BETTER ROADS SAFER ROADS



SAFER ROADS

Fall 2021 | TxLTAP.org

PROMOTING THE VALUE OF HIGHWAY SAFETY IMPROVEMENT PROGRAM TO DECISION MAKERS

The Highway Safety Improvement Program (HSIP) saves lives, and it's important to promote the value of HSIP to decision makers who determine how and where to invest limited HSIP dollars.

SELECTING PROJECTS AND STRATEGIES TO MAXIMIZE HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PERFORMANCE

The guide explains how State DOTs, metropolitan planning organizations, and other agencies can use economic analysis methods and safety management approaches to have the greatest potential to reduce fatalities and serious injuries.

FROM SPACE TRAVEL TO ROADWAY SAFETY: LIDAR HELPS IDENTIFY PAVEMENT SECTIONS PRONE TO HYDROPLANING

A technology once focused on aerospace applications half a century ago is finding new utility to improve the safety of driving surfaces in Texas thanks to evolving research at the Texas A&M Transportation Institute (TTI).

NEW TASK FORCE TO DIRECT FUNDING TO VITAL HIGHWAY SAFETY PROJECTS

The TxDOT/MPO Safety Task Force will help direct available funding toward the goal of reducing the number of deaths on Texas roadways.

EVERY NINE HOURS SOMEONE DIES FROM DRUNK DRIVING IN TEXAS

No parent should ever receive the kind of devastating news that two Bryan police officers delivered to Pam Todaro one early Saturday morning.

TEXAS RANKS #1 FOR TRAIN COLLISIONS. REMINDERS FOR DRIVERS AND PEDESTRIANS TO REVIEW BEST PRACTICES FOR INCREASED RAIL SAFETY

Texas ranks highest for the number of train collisions in the country, according to the latest full-year statistics from the Federal Railroad Administration (FRA).

WHERE HIGHWAYS MEET RAILS: CROSSING SAFETY TRAINING UPDATES FROM THE NATIONAL HIGHWAY INSTITUTE

More than 200,000 highway-rail grade crossings exist across the United States, more than half of which are under jurisdiction of a public authority.

EVERYBODY GOES HOME: TEXAS TRAFFIC INCIDENT MANAGEMENT PROGRAM RECOGNIZED BY THE FEDERAL HIGHWAY ADMINISTRATION

The Texas Traffic Incident Management (TIM) Program was recently recognized by the Federal Highway Administration (FHWA) for their efforts in training new TIM trainers.

PILOT PROGRAMS IN AUSTIN TEXAS LEVERAGING TECHNOLOGY TO MEET VISION ZERO GOALS

In September 2021, the City of Austin deployed TAPCO technology to test their Connected Vehicle Pedestrian Crosswalk Warning System.

ROADWAY SAFETY FOUNDATION HONORS SEVEN NATIONAL ROADWAY SAFETY AWARD WINNERS

The Federal Highway Administration (FHWA) and the Roadway Safety Foundation (RSF) recently honored seven projects with National Roadway Safety Awards for 2021.

TEXAS DEPARTMENT OF TRANSPORTATION OPENS THE 2021 HIGHWAY SAFETY IMPROVEMENT PROGRAM CALL FOR PROJECTS

The TxDOT HSIP is designed for highway safety projects that eliminate or reduce the number and severity of traffic crashes.

17 TXLTAP SERVICES

Contact TxLTAP for more information or to request training, services, or equipment.

PROMOTING THE VALUE OF HIGHWAY SAFETY IMPROVEMENT PROGRAM TO DECISION MAKERS



The Highway Safety Improvement Program (HSIP) saves lives, and it's important to promote the value of HSIP to decision makers who determine how and where to invest limited HSIP dollars. The FHWA Office of Safety recently published <u>promotional cards</u> that Federal, State, and local safety champions can use to promote the value of HSIP to decision makers. There are three cards, each focused on a different theme:

- Return on investment put your HSIP funds to work and get everyone home safely.
- Be proactive take action, using a systemic approach to safety, before the crash happens.
- Data-driven decisions use data to invest your HSIP funds effectively.

