

# BETTER ROADS SAFER ROADS



PLANNING  
AHEAD  
FOR SAFER  
ROADS

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A photograph of a man with a beard, wearing a green t-shirt and blue jeans, sitting in the driver's seat of a car. He is buckling his seat belt. The car's interior, including the steering wheel and gear shift, is visible. The background shows a blurred view of a house and trees through the car window.

# MILLIONS OF TEXANS STILL NOT WEARING SEAT BELTS

## TxDOT partners with law enforcement to urge everyone to “Click it or Ticket”

It has been nearly seven years since Eden Ganzerla lost control of her car while driving to work and crashed into a retaining wall, breaking nearly every bone in her body. Since then, she has endured thousands of hours of physical, occupational and speech therapy, the result of one fateful decision to not wear her seat belt. Ganzerla now struggles with a traumatic brain injury, speaks with the aid of a computer, and is slowly learning how to walk and talk again.

“Before the crash, Eden was very outgoing and talkative, living life to the fullest with her animals and friends,” said John Ganzerla, Eden’s father. “Now, she lives with us in Dripping Springs and is dependent on her mother and me for even the simplest everyday tasks.”

Unfortunately, choosing to not wear a seat belt is an all too common mistake in Texas. In 2022 there were 1,258 people killed who were not wearing their seat belt, a 2.5% increase from the year before.

“It’s critical for everyone to take just a few seconds to buckle up, every ride, every time,” said TxDOT Executive Director Marc Williams. “Wearing a seat belt is one of the most important

precautions motorists and their passengers can take to protect themselves in a crash. Whatever reason you may have for not buckling up, I promise it’s not worth your life.”

While more than 90% of Texans make the right choice to wear a seat belt, that still means 10% of Texans make the dangerous choice to stay unprotected on the road. TxDOT’s goal is to get 100% of drivers and passengers to wear their seat belt 100% of the time.

State law requires that every person in a vehicle be secured by a seat belt whether riding in the front or back seat. Fines and court costs for failing to fasten seat belts can add up to \$250 or more.

The National Highway Traffic Safety Administration estimates that the Click It or Ticket initiative has saved more than 7,399 lives, prevented more than 120,000 serious injuries, and resulted in \$28.5 billion in economic savings since its inception in 2002.

TxDOT’s Click It or Ticket campaign is a key component of #EndTheStreakTX, a broader social media and word-of-mouth effort that encourages drivers to make safer choices while behind the wheel to help end the streak of daily deaths. Nov. 7, 2000, was the last deathless day on Texas roadways.

# FHWA Highlights Efforts to Improve Safety for People Walking, Bicycling and Rolling Made Possible by the Bipartisan Infrastructure Law

Newly released guidance will help communities carry out plans to improve cycling, walking, rolling, and shared micromobility

The Federal Highway Administration (FHWA) recently announced new guidance to support bicycle, pedestrian and micromobility projects reflecting significant funding opportunities made possible by the Bipartisan Infrastructure Law. The announcement is a part of a series of actions by the agency to make travel safer for bicyclists, pedestrians, and other road users through its work implementing the U.S. Department of Transportation (USDOT) [National Roadway Safety Strategy](#) (NRSS).

"People who walk and bike are at the heart of our transportation system and thanks to historic Bipartisan Infrastructure Law funding, we have an unprecedented opportunity to design and build a 21st century transportation system that meets the needs of all users," said Federal Highway Administrator Shailen Bhatt. "The law also provides more flexibility to help cities and states address active transportation needs. We are open to new ideas and committed to working with our partners to make this transportation vision a reality so that biking, walking and other ways to travel are safe, convenient and enjoyable for everyone."

FHWA's [new bicycle and pedestrian guidance](#) provides updated information and guidance to FHWA Division Offices on Federal legislation, policies, and reference materials related to bicycle, pedestrian, and shared micromobility programs and projects. The Bipartisan Infrastructure Law expanded funding opportunities, promoted Complete Streets policies, and modified eligibility related to bicycling and walking. FHWA's updated guidance describes the range of opportunities available under the law to improve conditions for bicycling, walking, and shared micromobility. In addition to incorporating these changes, the guidance provides information on many [Pedestrian and Bicycle Funding Opportunities](#) and planning and design [resources](#) that State and local agencies can use to address safety and connectivity among multiple modes of travel.

Other recent USDOT actions taken to improve bicycle and pedestrian safety include the following:

- FHWA has updated its [Lighting Handbook](#). The revised document will serve as a resource for lighting designers and State, city, and town officials interested in improving safety using common roadway lighting applications, with a focus on how best to apply roadway lighting, a proven safety countermeasure supported by FHWA.
- In March, FHWA provided [updated guidance](#) to its division offices to support States interested in receiving FHWA

approval of State procedures and criteria for resurfacing, restoration, and rehabilitation work (often referred to as RRR projects) on roads on the National Highway System. RRR projects provide an opportunity to update roadways at little additional cost and are a key strategy for improving safe access for all road users. The updated guidance includes a new section on networks that provide access for different modes of travel and encourages use of a Complete Streets Design Model. The updated guidance will help fulfill FHWA's commitment to prioritizing safety for all road users in all Federal highway investments and reflects more than 30 years of research by the agency and others.

*"we have an unprecedented opportunity to design and build a 21st century transportation system that meets the needs of all users"*

- [Safe Streets and Roads for All Grant Awards](#): In February, USDOT announced a historic \$800 million in grant awards for 511 projects through the new Safe Streets and Roads for All (SS4A) Grant Program, a record amount of funding to improve road redesign and intersections, and address traffic injuries and fatalities. FHWA is working with several recipients that have already executed grant agreements. The second round of funding is now open for applications.
- [Complete Streets Funding for States](#): In January, FHWA announced it will use a [waiver](#) included in the Bipartisan Infrastructure Law to help accelerate Complete Streets-related activities that can improve safety. Under the law, the non-Federal match requirement for the use of State Planning and Research and Metropolitan Planning funds for Complete Streets planning activities can be waived by FHWA and, in turn, help reduce the costs of planning for Complete Streets by States and Metropolitan Planning Organizations. Guidance on the use of the waiver builds on "[Moving to a Complete Streets Design Model: A Report to Congress on Opportunities and Challenges](#)," FHWA's 2021 Report to Congress detailing its commitment to the Complete Streets design model.

