



# Technology Exchange

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## New Minimum Retroreflectivity Standards Take Effect

By Steven Strength

Even with the 2009 *Manual on Uniform Traffic Control Devices* (MUTCD) scheduled to be superseded by the new 11th edition in the spring of 2023, Revision 3 of the 2009 MUTCD, dealing with Minimum Retro-Reflectivity of Pavement Markings, has been published with an effective date of September 6, 2022. The new regulation includes a compliance date of four years from adoption, which will be 2026; therefore, these standards are expected to be incorporated into the MUTCD 11th edition as well. In a webinar on September 1, the FHWA Resource Center outlined the new standards, contained in Section 3A.03 of the revised manual.

The new standard states in part that **“Except as provided in Paragraph 5, a method designed to maintain retroreflectivity at or above 50 mcd/m<sup>2</sup>/lx (50 millicandelas per square meter per lux) under dry conditions shall be used for longitudinal markings on roadways with speed limits of 35 mph or greater.”** The mcd/m<sup>2</sup>/lx is a commonly used measurement of the light reflected back to a light source from a retroreflective surface. The regulation goes on to recommend that *“a method designed to maintain retroreflectivity at or above 100 mcd/m<sup>2</sup>/lx under dry conditions should be used for longitudinal markings on roadways with limits of 70 mph or greater.”*

The most notable exception in paragraph 5 of the standard specifies streets or highways with average daily traffic (ADT) volumes of less than 6,000 vehicles per day; therefore, most locally owned roads in Louisiana would not be subject to the new rule, nor will curb markings, dotted extension lines, or shared use paths. Additional exclusions apply to transverse markings; word, symbol, and arrow markings; crosswalk markings; and various diagonal markings such as chevrons.

For longitudinal markings on roadways falling under the new rule, FHWA has published guidance for assessing and maintaining the minimum levels for pavement markings, similar in nature to those suggested in the MUTCD for signs. These might include direct measurement using a handheld or mobile retroreflectometer, nighttime assessment using trained older driver inspectors (aged 60 or higher), comparison to calibration markings, expected service life based on evaluation of “similar” markings in service, or a combination of methods. Several supplemental resources have been published by FHWA providing guidance on the new standards and the various methods for maintaining compliance.

Details of the new standards are available on the FHWA website at [www.fhwa.dot.gov/retro](http://www.fhwa.dot.gov/retro) and at [https://safety.fhwa.dot.gov/roadway\\_dept/night\\_visib/pavement-markings.cfm](https://safety.fhwa.dot.gov/roadway_dept/night_visib/pavement-markings.cfm). The complete 2009 MUTCD with Revisions 1, 2, and 3 is available online at <http://mutcd.fhwa.dot.gov>.

LTAP is evaluating how best to help local agencies in complying with the new standards, including additional training, and the possibility of an equipment loan arrangement for measuring retroreflectivity of both markings and signs. Let us know your thoughts at [www.louisianaltap.org](http://www.louisianaltap.org), and stay tuned for updates!

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Visit [www.louisianaltap.org](http://www.louisianaltap.org) for our current classes, training requests, free resources, and much more...

# Rethink and Refresh, Not Reset

By Steven Strength



Maybe it's this way every year, but as fall 2022 rolls around here at Louisiana LTAP we seem to be going through an extra challenging transformation. Having said goodbye to both our Program Manager, Chris Melson, and our Training Coordinator, Mia Bosco, in the past two months, change has been thrust upon us in the form of new opportunities for our departed colleagues, and we wish them well.

Just as fall brings the promise of cooler weather, LTAP will rebound with new opportunities for our center as we strive to fulfill promises to serve our local agencies with tried and true programs, while molding our plans in new ways to meet the challenges of the coming year.

If your agency is dealing with staffing issues like LTAP and so many other employers, you might want to rethink your approach to workforce development with some helpful ideas on recruitment and retention from the folks at [Clearroads.org](https://clearroads.org), outlined in this edition of *Technology Exchange*. With next year's budgets looming, perhaps you could rethink your approach to preserving your infrastructure by taking advantage of the technical assistance being offered by LTAP in the area of Asset Management and Pavement Preservation, also discussed in this issue. Rethinking your approach might just be the key to getting your tireless efforts over the hump!

Every 5 years, Louisiana refreshes its approach to road safety by revising the Strategic Highway Safety Plan (SHSP). One thing is clear about the state of safety in Louisiana—we are making progress but still losing ground. The number of fatalities and serious injuries is on the rise, and families across the state are being devastated. Part of refreshing your agency's approach to making our roads safer might include looking at the new SHSP, deciding on a few effective tactics to take your efforts to the next level, and then engaging with your Regional Safety Coalition, LTAP, and the Local Road Safety Program to bring them to fruition. The resources available to local agencies for safety improvements are greater than at any time in memory; we just need to refresh our efforts with all of our safety stakeholders and figure out how to get the job done together.