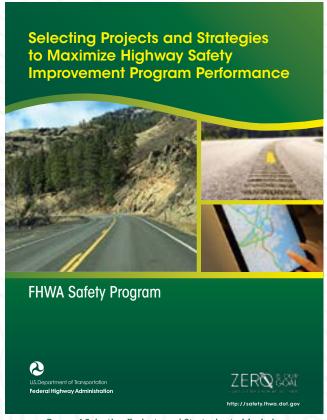
Each card contains general messaging on the front and a case study example on the back. Agencies can customize the back to feature their own examples using the PowerPoint version of the file.

Consider how you might use these cards to encourage design engineers, district engineers, and directors to prioritize safety and maximize opportunities to advance highway safety improvement projects that have the greatest potential to reduce the State's roadway fatalities and serious injuries.

Here are some ideas:

- Use the cards as-is to illustrate how other agencies are successfully implementing HSIP. This might be helpful if:
 - ✓ Your agency is hesitant to implement highway safety improvement projects at locations with no history of crashes.
 - ✓ Safety data collection and analysis are a challenge for your agency.
 - ✓ There are additional opportunities to maximize lives saved through the HSIP.
- Customize the cards to showcase a successful HSIP story in your agency. It might be helpful to share noteworthy practices among districts or regions.
- Apply the card's messaging in your talking points to various transportation leaders or other safety stakeholders. The content from the promotional cards can be easily translated into talking points or a presentation.

Through continued outreach and communication about the value of highway safety improvement projects and the HSIP, we can achieve the long-term vision of zero deaths on our Nation's roads. For more information or to ask questions, please contact Karen Scurry at karen.scurry@dot.gov.



Cover of Selecting Projects and Strategies to Maximize Highway Safety Improvement Program Performance. (Source: FHWA)

SELECTING PROJECTS AND STRATEGIES TO MAXIMIZE HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP) PERFORMANCE

by Karen Scurry

BACKGROUND

The purpose of the Highway Safety Improvement Program (HSIP) is to significantly reduce fatalities and serious injuries on all public roads and for all road users. The purpose of the HSIP is consistent with the Safe System Approach principle that death and serious injuries are unacceptable, and the Federal Highway Administration's (FHWA) long-term vision of zero fatalities on our Nation's roads. To achieve this vision, State and local agencies use a data-driven roadway safety management process to plan, design, and implement highway safety improvement projects under the HSIP. While States are proactively addressing safety needs through this program, there may be opportunities to enhance current project planning and selection practices to maximize HSIP performance. The <u>Selecting Projects and Strategies to Maximize Highway Safety Improvement Program Performance</u> guide highlights those opportunities.

OVERVIEW OF THE GUIDE

The guide explains how State DOTs, metropolitan planning organizations, and other agencies can use economic analysis methods and safety management approaches to have the greatest potential to reduce fatalities and serious injuries. The guide discusses how projects affect safety performance, presents current approaches for highway safety management, and provides considerations for new economic methods and strategies that may improve upon current methods.

The performance of the HSIP depends on the performance of its projects. The performance of each project largely depends

on the effectiveness of countermeasures and where they are installed. This guide presents fundamental analytical methods and a conceptual framework for maximizing the effectiveness of the HSIP by increasing the individual performance of HSIP projects. The best-performing, most cost-effective, highest-priority HSIP projects deliver the greatest reductions in fatalities and serious injuries at the lowest costs. To address fatal and serious injury crashes, agencies should focus on the change in fatal and serious injury crashes, rather than all crashes or all injuries, when identifying and selecting projects.

Benefit-cost analysis allows analysts to quantify and compare the benefits and costs among highway safety improvement projects.

The guide explains how State DOTs, metropolitan planning organizations, and other agencies can use economic analysis methods and safety management approaches to have the greatest potential to reduce fatalities and serious injuries.