For information on resources available to improve safety for bicyclists, pedestrians and other road users, visit <https://highways.dot.gov/safety/pedestrian-bicyclist>. Additional FHWA Bike-ped resources and information can be found at the [FHWA Bicycle and Pedestrian Program](#).



# BIDEN-HARRIS ADMINISTRATION OPENS FIRST ROUND OF \$85 MILLION COMPETITIVE GRANT PROGRAM TO FUND DIGITAL CONSTRUCTION TECHNOLOGIES THAT **SAVE TIME AND MONEY**

The U.S. Department of Transportation's Federal Highway Administration (FHWA) recently announced that the application period is open for the first year of a new, \$85 million grant program under President Biden's Bipartisan Infrastructure Law. The Advanced Digital Construction Management Systems (ADCMS) grant program will focus on digital construction, such as computer modeling and 3D design, to encourage state-of-the-art practices in project delivery. It complements President Biden's Investing in America agenda that is rebuilding our nation's infrastructure and creating a manufacturing and innovation boom.

"Technology has transformed many facets of life in the modern era, and we want the transportation construction industry to take advantage of these advancements to deliver projects on time and on budget," said Federal Highway Administrator Shailen Bhatt. "These technologies, along with funding from President Biden's Bipartisan Infrastructure Law, will help us more quickly deliver the transportation system of the 21st century."

The ADCMS program is one aspect of FHWA's multifaceted Technology and Innovation Deployment Program (TIDP) and provides funding as an incentive for state departments of transportation. It promotes access to more meaningful, accurate, and easy-to-use data by construction professionals with enhanced software modeling tools and features. Better and more consistent modeling allows the seamless sharing of design and construction plans. The program goals include:

- accelerated adoption of advanced digital construction management systems to boost productivity and manage complex projects;
- more timely and productive information-sharing;
- the development and deployment of best practices; and,
- increased transparency as the result of the real-time sharing of information.

The ADCMS grant program will award up to \$34 million for combined Fiscal Years 2022 and 2023 and up to \$17 million each Fiscal Year thereafter through Fiscal Year 2026.

This funding opportunity will focus on projects that promote information-sharing, reduce reliance on paper, improve productivity and savings during project delivery, and can serve as models for the adoption and deployment of digital construction technologies. While state departments of transportation, the District of Columbia and Puerto Rico are eligible to apply, they are encouraged to partner with local governments, tribes, and private industry in designing their proposed projects.

The Notice of Funding Opportunity for the ADCMS program is available at [ADCMS Grants](#) along with more information about the program.



# PLANNING MAKES PERFECT:

## Addressing Construction Issues Before the Project Begins

A common sight on Texas roadways is noise walls and retaining walls. Noise walls, or barriers, are helpful in keeping the sound of a busy highway out of neighborhoods and business districts. Retaining walls reduce the need for a sloped area at grade changes and are used extensively for highway overpasses.

Noise walls and retaining walls serve different purposes but have similarities in terms of the design and construction process. However, construction of these walls may face issues with utilities, phases of construction, and access. Manuals and design guides mention these concerns but fail to lay out applicable solutions.

Research from the Texas A&M Transportation Institute (TTI) and the Texas Department of Transportation (TxDOT) aims to assist noise wall and retaining wall constructability by resolving issues with sequencing and placement.



*Highlighting the revised design (extended portion) of the retaining wall on TX 360 north of IH 30. This portion of the retaining wall was extended due to a change in the foundation design to mitigate a conflict with a utility duct bank.*

"The research started with discussions with TxDOT utility coordination staff at the Dallas and San Antonio Districts," says Kris Harbin, TTI assistant research scientist. "There were issues between utility relocations and noise wall placements being set in the same area of the right of way."

Harbin's study, titled Sequencing and Placement of Noise Walls and Retaining Walls on TxDOT Projects, seeks to provide guidance on the best ways to install these types of walls to benefit ease of travel and save on construction costs.

"A smoother process happens when TxDOT and utility companies work closely to determine where lines are before the project starts," Harbin says. "You have to make sure you have your ducks in a row during design, or it's going to cause issues during construction."

As with many plans, changes will need to be addressed during execution. Existing lines for gas, sewer or other utilities may require TxDOT to rethink the original design.

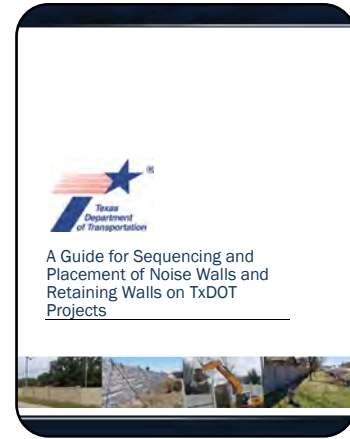
"One location had a crossing for an existing utility duct bank, which is used to consolidate utility cabling," Harbin says. "During construction, TxDOT realized the utility was shallower than what the utility company provided to TxDOT, putting it in conflict with the proposed retaining wall. Estimated relocation of the utility would take about two years and cost \$2 million; TxDOT decided not to relocate it. It would have been better to clear the conflict during design, but the foundation of the retaining wall was revised during construction to allow the utility facility to stay in place."



*Retaining wall widening to facilitate the addition of main lanes on IH 45 near FM 1765 in the Houston District.*

The utility coordination process at TxDOT of avoid, minimize, and accommodate comes into effect: do what is needed to ensure a successful completion of the project.