Change is inevitable, and the bad news is that there is no "reset" button to make everything better. Having said that, the good news is that we don't need to reset everything to move forward. You already

## LTAP Annual Report

LTAP is pleased to share that in the last fiscal year (2021-2022), we conducted 86 classes (67 in-person, 19 virtual) that transferred knowledge to an estimated total of 2,342 participants from local and state agencies. Our staff members, who are involved in 12 professional organizations, also gave a total of 17 presentations at national and statewide conferences.



have the knowledge and passion to make your agency and your jurisdiction a better place. A fresh look at our challenges, like feeling the first cool breeze of autumn, might be the ticket! Let us here at LTAP know how we can help, and stay safe out there!

# A Holistic Approach to Promoting Pavement Preservation

By Rudynah Entera Capone

Limited budget is a common challenge for any agency—be it municipal, city, or parish entity. With this, you wonder if there's a way to stretch your budget and, at the same time, improve the overall condition of your road network system. How is that possible? The answer is called Pavement Preservation (PP) and Road Surface Management (RSM).

An even greater feature is that LTAP can provide technical assistance to get you on track with establishing a PP program in your agency, and the team is taking a holistic approach to doing so. From developing the "Importance of PP and RSM" brochure, to teaching the Roads Scholar (RS #7): Pavement Preservation & Road Surface Management course, to giving presentations to elected officials, or conducting site visits and mini-workshops on how to start a PP/RSM program, LTAP goes all-inclusive to help you get the work done.

Our RS #7 course instructor, Nick Verret, who is also the engineer of the City and Parish of Natchitoches, not only teaches the course but also provides targeted and onsite post-class technical assistance to agencies that indicate interest in establishing a PP and RSM program in their jurisdiction.

According to Verret, pavement preservation helps local agencies get a bigger "bang for the buck" with their limited funding, but, as is often the case with other things in life, one size does not fit all.

"Each local agency has unique needs and its own set of factors that must be considered in the Pavement Preservation decision-making process. Therefore, rather than trying to use a "cookie cutter" approach, it is best for each agency to develop its own individualized PP "tool kit," and we at LTAP stand ready to assist in this effort!" Verret adds.

This year alone, approximately 146 participants from various local public agencies attended the RS #7 course, which was offered in seven locations. The course provides an overview of RSM, the basic philosophy of PP, and some examples of why it's beneficial to apply PP treatments to an existing network of paved roads. The attendees were provided a variety of reference materials, including workbooks, checklists, and resource links. The content of the course was enhanced with input provided by the local agency partners who responded to an electronic survey that LTAP distributed months prior.

LTAP regularly engages elected officials at various levels and events, such as the Police Jury Association of Louisiana (PJAL) and the Louisiana Municipal Association (LMA) conventions. A few stand-alone presentations are done at police jury meetings to secure leadership buy-in and support for the PP program. Nick has been working with parish and city engineers from Jefferson Davis Parish and City of Shreveport to conduct site visits, mini-workshops, and plan reviews to help promote local initiatives.

"The technical assistance provided to us was a success. We presented to the jury, and we had a great discussion. LTAP is a great resource, and we're grateful for the support they've provided us," explains project consultant Alex Guillory about his experience working with Verret alongside Jefferson Davis Parish Police Jury's Road Administrator Randy Ringuet.

To even make it all-out-holistic in advocating for pavement preservation programs amongst engineers and road supervisors, LTAP took the lead in the creation of LPESA's Pavement Preservation Subcommittee. This is in addition to LTAP organizing pavement-related discussions during LPESA's biannual conferences and quarterly virtual showcases. Offering these avenues for learning aligns with LPESA's mission of fostering and maintaining a high professional spirit among parish public works and engineering employees.



LTAP staff members (from left) Leo Marretta, Rudynah Capone, Steven Strength and Courtney Dupre presented our poster on "Holistic Approach to Promoting Pavement Preservation" at the National LTAP Association Conference held in Seattle, WA this past July.



# How Do You Recruit and Retain Highway Maintenance Workers?

## Clear Roads Research Project Offers Some Ideas.

A research project titled “Recruitment and Retention of Highway Maintenance Workers” done through the Clear Roads Pooled Fund Program offers ideas that may be helpful for state and local agencies in recruiting and retaining highway maintenance workers.