The benefit cost ratio (BCR) is the best measure of economic performance for projects, countermeasures, and the overall program. Because the HSIP is constrained by a budget, projects that improve safety performance most cost-effectively should maximize HSIP performance. BCR allows agencies to rank projects by performance and select the best-performing combination of projects. Analysts can use BCR in terms of reduced fatal and

serious injury crash costs per dollar spent (BCRKA) to quantify and rank the performance of individual projects or the overall program. States can improve HSIP performance by increasing the average BCRKA of implemented projects or by adding funding.

The guide also presents an alternative way to calculate BCR based on the ratio of maximum monetary potential for safety improvement at a site and the countermeasure score (CM score) for proposed improvements, rather than estimated benefits and costs. CM score is a new measure proposed in this guide that represents the life cycle project costs to reduce 1 percent of crashes at any applicable location, providing a more comprehensive way to compare countermeasure effectiveness than offered by currently available measures such as crash modification factors (CMFs).

This guide presents case studies using data from two States that illustrate how agencies can apply BCRKA and the CM score to prioritize projects. In these case studies, the BCRKA method resulted in selecting projects expected to prevent more fatal and serious injury crashes than the current project selection methods used by the two States. While BCRKA is appropriate to prioritize projects and alternatives among different locations, analysts can use CM scores to select among countermeasures at a given location. CMFs, costs, and service lives used in determining CM scores have a large effect on the relative comparison between countermeasures. The CM score method holds promise but requires further evaluation to confirm the case study findings.

KEY RECOMMENDATIONS

To maximize performance of the HSIP, agencies can:

- Measure the performance of proposed programs or project selection scenarios in terms of expected lives saved and serious injuries prevented to help focus the HSIP on fatal and serious injury crashes.
- Rank proposed projects by BCR based on the potential for reducing fatal and serious injury crashes and select the highest-ranked projects to offer the maximum predicted safety performance of the HSIP.
- Express BCR in terms of potential monetary safety benefits and costs. Monetary potential for safety improvement measures a location's estimated contribution to the safety performance of a project independent of countermeasures.
 The CM score measures a countermeasure's ability to impact the safety performance of a project independent of where a countermeasure is implemented.
- Develop more planning-level safety performance functions and CMFs in terms of fatal and serious injury crashes, average project costs (or range of costs), and other data that support the BCRKA prioritization method.

BENEFITS

There are opportunities to use the recommendations presented in the guide to save more lives and prevent more serious injuries with the HSIP. While more complete and higher-quality data will help identify locations and projects with the greatest potential to improve safety, States can implement the concepts and methods of

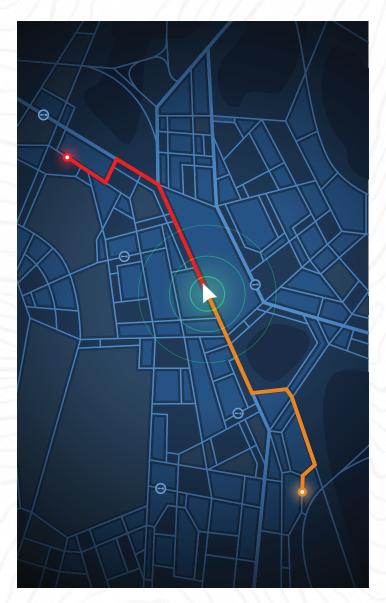
BCR-based prioritization with almost any level of data. Researchers can assist practitioners by developing new tools that apply the methods presented in the guide and expanding the library of available safety performance functions, CMFs, and implemented countermeasure data.

Every phase of the HSIP and project development process has a potential impact on the safety performance of the resulting projects. Ensuring that agencies are selecting projects and

Save more lives and prevent more serious injuries with the HSIP

strategies to maximize HSIP performance will help reduce fatalities and serious injuries across the country.

Reprinted from the Federal Highway Administration's Fall 2021 issue of Safety Compass.