One result of this research to address problems during design is a guidebook to assist organizations in sequencing and placement of noise walls and retaining walls. The guidebook provides recommendations, preferred methods and best practices for sequencing, placement, design and construction for reducing issues with structures during construction and maintenance.



*A Guide for Sequencing and Placement of Noise Walls and Retaining Walls on TxDOT Projects. Source: TxDOT*

This 38-page guidebook, condensing the original 420-page research document, is available for use by other departments of transportation. The guidebook may be accessed at <https://tti.tamu.edu/documents/O-7014-P1.pdf>.

"I don't want it to sit on a shelf," Harbin says. "I want it to get out there and be used. There's so much good information squeezed down to fit into the guidebook so it's easier to use."

Information in the guidebook is divided into sections.

"We laid out the guidebook to make it easy to find the information because we are going to have multiple stakeholders and users of this guidebook," Harbin says. "If you are looking for noise wall design recommendations, [go to page 15](#). If you're interested in right of way, [go to page 22](#). If you're interested in utilities, [go to page 19](#)."

A key benefit of the research is recommendations for designers and other stakeholders. Harbin would also like to work with TxDOT districts to help implement best practices in the guide.

"If we do it right the first time, it's going to make everyone's life easier," Harbin says. "This research makes the process better, not only for a current project but for projects to come."

For more information contact Kris Harbin at [k-harbin@tti.tamu.edu](mailto:k-harbin@tti.tamu.edu).

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# NEARLY \$100 MILLION APPROVED FOR TEXAS TRANSIT AGENCIES



Taking the bus opened up endless possibilities for Uvalde resident Jennifer Gilleland. Born with cerebral palsy, she'd ride 90 miles each way on a TxDOT-funded rural transit agency bus to get to class as she worked on her college degree. Years later, bus rides have helped her travel the nation, even going skydiving in Miami. Her inspiring story is just one example of the many ways TxDOT-funded transit agencies are having a major impact on Texans.

The Texas Transportation Commission recently approved \$96 million in state and federal funds for rural and small urban transit agencies across the state to help Texans travel to jobs, healthcare and education. The funding goes to agencies like Southwest Area Regional Transit District that provided a path for Gilleland to reach her dream of getting two college degrees through a comprehensive outreach, travel training, and partnership with healthcare case-management programs.

"Rural communities and surrounding areas can sometimes have limited options for transportation, and these transit agencies provide a lifeline for those who need it most," Texas Transportation Commissioner Alvin New said. "This funding will help make sure Texans can get to where they need to go safely and reliably."

These funds will go towards 79 [public transportation providers](#) and planning agencies across the state to operate and maintain a critical network of integrated mobility services including:

- East Texas Council of Governments (ETCOG), Tyler and Longview are working together to provide a seamless network of transportation services through a combination of state and federal grant programs that address the diverse needs of their communities.
- Bluebonnet Trails Community Services (BTCS) will be employing around-the-clock language services allowing mobility managers to supply better coordinated transit for non-English speaking individuals.
- Rolling Plains Management Corporation (RPMC) is constructing an Administrative and Operations Center to house its SHARP Lines Rural Public Transportation dispatch, administration and training activities. The new facility includes approximately 6,000 square feet of office space attached to the existing bus storage and maintenance building in Crowell, Texas. The new facility provides a safe and efficient office and training space large enough to accommodate additional drivers, fleet maintenance and dispatch administrative staff.

For more information contact TxDOT Media Relations at [MediaRelations@txdot.gov](mailto:MediaRelations@txdot.gov) or (512) 463-8700.

# TXDOT RAIL INVESTIGATORS BATTLE HEAT, RATTLESNAKES TO KEEP RAILROADS SAFE

Battling the Texas heat, rattlesnakes and more, TxDOT rail investigators travel the state to keep trains and drivers safe around the tracks. Texas has more railroad mileage than any other state in the nation – more than 10,000 miles of tracks. To help keep those tracks safe, TxDOT employs rail investigators, carrying out such duties as:

- Conducting freight and commuter rail safety inspections.
- Monitoring railroads for compliance with federal regulations and railroad operating rules.
- Investigating railroad accidents and complaints.
- Responding to miscellaneous railroad information requests, including requests for clearance deviations.
- Serving as liaisons to the Federal Railroad Administration in matters relating to rail safety.

“Texas connects ports on the Gulf Coast to the plains of the Midwest and is often the starting point for goods shipped from Mexico to the east and west coasts,” TxDOT Rail Division Director Jeff Davis said. “Although much of this trade occurs on our highway system, a significant amount is also transported on our extensive rail network, and we want that system to operate as safely as possible.”

Sterling Teague, a TxDOT rail safety investigator who specializes in inspecting locomotive power and equipment, examines train cars and engines in rail yards. He works to ensure equipment is in good condition, hazardous materials are stored properly and rail workers are wearing proper protective gear and following safety precautions.