This project developed a concise guide of innovative and practical ways for DOTs to recruit and retain a highly proficient, productive, versatile, and committed roadway maintenance workforce. The final report includes case studies in several categories, including recruitment programs, retention strategies, recruitment and retention for underserved communities, recruitment and retention of the next generation, and capturing information to inform program improvements.

### Strategies for Consideration

The final report includes 13 case studies from agencies across the nation, and they were reviewed with varying depth and length. Recommendations include the following strategies for recruitment and retention.

#### Recruitment Strategies

- looking to groups such as military veterans;
- implementing apprenticeship program;
- building partnerships with departments of corrections (DOCs); and
- telling positive stories on social media.

Among the successful recruitment programs are: (1) Ohio DOT’s Helmets to Hardhats apprenticeship program; (2) City of Fishers (Indiana) Re-entry Initiative through a Structured Employment (RISE) program; (3) Michigan DOT’s Vocational Village Program that opens up job opportunities to recently released inmates.

North Dakota DOT has utilized social media to share the work that the DOT does to promote an understanding of road maintenance work among the traveling public. The public works department at the City of Dubuque (Iowa) has worked with their public information office to create social media posts like “transformation Tuesdays” where they show a picture of the road before and after maintenance.



#### Retention Strategies

- employee benefit and incentive programs
- tuition Reimbursement
- career progression and leadership programs
- creating a positive workplace culture

Maine DOT offers incentives for snow plow drivers to earn an additional pay of up to \$100 a week. Ohio DOT conducts a quality of work-life survey every year and offers employees boot credit, gear credit, and tool allotment (for mechanics). The City of St. Paul (Minnesota) offers flexible work opportunity and accommodates employees who do not want to work more than 40 hours a week.

Idaho Transportation Department (ITD) runs a horizontal career paths (HCPs) program that provides a path toward earning pay raises. Ohio DOT also has a highway technician program that has been beneficial in retaining good workers, allowing them to “create their own destiny” within the agency.

Colorado DOT has implemented a two-week in-house Training Academy required for all new employees. Idaho Transportation Department has two full-time in-house trainers to provide training to district employees, which was found to be more cost-effective.

North Dakota DOT is beginning to see success in its Leadership Development Journey Program, which allows workers to gain and improve upon their job competencies through cross training, interviews, job shadowing, and mentorship.

### Recruiting the Next Generation

How to attract the millennial workforce includes strategies like maintaining an online presence, using social media to tell positive stories, and establishing partnerships with colleges to reach pre-career students both digitally and face-to-face. The importance of internships targeting both high school and college students was also highlighted as an effective mechanism for attracting future applicants.

You may find the full report and recorded webinar (held last June 2021) here: <https://clearroads.org/project/19-02/>

# Louisiana Updates Strategic Highway Safety Plan, Refocuses on New Tactics to Address Roadway Fatalities



Louisiana recently updated its Strategic Highway Safety Plan (SHSP), the official document that outlines the overall vision of reaching Destination Zero Deaths. The plan, which is updated every five years, details the strategies and tactics for reducing fatalities and serious injuries on all public roads on the identified emphasis areas such as occupant protection, impaired driving, distracted driving, and infrastructure and operations.