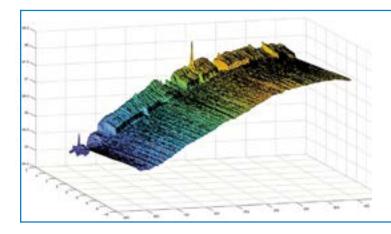




FROM SPACE TRAVEL TO ROADWAY SAFETY: LIDAR HELPS IDENTIFY PAVEMENT SECTIONS PRONE TO HYDROPLANING

A technology once focused on aerospace applications half a century ago is finding new utility to improve the safety of driving surfaces in Texas thanks to evolving research at the Texas A&M Transportation Institute (TTI). The effort employs LiDAR — or light detection and ranging — which calculates distances by transmitting a laser beam to an object and gauging the time the light takes to return to its source.

Led by TTI Associate Research Engineer Charles Gurganus, this new effort funded by the Texas Department of Transportation (TxDOT) builds upon earlier work originally designed to improve roadway resilience and add to TxDOT's Asset Management Plan. Gurganus and his team first used LiDAR in 2017 to measure roadside drainage channel dimensions to ensure those ditches served their intended purpose — to draw stormwaters away from the roadway and guard against premature wear and tear on and beneath the driving surface.



Using digital renderings of the roadway and roadside surface to model how water flows along the surface, researchers can determine how big a pavement drainage really is. And with that as a baseline, cost-effective solutions that also improve safety are easier to find.



"Water can be an amazing force, and hydroplaning results from a series of events; a lot of bad things happen all at once."

What started out as a method to relate roadside drainage to pavement durability and maintenance needs, however, has now become a way to determine hydroplaning potential. The research team is mapping pavement surfaces to detect spots where thin layers of rainwater collect and fail to drain quickly enough from the pavement surface.

"Water can be an amazing force," Gurganus says. "And hydroplaning results from a series of events; a lot of bad things happen all at once."

For example, analyzing data from Texas's Crash Records and Information System can reveal that a certain 20-mile stretch of roadway has a higher-than-average number of wet-weather crashes, Gurganus notes, but the new LiDAR application can isolate much shorter segments where the pavement geometry might be a

contributing factor. And that means maintenance and prevention measures can be more effectively targeted.

This new application of LiDAR is a major advancement, but it brings along with it a hefty challenge, namely processing the sheer volume of data collected for analysis. "It's the world we live in," Gurganus points out. "We're data rich and information poor."

Overcoming that circumstance is an ongoing task for the research team, which is making the analysis of pavement data more digestible with visualization tools and readily available to TxDOT engineers at the network level.

By applying a technology used by NASA in the 1970s to aid spacecraft development and travel, TxDOT can now make conditions safer for roadway travel.

"TxDOT already does a lot to prevent wet-weather crashes, from warning signs to pavement texturing to aggregate selection," Gurganus says. "This gives TxDOT another tool to identify and prioritize the most vulnerable spots. It makes it possible to perform surgery with a scalpel instead of a hatchet."

For more information, please contact Charles Gurganus at (979) 317-2302 or c-gurganus@tti.tamu.edu.

Reprinted from Texas Transportation Researcher, Volume 57, Number

NEW TASK FORCE TO DIRECT FUNDING TO VITAL HIGHWAY SAFETY PROJECTS

The Texas Transportation Commission recently announced a new task force to be comprised of representatives from the Texas Department of Transportation (TxDOT) and the state's metropolitan planning organizations (MPOs) to further identify and fund safety projects from funding allocated to MPOs throughout the state with a relentless focus on reducing the number of fatalities on Texas highways.

In 2019, the Commission directed TxDOT to work toward a goal of reducing the number of deaths on Texas roadways by half by the year 2035 and to zero by the year 2050. To achieve "The Road To Zero" goal, Commission Chairman J. Bruce Bugg, Jr. said it is essential that TxDOT work closely with its MPO partners.

"This will allow us to work with MPOs to effectively direct unspent funding from Categories 5, 7, and 8 to critical safety projects that will improve our roadways and ultimately help reduce the number of deadly crashes," Bugg said. "We know this goal is achievable and this new task force is yet another key component to getting there."

The TxDOT/MPO Safety Task Force will be co-chaired by commissioners Laura Ryan and Alvin New and will include representatives from across TxDOT and each of the state's MPOs.

"There is not a moment to waste to ramp up our collective efforts and do all that we can to save lives," said Commissioner Laura Ryan. "The trend in roadway fatalities is going in the wrong direction, and not a single death is acceptable. These numbers represent real people and real losses. We must do more, and it takes all of us working together."