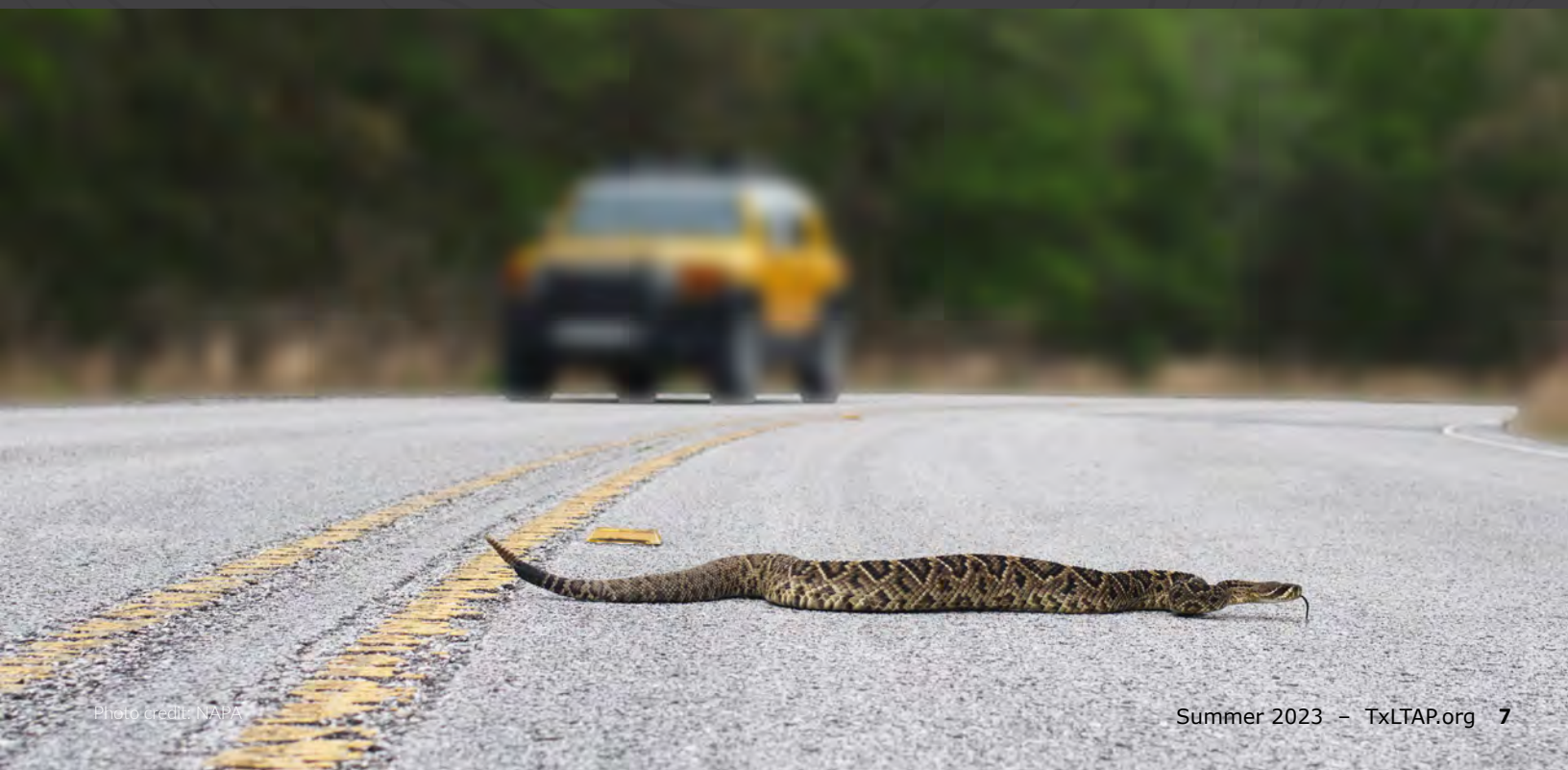
“I used to work for railroads, so I know what to look for in terms of what goes on, on the tracks and in the cars,” Teague said. “And of course, we all have training from TxDOT and certifications from the state and federal government in our specialties. Our goal is to keep everyone safe, from the train operators to rail workers to the traveling public.”

Safety violations aren’t the only thing rail investigators watch out for. Some Texas railroads are out in very remote areas of the state and encounter other hazards.

“Just like any job, we do encounter several hazards while conducting track inspections,” said Luie Sanchez, lead track investigator in Midland. “As we all know, it gets extremely hot during the summer months in West Texas and one of the biggest dangers we encounter while performing walking inspections are rattlesnakes. I walk many miles in very remote areas of the state and the chances of walking by/near a rattler are pretty high.”

Much of this work takes place outside the eyes of the traveling public, but drivers, bicyclists and pedestrians do often find themselves at railroad crossings.

All Texans can help TxDOT investigators keep railways safe in Texas by always stopping at tracks when the lights are flashing and arms are down. And if for any reason your or another’s car—or anything else—is stuck on the tracks, look for the blue sign on the railroad crossings and call the number there for help.





# ADVANCING EQUITY IN ROADWAY SAFETY

*by Anthony Boutros*

To address the national roadway fatality crisis, the Federal Highway Administration (FHWA) is encouraging transportation agencies to adopt the Safe System Approach. The [Safe System Approach \(SSA\)](#) is a human-centered approach that anticipates human mistakes and accommodates human vulnerabilities by designing and operating the roadway system so it is safe for everyone—particularly for people who are disproportionately impacted by crash fatalities and serious injuries. To reach zero deaths and serious injuries, the SSA should be applied equitably to address these disparities.

## DISPARITIES IN ROADWAY FATALITIES AND SERIOUS INJURIES

The Centers for Disease Control and Prevention (CDC) defines health disparities as preventable differences in the burden of disease, injury, violence, or in opportunities to achieve optimal health experienced by socially disadvantaged racial, ethnic, and other population groups and communities.

Transportation is a key determinant in influencing a person's health, including access to public and active transportation, safe and health-promoting green spaces for exercise and recreation, and connectivity to economic and social opportunities. Transportation infrastructure can play a key role in reducing health disparities.

Transportation infrastructure can connect people to opportunities such as safe housing, nutritious food, physical activity, education, and job opportunities. Some transportation infrastructure decisions, however, have exposed some groups to disproportionate burdens—including disparate fatal and serious injury crashes.

The disparities in transportation burdens and benefits are, in large part, a result of historic and present-day disinvestment in underserved communities and underrepresentation of disadvantaged communities in planning, project development, construction, operations, and maintenance for the transportation system.