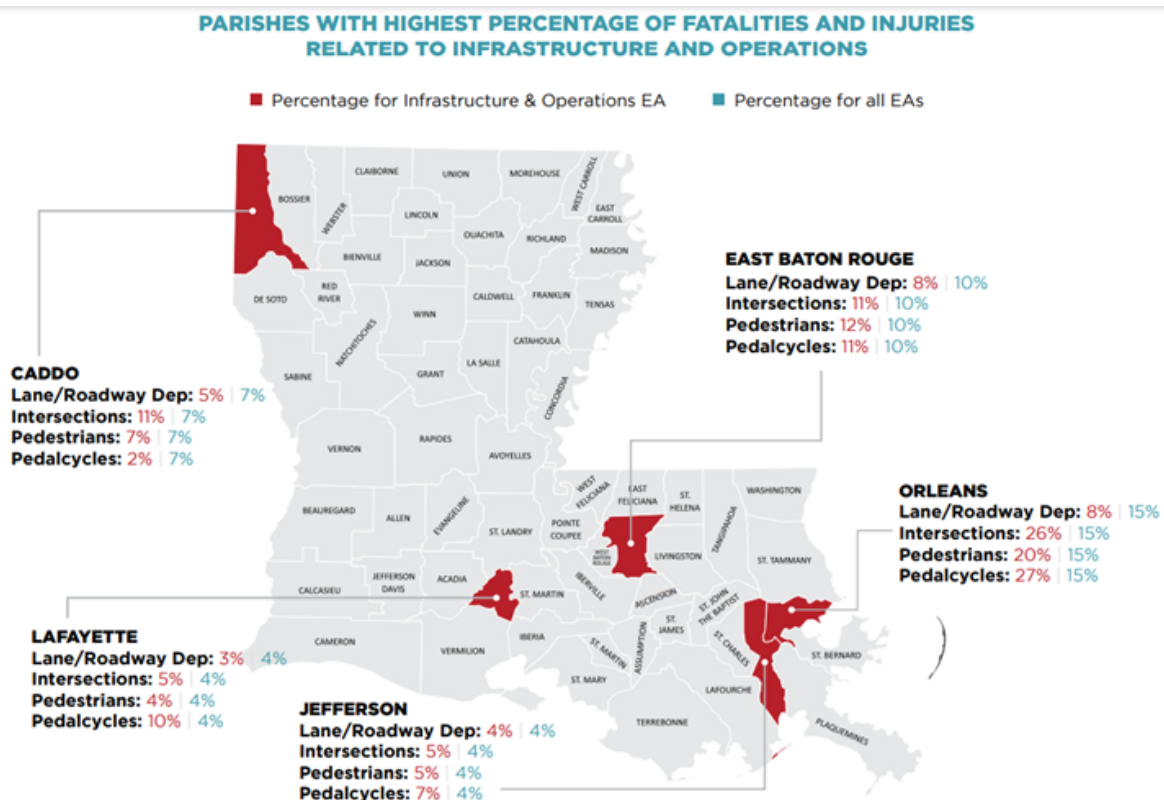
Preliminary data shows 971 people lost their lives due to a motor vehicle crash in the state last year. This is a 17 percent increase from 2020, where there were 828 fatalities. The state has experienced this highest percentage increase in one year since crash fatality records have been kept. “The statistics are alarming,” Governor John Bel

Edwards said in a statement.

“The loss of nearly 1,000 motorists on our roadways is devastating and a number that desperately needs to decrease and be non-existent one day. The safety of our roadways and our motorists is of the utmost importance of our department, and the SHSP provides quantitative data for strategies on improving the safety conditions throughout the state,” shared DOTD Secretary Shawn Wilson, Ph.D.

The SHSP is a collaborative effort between federal, state, and local agencies that have vested interest in improving road safety. Key agencies such as FHWA, DOTD, Louisiana Highway Safety Commission (LHSC), and Louisiana State Police (LSP) spearhead this initiative.

The plan was developed with input from driver behavior safety experts, engineers, law enforcement personnel, emergency service providers, and advocacy groups. Its implementation is made possible through various initiatives, projects, and activities happening at the local level through the nine regional safety coalitions established through a signed agreement between DOTD and the nine Regional Planning Commissions (RPCs) or the Metropolitan Planning Organizations (MPOs) in each region. LTAP and the Local Road Safety Program (LRSP) are full partners in this effort. Visit [www.destinationzerodeaths.com](http://www.destinationzerodeaths.com) to download the plan.



This document, and the information contained herein, is prepared for the purpose of identifying, evaluating, and planning safety improvements on public roads, which may be implemented utilizing federal aid highway funds. This information shall not be subject to discovery or admitted into evidence in a Federal or State court pursuant to 23 U.S.C. 407.

## Local Agencies Receiving Federal-aid Funds Required to Attend LPA Training Classes Scheduled on November 29 to December 1 in Alexandria

By Rudynah Entera Capone



One of the core courses that LTAP has to offer is the Local Public Agency (LPA) Training Program. Classes are scheduled on November 29 to December 1, 2022, at the AEX Conference Room of the England Airpark in Alexandria.

If you are an LPA that receives federal and/or state funding, then you are required to take the LPA Qualification Core Training, which will be taught in the first two days. Topics include project planning, funding and reporting requirements; project development and design process; working with DOTD districts and headquarters; a review of entity-state agreement; and submittal of plans, specifications, and estimates.

The other course on Construction, Engineering, and Inspection (CE&I) will be taught on the third day. It is an optional course offered to enhance the capabilities of “Responsible Charge” personnel from local agencies to develop and manage a project or oversee and understand the CE&I process. A “Responsible Charge” is someone who is a full-time employee of the entity designated to oversee the project.

“It’s really important that LPAs fully understand the project delivery process and requirements that they need to comply with—from the time they apply for funding until they closeout the project for completion,” says Tanya Moore, the director of Local Public Assistance Programs at DOTD.