"Safety is always the top priority in meeting TxDOT's mission of Connecting You With Texas," said Commissioner Alvin New. "We take this responsibility to heart and look forward to working very closely with the MPOs to strategically and thoughtfully find, evaluate, fund and measure solutions to help reach our goal of zero fatalities, with particular focus on progressing toward our mid-term goal of reducing deaths by half by the year 2035."

The TxDOT/MPO Safety Task Force will have an initial two-year term. It will develop a short-term plan to immediately invest funding on current ongoing safety initiatives, such as rumble strips that alert drivers to slow down and when they are veering off the road; cable barriers that prevent vehicles from sliding into on-coming traffic; shoulder widenings to make room for disabled vehicles or more space to avoid a collision; four-lane divided roadways that help move traffic more efficiently; grade separations for uninterrupted traffic flow and increased safety; and other safety measures. In addition, a long-term plan will be created to identify funding sources, from Categories 5, 7, and 8 to establish metrics to measure effectiveness, and describe incentives for the partnership based on the reduction of deaths on Texas roadways.

"Ending the streak of daily deaths on Texas roadways is a responsibility shared by every Texan," said TxDOT Executive Director Marc Williams. "The TxDOT/MPO Safety Task Force will help bolster the partnership we have with local leaders, allowing us to better focus our efforts, our ideas and our funding on saving lives."

Federal law requires that an MPO be designated for each urban area with a population of 50,000 or more. There are 23 MPOs in Texas. Each of the MPOs receive federal funding for transportation planning.

The TxDOT/MPO Safety Task Force will help direct available funding toward the goal of reducing the number of deaths on Texas roadways. It will provide regular updates to the Commission, with a final report delivered at the completion of its initial two-year term.

TEXAS METROPOLITAN PLANNING ORGANIZATIONS

1. ABILENE MPO

Address: 209 South Danville, Suite B-212, Abilene, TX 79605

Phone: (325) 437-9999

Website: http://www.abilenempo.org/ Urbanized Areas Served: Abilene, TX

Contact: E'Lisa Smetana, Executive Director

E-mail: elisa.smetana@abilenetx.com

2. ALAMO AREA MPO (AAMPO)

Address: 825 South St. Mary's, San Antonio, Texas, 78205 Phone: (210) 227-8651

E-mail: aampo@alamoareampo.org Website: http://www.alamoareampo.org Urbanized Areas Served: San Antonio, TX Contact: Isidro Martinez, Director E-mail: imartinez@alamoareampo.org

3. AMARILLO MPO

Address: P.O. Box 1971, Amarillo, TX 79105-1971 Phone: (806) 378-6293

E-mail: amarillompo@amarillompo.gov Website: https://www.amarillo.gov/ departments/planning-and-developmentservices/planning/metropolitan-planningorganization

Urbanized Areas Served: Amarillo, TX Contact: Travis Muno, MPO Administrator E-mail: travis.muno@amarillo.gov

4. AUSTIN MPO - CAPITAL AREA MPO (CAMPO)

Address: 3300 N. Interstate 35, Suite 630,

Austin, TX 78705 Phone: (512) 215-8225 E-mail: campo@campotexas.org

Website: http://www.campotexas.org
Urbanized Areas Served: Austin, TX;

San Marcos, TX

Contact: Ashby Johnson, Executive Director

E-mail: Ashby.Johnson@campotexas.org

BEAUMONT - PORT ARTHUR MPO SOUTH EAST TEXAS REGIONAL PLANNING COMMISSION (SETRPC)

Address: 2210 Eastex Freeway, Beaumont, TX 77703 Phone: (409) 899-8444

Website: http://www.setrpc.org/ter/ Urbanized Areas Served: Beaumont, TX;

Port Arthur, TX

Contact: Bob Dickinson, Director E-mail: bdickinson@setrpc.org

6. BRYAN-COLLEGE STATION MPO (BCSMPO)

Address: 309 North Washington Street,

Suite 14, Bryan, TX 77803 Phone: (979) 260-5298 E-mail: bcsmpo@bcsmpo.org Website: http://bcsmpo.org/