## FURTHERING EQUITY



*Under equality, everyone gets the same resources. Under equity, the specific historical and present-day circumstances and abilities of individuals and communities are taken into consideration to provide appropriate solutions that provide everyone with opportunities to live safe and healthy lives. © 2017 Robert Wood Johnson Foundation. Modified, with permission, by FHWA.*

FHWA is working to address disparities and expand opportunities

to improve the health and wellbeing of all people. The Bipartisan Infrastructure Law, which includes a generational investment in transportation infrastructure, integrated equity into multiple new programs, including the Reconnecting Communities Pilot (RCP) program and the Safe Streets and Roads for All grant program.

Equity ensures the specific needs of underserved communities are considered and addressed. Incorporating equity into roadway safety should involve working with underserved communities to:

- Collect and analyze data to identify communities experiencing disparities in roadway fatalities and serious injuries.
- Engage community representatives to understand their transportation safety needs and build trust.
- Implement improvements in safety planning, funding, design, operations, and asset management processes to eliminate disparities in traffic fatalities and serious injuries.
- Evaluate impacts by monitoring outcomes and working to continuously improve safety outcomes with communities.

## RESOURCES

FHWA is working to provide resources that can assist in applying Equity into Roadway Safety processes:

- [Equity in Roadway Safety Website](#)
  - » [Collect and Analyze Safety Data Equitably](#)
  - » [Engage Community Representatives](#)
  - » [Implement Safety Improvements Equitably](#)
  - » [Evaluate Safety Improvements Equitably](#)
- [Equity in Roadway Safety Webinar Series](#)
- [Integrating Equity into the Safe System Approach Presentation](#)
- Noteworthy Practices:
  - » California: [Integrating the Safe System Approach and Equity into California's Strategic Highway Safety Plan](#)
  - » Minnesota: [MnDOT's SPACE Tool: Using Equity Data to Inform Active Transportation Safety](#)
  - » San Francisco: [Equity Approaches for Vision Zero](#)
  - » Virginia: ["E is for Everybody": Using Equity to Prioritize Pedestrian Safety Projects and Make the Case for Greater State Funding](#)

For more information, please contact Anthony Boutros at [anthony.boutros@dot.gov](mailto:anthony.boutros@dot.gov).

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# MAINTAINING MINIMUM PAVEMENT MARKING RETRO REFLECTIVITY

by Cathy Satterfield and Paul LaFleur

## RULE AIMS TO REDUCE CRASHES IN DARK AND LOW-LIGHT CONDITIONS

Almost one year ago, FHWA published a new [final rule](#) on Maintaining Minimum Pavement Marking Retroreflectivity. The rule provides new minimum standards for pavement marking retroreflectivity, or the light reflected off of materials used in pavement markings to make them more visible in the dark.

Total estimated fatalities during nighttime increased by 11 percent from 2020 to 2021. The nighttime fatality rate is also about three times the daytime fatality rate. This new rule will help reduce nighttime crashes by making pavement markings more visible and easier to see at night or in dark conditions and supports FHWA's mission to reduce roadway fatalities and serious injuries. It also helps prepare infrastructure for more autonomous vehicle technologies that use retroreflectivity to navigate roadways.

## RULE SUMMARY

When signs and markings are initially installed, they generally have very good retroreflectivity. However, retroreflectivity begins to degrade quickly due to traffic wear, UV rays, and winter maintenance, such as snow plowing. This rulemaking sets parameters for the minimum levels of retroreflectivity that are acceptable before the markings need to be refurbished or replaced.

The final rule requires implementation and continued use of a method that is designed to maintain retroreflectivity of longitudinal pavement markings at or above minimum levels by September 6, 2026, 4 years from the effective date of this rule. This rulemaking effort was included as revision 3 to the 2009 edition of the MUTCD and will be included in the 11th edition of the MUTCD, which is currently in development.

## IMPLEMENTATION METHODS

Agencies will need to have a method in place to maintain the reflectivity of pavement markings at or above the minimum levels stated in the MUTCD. The rule requires State and local agencies to implement a method for maintaining pavement marketing retroreflectivity within 4 years, and these improvements are eligible for Federal-aid funding.

The rule recommends implementation methods that are available in a separate document, [Methods for Maintaining Pavement Marking Retroreflectivity](#). Three videos, currently under development, will also describe specific measuring methods so that the retroreflective values can be tracked. More information on these videos is available in the [announcements section](#).

For more information, please contact Paul LaFleur at [paul.lafleur@dot.gov](mailto:paul.lafleur@dot.gov).

# EVERY DAY COUNTS - 7'S NIGHTTIME VISIBILITY FOR SAFETY INITIATIVE

The statistics make it clear: Nighttime visibility is a problem on our roadways.

