can provide a wide range of benefits to local and tribal agencies and their employees. Below are just a few examples!

- It provides recognition for local and tribal road agencies and their employees, shows them that their ideas have value, and potentially recognizes them on a national stage.
- Build a Better Mousetrap shows respect for the individuals and teams that do more than just put in their eight hours each day.
- The competition promotes innovation implementation in a manner that is relevant and useful to local and rural agencies.
- Build a Better Mousetrap promotes a safety culture.

Don't wait, enter now!

Looking for more information? Interested in entering? Email Hemin Mohammed at hemin@ku.edu.

SHARE!

If you know individuals who would like to receive our newsletter, please have them go to: www.kutc.ku.edu/ltap and sign up for the Kansas LTAP email list. There is a box to check to request electronic notification of each new issue of the LTAP Newsletter. Back issues are available at our website in the newsletter archives section.

Kansas LTAP *Newsletter*

The Kansas Local Technical Assistance Program (LTAP) is an educational, technology transfer and service program ofbthe Kansas University Transportation Center (KUTC), under the umbrella of the KU Transportation Research Institute. Its purpose is to provide information to local government highway departments and their personnel and contractors by translating into understandable terms the latest technologies in the areas of roads, highways and bridges.

The *Kansas LTAP Newsletter* is published quarterly and is free to counties, cities, townships, tribal governments, road districts and others with transportation responsibilities. Editorial decisions are made by Kansas LTAP. Engineering practices and procedures set forth in this newsletter shall be implemented by or under the supervision of a licensed professional engineer in accordance with Kansas state statutes dealing with the technical professions.