Urbanized Areas Served: College Station -

Bryan, TX

Contact: Daniel Rudge, Executive Director

E-mail: drudge@bcsmpo.org

7. CORPUS CHRISTI MPO (CCMPO)

Address: 602 N. Staples Street, Suite 300,

Corpus Christi, TX 78401 Phone: (361) 884-0687 E-mail: ccmpo@cctxmpo.us

Website: http://www.corpuschristi-mpo.org/ Urbanized Areas Served: Corpus Christi, TX Contact: Robert F. MacDonald, MPA, PE, Transportation Planning Director E-mail: rmacdonald@cctxmpo.us

8. DALLAS-FORT WORTH MPO - NORTH **CENTRAL TEXAS COUNCIL OF GOVERNMENTS (NCTCOG)**

Address: 616 Six Flags Drive, Arlington, TX 76011 Phone: (817) 695-9240 E-mail: transinfo@nctcog.org

Website: http://www.nctcog.org/trans Urbanized Areas Served: Dallas-Fort Worth-Arlington, TX; Denton-Lewisville, TX; McKinney, TX

Contact: Michael Morris, P.E., Director E-mail: mmorris@nctcog.org

9. EL PASO MPO

Address: 211 N. Florence, Suite 202,

El Paso, TX 79901

Phone: (915) 212-0258 (Office) Website: http://www.elpasompo.org/ Urbanized Areas Served: El Paso, TX-NM Contact: Eduardo Calvo, AICP,

Executive Director

E-mail: ECalvo@ELPASOMPO.ORG

10. HOUSTON-GALVESTON MPO -**HOUSTON-GALVESTON AREA COUNCIL** (HGAC)

Address: 3555 Timmons, Suite 120,

Houston, TX 77027 Phone: (713) 627-3200

E-mail: PublicComments@h-gac.com Website: http://www.h-gac.com Urbanized Areas Served: Houston, TX; Conroe - The Woodlands, TX;

Lake Jackson - Angleton, TX; Texas City, TX Contact: Craig Raborn, MPO Director E-mail: craig.raborn@h-gac.com

11. KILLEEN-TEMPLE MPO (KTMPO)

Address: 2180 North Main Street,

Belton, Texas 76513 Phone: (254) 770-2200

Website: http://www.ktmpo.org/ Urbanized Areas Served: Killeen, TX;

Temple, TX

Contact: Uryan Nelson, MPO Director E-mail: Uryan.nelson@ctcog.org

12. LAREDO & WEBB COUNTY AREA MPO (LW-CAMPO)

Address: 1413 Houston St, Laredo, TX 78040 Phone: (956) 794-1613

Website: http://www.laredompo.org/ Urbanized Areas Served: Laredo, TX;

Webb County

Contact: Juan S. Mendive, Interim MPO Director

E-mail: jmendive@ci.laredo.tx.us

13. LONGVIEW MPO

Address: P.O. Box 1952, Longview, TX 75606 Phone: (903) 237-1062

E-mail: MPO@LongviewTexas.gov Website: http://mpo.longviewtexas.gov Urbanized Areas Served: Longview, TX

Contact: Bryan McBride, Longview MPO Director

E-mail: bmcbride@longviewtexas.gov

14. LUBBOCK MPO

Address: 916 Main Street, Suite 445,

Lubbock, TX 79401 Phone: (806) 775-1676

Website: http://mpo.ci.lubbock.tx.us/ Urbanized Areas Served: Lubbock, TX Contact: David Jones, Executive Director

E-mail: djones@mylubbock.us

15. PERMIAN BASIN MPO

Address: 9601 Wright Dr., Ste. 1,

Midland, TX 79711

Phone: (432) 617-0129 x1006 E-mail: info@permianbasinmpo.com Website: http://www.permianbasinmpo.com/

Urbanized Areas Served: Midland, TX;