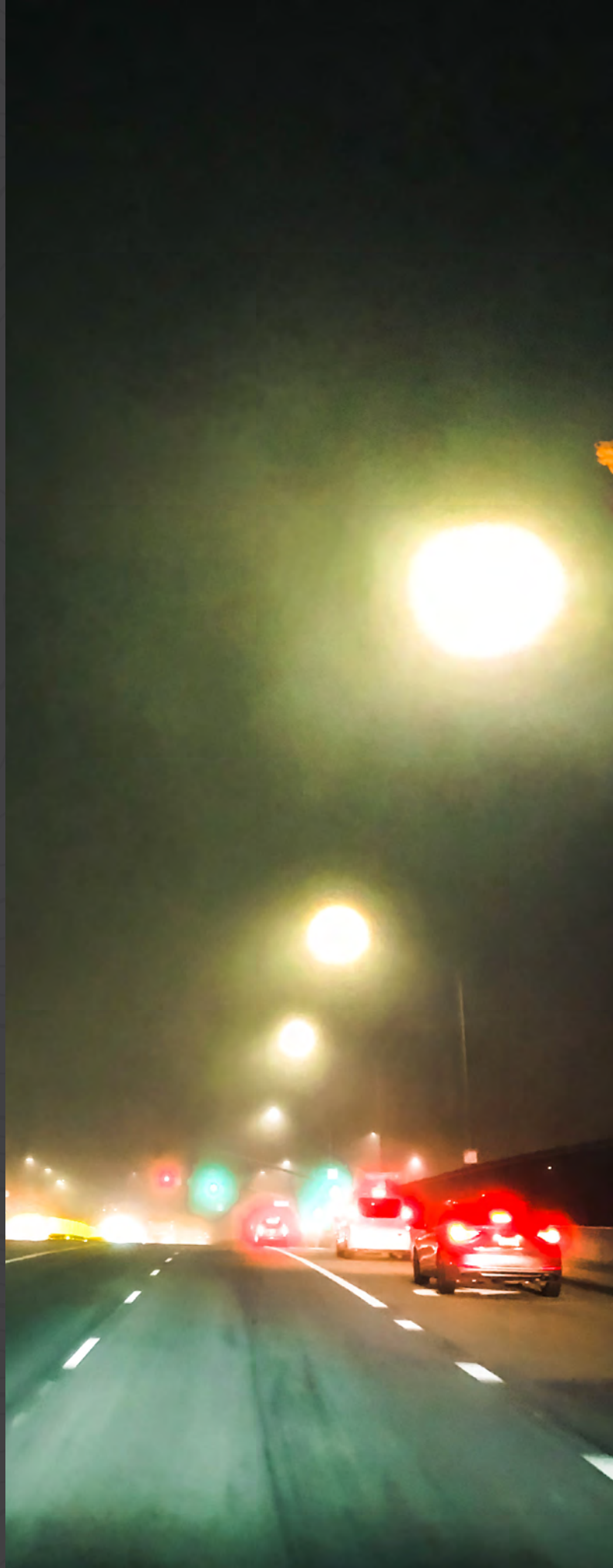
- The nighttime fatality rate is three times the daytime rate.
- Some 76 percent of pedestrian fatalities occur at night.

Enhancing visibility between drivers and other road users will save many lives on our roads. A key countermeasure in this initiative is lighting. Considerations including lighting design and application for pedestrians, bicyclists, and at intersections complemented with placement of traffic control devices are key to solving this problem.

The EDC-7 Summit was held February 14-16, 2023, and the theme of day one was improving safety for all users, with one of the featured innovations being Nighttime Visibility for Safety. Over 1,000 participants attended the breakout session on February 14th, and several joined the mini-discussions and office hours held during the rest of the summit. If you missed the breakout session, you can still view it on-demand at the [summit website](#).

Keep an eye out for more presentations on this initiative at the Center for Local Aid Support webinar series. Stay up-to-date on the EDC-7 initiative Nighttime Visibility for Safety by [subscribing to the Nighttime Visibility for Safety e-News](#) to receive updates on webinars, case studies, videos and more!

For more information, please contact Tori Brinkly at [tori.brinkly@dot.gov](mailto:tori.brinkly@dot.gov), Joseph Cheung at [joseph.cheung@dot.gov](mailto:joseph.cheung@dot.gov), or George Merritt at [george.merritt@dot.gov](mailto:george.merritt@dot.gov).



# READY FOR A SAFETY WALKAROUND? WE'VE GOT TIPS!

The prevention side of incidents. That's how Tarah Kile, director of the Consultation, Education and Training Division at Michigan OSHA, describes safety walkarounds.

"Those opportunities to walk your shop, walk your floor or walk your jobsite are invaluable," Kile said. "Any organization that doesn't want to have an incident, wants to lower their incident rates or keep their employees safe really should participate."

Safety professionals, management and workers from any area of an organization can take part in walkarounds, which are aimed at identifying and resolving hazards. Even in industries that have specific requirements for the timing and scope of certain inspections (construction and mining are two), conducting regular safety walkarounds can bring big benefits.

"To me, it's one way of confirming and verifying all the training that we do, all the awareness that we do, all the communication that we do throughout the organization is actually being applied," said David Consider, senior safety consultant at the National Safety Council.

Here are five tips for making your safety walkarounds effective.

## 1. BRING A GROUP

Safety doesn't fall only on safety pros, so get others involved in the walkaround process. That could be a small group of three to four people or a larger group of eight to 10.

"At a minimum, I'm taking representatives from management and I'm taking representatives from the worker side of the house," OSHA Region 3 Assistant Administrator Nicholas DeJesse said. "Management, obviously, because they oversee the process. Workers because they are intimately involved in every aspect of the work when it comes to the process."

"A worker will know if a process or machine is running properly. They will know when it's running improperly, as well."

Participation by representatives from different parts of the organization can add knowledge and varying perspectives to the walkaround process.

"Grab a janitor. Grab an accountant," Kile said. "Somebody with a fresh set of eyes that can ask questions you don't think to ask is really important."

However, she cautions against making safety walkaround teams too big. "You don't want to overwhelm the workers."

*"You don't want to work in a factory full of nothing but workarounds, and you never want to find 10 things, then a month later find the same 10 still not corrected."*

## 2. REWARD THE GOOD

Consider has an unwritten "2-to-1" rule, which involves pointing out to workers two good things for every safety hazard he discovers. Some safety pros extend it to 5-to-1, he noted.

"It's so easy to find the things we're doing wrong," he said. "But what we struggle with sometimes is finding the good and recognizing the good."

If he spots a worker not wearing safety glasses, for example, Consider's approach would be as follows: "I'll tell them, 'Hey, great work area. It's nice and clean. It's organized. You've got a cord in the back that's been identified. You've got some cones back there. Nice job. But, I need you to put those safety glasses on.'"

Rewarding correct behaviors, Consider added, takes away uneasiness that workers may have when the next safety walkaround takes place.



by Barry Bottino

### 3. DOCUMENT YOUR FINDINGS

This can be as simple as taking handwritten notes and documenting hazards with photos, or even using an inspection app.

"If we can be more efficient and tap into technology, absolutely," Consider said.

Kile pointed out that workers in an organization that's new to safety walkarounds could be taken aback by a camera or a clipboard. "If you're new to this and your culture isn't used to it, I would say walk out with a smile and your PPE and take your notes afterward."