“The LPA training series will help local agency project sponsors understand the ins and outs of the various federal aid programs, and locals will have an opportunity to meet many of the key program personnel at DOTD who will help them execute a successful project from concept to completion,” LTAP Director Steven Strength emphasizes.

To register for the class, click the training tab on [www.louisianaltap.org](http://www.louisianaltap.org)

## Parish Engineers to Meet in West Monroe This November

Parish engineers, local public works directors, and road supervisors are scheduled to convene on November 2-3, 2022, for the next LPESA conference. It will be held inside the Assembly Room of the Ouachita Parish Fire Department Training Center.

Agenda topics include: drainage maintenance projects and case studies; watershed initiative and flood control program updates; how to implement pavement preservation program in your agency; infrastructure road safety tactics and strategies; bridge formula program opportunities; litter enforcement and debris cleanup efforts; local transportation innovations; public bid law updates; and professional ethics. Register by visiting [www.lpesa.org](http://www.lpesa.org).

We're going to West Monroe!

**Register Now!**

**LPESA Fall 2022 Conference**

Louisiana Parish Engineers & Supervisors Association (LPESA)

**NOVEMBER 2-3, 2022**

Ouachita Parish Fire Department Training Center

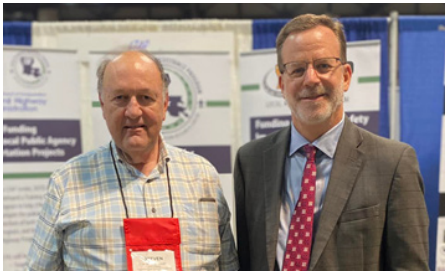
[www.lpesa.org](http://www.lpesa.org)



## Raise the Roof! LTAP Shares Tips and Tricks with Peers Nationwide



LTAP staff members participated as speakers in different breakout sessions at the NLTAPA 2022 conference in Seattle, Washington. Rudynah Capone presented in two breakout sessions on purposeful planning and innovative tools for capturing audience's attention (left photo). Courtney Dupre spoke in the conference opener, "LTAP University" session (right photo). Steve talked about LTAP's successes and challenges during one of the state-sharing sessions, and Leo Marretta explained our poster on "LTAP's Holistic Approach to Promoting Pavement Preservation" (see page 3).



## LTAP-LMA Partnership

It was a rather rare opportunity to have both LTAP Director Steven Strength (left) and Louisiana Municipal Association's Executive Director John Gallagher (right) in the same photo during the LMA Convention in Lafayette this past July. Both are esteemed leaders in workforce development and training initiatives that benefit the municipalities, towns, and small villages across the state. LTAP shares information on training and technical assistance at the LMA Convention, and LMA supports and promotes LTAP activities through its *Louisiana Municipal Review* magazine.



## Stop + Slow + Yield for Traffic, Folks!

LTAP Director Steven Strength taught our "Roads Scholar #4: Temporary Traffic Control for Local Agencies" classes in seven locations from August 16 to September 21. Local agency employees attended the course—mostly engineers, inspectors, and maintenance personnel whose duties require intermediate level understanding of traffic control in work zones. Classes in New Orleans and Lafayette are postponed to October 27 and November 1, respectively.

## Upcoming LTAP Classes

### Roads Scholar #14: Bridge Maintenance and Repair

This class is recommended for parish and local agency engineers, managers, supervisors, and personnel who direct or conduct maintenance or repair of locally owned bridges.



Baton Rouge – October 26  
West Monroe – November 15  
Bossier City – November 16  
Alexandria – November 30

Lake Charles – December 13  
Lafayette – January 10  
New Orleans – January 24

## Local Public Agency Training

November 29 to December 1, 2022

AEX Conference Room of the England Airpark  
Alexandria, LA

**Day 1 and 2:** The LPA Qualification Core will be taught in the first two days. All project sponsors and their consultants working on LPA projects receiving federal or state funding through DOTD are required to attend this training.

**Day 3:** The LPA CE&I course will be taught on the third day, which is intended for those LPA construction project personnel or engineers who serve as the LPA Project Engineer (PE) and the "Responsible Charge."

To register for any of our LTAP classes, log into the  
LTRC registration system:

<https://registration.ltrc.lsu.edu/login>



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### **Publication Statement**

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The purpose of the Local Technical Assistance Program is to provide technical materials, information, and training to help local government agencies in Louisiana maintain and improve their roads and bridges in a cost-effective manner. To accomplish this purpose, we publish a quarterly newsletter; conduct seminars, workshops, and mini-workshops covering various aspects of road and transportation issues; provide a lending library service of audio/visual programs; provide technical assistance through phone and mail-in requests relating to transportation technology; and undertake special projects of interest to municipalities in Louisiana.