Odessa, TX

Contact: Cameron Walker,

Executive Director

E-mail: cwalker@permianbasinmpo.com

16. RIO GRANDE VALLEY MPO (RGVMPO)

Address: 510 S. Pleasantview Drive,

Weslaco, TX 78596 Phone: (956) 969-5778 E-mail: info@rgvmpo.org

Website: http://www.rgvmpo.org/ Urbanized Areas Served: Brownsville, TX, Harlingen-San-Benito, TX,

and Hidalgo County, TX

Contact: Andrew Canon, Director E-mail: acanon@rgvmpo.org

17. SAN ANGELO MPO (SA-MPO)

Address: 510 N. Chadbourne, San Angelo, TX 76903 Phone: (325) 481-2800

E-mail: info@sanangelompo.org

Website: http://www.sanangelompo.org/ Urbanized Areas Served: San Angelo, TX Contact: Major Hofheins, Director

E-mail: Major.hofheins@sanangelotexas.us

18. SHERMAN-DENISON MPO (SD-MPO) Address: 100 W. Houston, Suite G1, Sherman, TX 75090

Phone: (903) 813-4524

Website: http://www.sdmpo.org/ Urbanized Areas Served: Grayson County;

Sherman, TX; Denison, TX

Contact: Clay Barnett, P.E., Director E-mail: barnettc@co.grayson.tx.us

19. TEXARKANA MPO

Address: 220 Texas Blvd., 1st floor,

Texarkana, TX 75501 Phone: (903) 798-3927 E-mail: Txkmpo@txkusa.org

Website: http://www.texarkanampo.org/ Urbanized Areas Served: Texarkana, TX -

Texarkana, AR

Contact: Rea Donna Jones

E-mail: ReaDonna.Jones@txkusa.org

20. TYLER AREA MPO (TAMPO)

Address: 423 W. Ferguson, Tyler, TX 75702

Phone: (903) 531-1175 E-mail: mpo@tylertexas.com

Website: https://www.tylerareampo.org/

Urbanized Areas Served: Tyler, TX

Contact: Heather Nick, Executive Director

E-mail: hnick@tylertexas.com

21. VICTORIA MPO (VMPO)

Address: 700 Main Center, Suite 129,

Victoria, TX 77901 Phone: (361) 485-3360

Website: https://www.victoriatx.gov/305/ Metropolitan-Planning-Organization

Urbanized Areas Served: Victoria, TX Contact: Stephen Javier Keen, MPO

Coordinator

E-mail: skeen@victoriatx.gov

22. WACO MPO

Address: P.O. Box 2570, Waco, TX 76702

Phone: (254) 750-5650 E-mail: mpo@ci.waco.tx.us

Website: http://www.waco-texas.com/

cms-mpo/

Urbanized Areas Served: Waco, TX Contact: Chelsea Schultz, Interim Director

E-mail: ChelseaS@wacotx.gov

23. WICHITA FALLS MPO (WFMPO)

Address: 2100 Seymour Highway, Wichita Falls, TX 76301 Phone: (940) 761-7450

Website: http://www.wfmpo.com/ Urbanized Areas Served: Wichita Falls, TX Contact: Irvan "Lin" Barnett, Director E-mail: Lin.Barnett@wichitafallstx.gov



No parent should ever receive the kind of devastating news that two Bryan police officers delivered to Pam Todaro one early Saturday morning. At 6:45 a.m. on August 9, 2014 they appeared on her doorstep to tell her that her 25-year-old son had been killed in a drunk driving crash.

Her son Dillon was driving home from a fish fry and died instantly when his truck ran off the road hitting a brick mailbox and concrete pole. His blood alcohol concentration (BAC) was 0.16, twice the legal limit.

Dillon is just one of nearly a thousand people killed every year in drunk driving crashes in Texas. Stories like his are part of TxDOT's "Faces of Drunk Driving" campaign that puts real faces behind the statistics.

Last year there were 963 DUI-alcohol related fatalities. That means on average, a person in Texas dies every nine hours and six minutes as a result of a traffic crash involving alcohol.