The safety pro should then collect group members' notes and photos after the walkaround and compile them in a report that begins with an executive summary. Consider suggested starting the follow-up report with positive observations before noting identified hazards/takeaways that need attention. Once the report is complete, distribute it to key members of the organization and use it as a template for future reports.

Documentation also applies to safety pros. DeJesse said that should include updates on what actions were taken. For an unguarded part on a machine, for example, that could involve communicating with employees to stay clear of the part, posting warning signs or stanchions to keep workers away until a new piece of Plexiglas is delivered, and then installing the guard.

"You don't want to work in a factory full of nothing but workarounds," DeJesse said. "And you never want to find 10 things, then a month later find the same 10 still not corrected."

### 4. PRIORITIZE FIXES

Now that you've identified safety issues, which should be corrected first? Experts say start with the hazards that cause immediate concern. "If it's immediately dangerous, we get people out of that

situation," Kile said. "There's no question about that."

Resources from OSHA's Safe + Sound program include a safety walkaround fact sheet that features a hazard prioritization matrix.

It uses five levels of "likelihood of occurrence or exposure" (frequent, probable, occasional, remote and improbable), along with four categories of "severity of injury or illness consequence" (negligible, marginal, critical and catastrophic).

By using the matrix, safety pros can determine which hazards should be prioritized. (Find the matrix and more at [osha.gov](https://www.osha.gov).)

"Anything that you find that can be fixed right away, should be," Kile said.

### 5. FOLLOW UP, THEN DO IT AGAIN

So, let's say your safety walkaround group has identified 10 hazards that need attention. Now what?

"I like ensuring we have a robust, quality follow-up system in place," Consider said.

A week after the walkaround, Consider suggests going out and checking to see if a hazard has been resolved and if the solution is working. Check back again in a month, and again in three months. "Now we're letting folks know we care about them, that we're interested, and it's not a one-and-done," he said.

Fixing a guard on one machine and following up can create a template should another machine need attention. "It brings about best practices," Consider said.

*Reprinted from the National Safety Council's Safety + Health, June 2023*



# PROTECTING WORKERS FROM BRUTAL HEAT

As Texas continues another summer with record-high temperatures, TxDOT is taking action to help protect employees who work in the sun.

Tim Mask, lead safety officer in TxDOT's Dallas District, said the agency is constantly educating outdoor employees on the warning signs of dangerous heat exposure. In addition, TxDOT provides an entire catalog of products to help employees combat the heat. These include shade tents, special clothing designed to shield employees from the heat, cooling towels and more.

"Safety never stops, and TxDOT is delivering that message and providing the knowledge that employees need to prepare themselves for the task at hand," Mask said. "The safety items available, from outerwear to electrolytes, help our teams to be better prepared for the day. And the most important thing of all is each person has the right to call a timeout if they are feeling or seeing something that isn't right."

TxDOT recommends employees in excessive heat drink at least eight ounces of water every 15-20 minutes. That's two to three gallons of water per person during a typical workday.

"Our teams in the field should be having a hydration huddle every hour to check up on one another and hydrate with a bottle of water," Mask said. "This also gives the team a moment to discuss the operation and any changes that may need to happen moving forward."

TxDOT typically schedules work early in the morning, trying to beat the hottest parts of the day. If a situation becomes unsafe, the agency will immediately postpone work to protect employees.

"We try to plan our work around the temperatures by allowing crews to begin work earlier in the mornings," Mask said. "This way they're able to complete the operations before the hottest part of the day."

## Things you need to know:

- Heat illness can strike quickly—learn to recognize the symptoms.
- Workers with heat illness should stop working, get cool, and drink fluids.
- Altered mental state can be a sign of heat stroke and requires immediate attention.
- When treating severe heat illness, cooling is the first priority.

## HEAT STRESS

# First Aid for Heat Illness

Cooling is key. Know the symptoms and treatment of heat illness.

## Signs and Symptoms

Symptoms can occur in any order. For example, a person will not always experience heat cramps before they suffer from heat exhaustion.

## What to Do

### Heat Rash/Prickly Heat

- Red cluster of pimples or small blisters, usually on neck, upper chest, groin, under breasts, and in elbow creases
- Extensive areas of skin that do not sweat on heat exposure, but present gooseflesh appearance that subsides with cool environments

- When possible, a cooler, less humid work environment is the best treatment
- Keep rash area dry
- Powder can be applied to increase comfort
- Do not use ointments or creams, as they may impair cooling—warm, moist skin can make the rash worse

### Heat Cramps

- Muscle cramps, pain, or spasms in the abdomen, arms, or legs

- Drink fluids every 15 to 20 minutes and eat a snack or sports drink
- Avoid salt tablets
- Get medical help if the worker has heart problems, is on a low sodium diet, or if cramps do not subside within 1 hour

### Heat Syncope (Fainting)

- Fainting, dizziness, or light-headedness after standing or suddenly rising from a sitting/lying position

- Sit or lie down in a cool place when beginning to feel faint or dizzy
- Slowly drink water or clear juice

### Heat Exhaustion

- Headache
- Nausea
- Dizziness, weakness
- Irritability
- Thirst, heavy sweating
- Elevated body temperature
- Decreased urine output

- Call for medical help or take worker to a health facility for evaluation and treatment
- Stay with worker until help arrives
- Remove worker from hot area and give liquids to drink
- Remove unnecessary clothing, including shoes and socks
- Cool worker with water, cold compresses, an ice bath, or fans
- Encourage frequent sips of cool water

### Heat Stroke

- Confusion, altered mental state, slurred speech, loss of consciousness
- Hot, dry skin or profuse sweating
- Seizures
- Very high body temperatures
- Fatal if treatment delayed

- This is an emergency! Call for emergency care immediately!
- Move worker to a cool area and remove outer clothing
- Cool worker with water, cold compresses, an ice bath, or fans
- Circulate air around worker to speed cooling
- Place cold, wet cloths or ice on head, neck, armpits, and groin
- Stay with worker until emergency medical services arrive

Less Severe

Severe

OFTEN FATAL

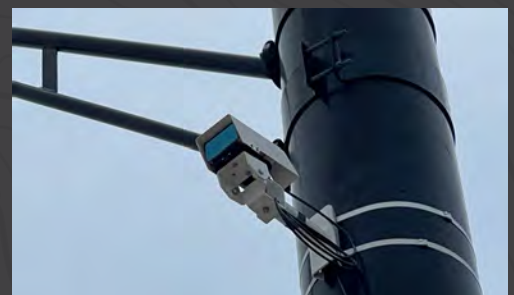
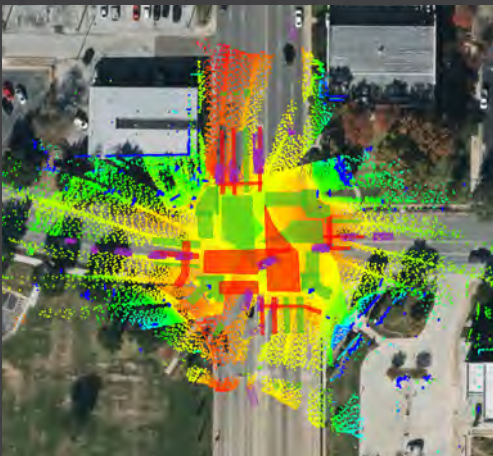
# BUILD A BETTER MOUSETRAP HONORABLE MENTION: ARLINGTON, TEXAS

Build a Better Mousetrap (BABM) is a national program that recognizes state, local and Tribal government agencies who use homegrown innovation to improve safety in their transportation programs. Many of these ideas come from the front-line workers who are looking for better ways to get the job done while saving money, time and improving efficiency. As part of the 2023 round of BABM project submittals, the City of Arlington received an Honorable Mention for their project titled "Equitable Street Solutions for Vulnerable Road Users". This transformative project aims to revolutionize the roadways and intersections of Arlington by utilizing cutting-edge LiDAR sensors and disruptive control strategies to promote equitable safety and reduce traffic control delays while mitigating their negative impact on the environment. With the deployment of a smart traffic signal system in the central area of the city, the project team is poised to make significant progress towards achieving the goals set forth in the city's Vision Zero Program, reducing crashes involving vulnerable pedestrians and bicyclists. The collected new behavioral data,

such as near misses, are being used to identify potential crashes under certain conditions (e.g., permissive left-turn vehicles .vs opposing through vehicles).

The success of this project has garnered widespread attention and acclaim within the traffic community, with Utah DOT recognizing its potential and sponsoring two additional projects at the University of Texas at Arlington to further evaluate the benefits of LiDAR sensors for traffic safety improvement. By sharing the results

of this groundbreaking project with the wider community, we hope to inspire others to pursue innovative solutions that prioritize the safety and well-being of all road users while minimizing the environmental impact of traffic control systems.



For more information, visit [TxLTAP.org](https://TxLTAP.org)

Call 817-272-2581 or email [txltap@uta.edu](mailto:txltap@uta.edu) to request training, technical assistance or equipment.

## WORKFORCE DEVELOPMENT

Contact TxLTAP to schedule training or request assistance with developing a no-cost training program tailored to the unique needs of your organization. TxLTAP serves all Texas cities and counties, and instructors deliver training in accordance with all local safety guidelines.

## GRAVEL ROADS ACADEMY

Improve upon current knowledge related to gravel road maintenance best practices. Learn how to get more mileage out of your gravel roads budget with the latest tools, techniques, and know-how from road maintenance experts.

## EQUIPMENT LENDING LIBRARY

Equipment, such as traffic counters, a portable radar speed sign, handheld retroreflector, digital ball bank indicator, fall protection gear, dynamic cone penetrometer and more, is available for loan at no-cost to local government agencies throughout Texas.

## HEAVY EQUIPMENT RODEO

Heavy equipment operators will learn and practice new skills while stressing safety and excellence. Operators will use maintainers, backhoes, dump trucks, loaders, and more to steer through a series of exercises designed to test their abilities.



# TXLTAP TRAINING & SERVICES

TAKE ADVANTAGE OF

TECHNICAL  
ASSISTANCE

TXLTAP TRAINING AND SERVICES ARE  
DELIVERED BY SEASONED INDUSTRY  
PROFESSIONALS WITH EXTENSIVE  
TRANSPORTATION KNOWLEDGE

TxLTAP instructors, subject matter experts, and staff include former maintenance managers, heavy equipment operators, road crew chiefs, civil and transportation engineers, inspectors, and public works directors who have all worked on Texas' roads and have the unique experience and knowledge to support local safety, maintenance, and innovation efforts.

In addition to delivering training classes, publishing Better Roads, Safer Roads, and providing information exchange opportunities at conferences, TxLTAP provides local roadway agencies an opportunity to consult directly with carefully selected subject matter experts to specifically address organizations' unique issues and offer meaningful solutions. Like all resources TxLTAP offers, there is no charge to receive technical assistance.

Do you need information on proper methods for repairing your lingering road problem? Would it help if someone came out to watch your road crew perform a repair and offer suggestions on how to save time and money in the future? Could you use the help of a traffic engineer who could assess a problematic intersection? Would it be a benefit to you if a subject matter expert came to ride and evaluate local roads or develop a no-cost training model specific to the needs of your workforce?

Take advantage of technical assistance services!

Call 817-272-2581 or email [txltap@uta.edu](mailto:txltap@uta.edu) to request assistance.



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TxLTAP serves local government roadway agencies by providing no cost training, technical assistance, equipment lending & more. Learn more at [TxLTAP.org](http://TxLTAP.org).

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