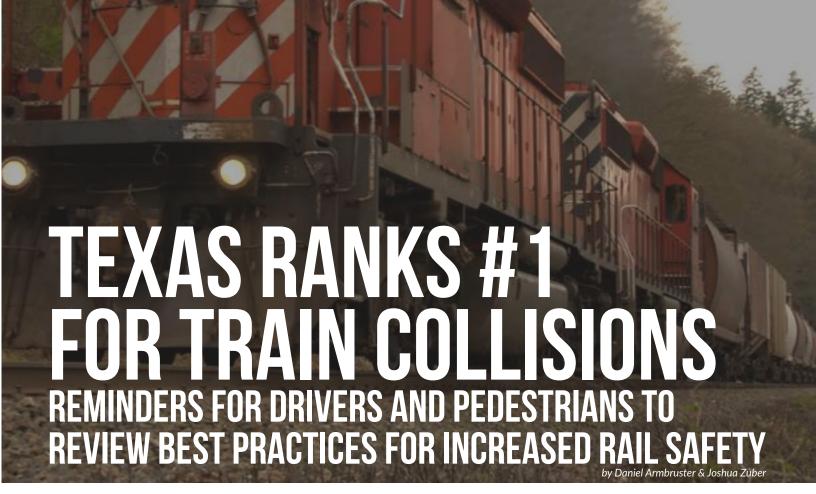
"Drinking and driving can lead to tragic consequences that are 100% preventable," said TxDOT Executive Director Marc Williams. "These consequences involve individuals who made the unfortunate decision to drink and drive along with many innocent victims of those decisions. This is why it is critical to always plan ahead for a sober ride through a designated driver, taxi, ride-share app or simply by staying where you are. Drinking and driving do not mix."

One of the new "faces" of the campaign, 25-year-old Walter Tidwell talks about those regrets. He shares details of the night he decided to hop in his car and drive home alone after a long night of drinking. Fortunately, Tidwell was pulled over after driving the wrong way down a one-way street before he could hurt himself or someone else. He just recently resolved the case after three years of court visits and will undergo alcohol and drug offender courses, community service and probation. Tidwell hopes his story will convince others to drive sober.

TxDOT's new campaign will feature events around the state to share stories of Texans who deal with the consequences of a drunk driving crash every day. Events will include an exhibit of powerful testimonials on video in English and Spanish. Full video stories and other drunk driving facts can be found at www.facesofdrunkdriving.com.

The Faces of Drunk Driving is an important aspect of the Drive Sober. No Regrets. campaign which are key components of #EndTheStreakTX, a broader social media and word-of-mouth effort that encourages drivers to make safer choices while behind the wheel, like wearing a seat belt, driving the speed limit, never texting and driving and never driving under the influence of alcohol or other drugs. November 7, 2000 was the last deathless day on Texas roadways. #EndTheStreakTX asks all Texans to commit to driving safely to help end the streak of daily deaths on Texas roadways.

The information contained in this report represents reportable data collected from the Texas Peace Officer's Crash Report (CR-3). This information was received and processed by the department as of April 26, 2021.



Texas ranks highest for the number of train collisions in the country, according to the latest full-year statistics from the Federal Railroad Administration (FRA). According to the FRA, in 2020, Texas recorded 191 highway-rail incidents. That number decreased from 2019, however, the number had previously been on the rise since 2016, before the pandemic. The FRA counted 11 highway-rail casualties in Texas for 2020, which is fourth highest in the country.

According to the FRA, Harris County had the greatest number of highway-rail incidents totaling 28 in 2020, followed by Tarrant County with 16, Bexar County with eight and Dallas County with seven.

2020 Highway-Rail Incidents State ranking by number of incidents			Texas
Texas	191	11	69
California	150	39	55
Georgia	103	9	33
	aterankingb State Texas California	State Incidents Texas 191 California 150	State Incidents Fatalities Texas 191 11 California 150 39

"Texas continues to rank highest for the total number of train collisions, therefore, it is important to remind drivers and pedestrians to stay safe around train tracks," said AAA Texas spokesperson Joshua Zuber. "When you encounter a train crossing, whether driving or walking, always take extra precautions."

The Texas Department of Transportation (TxDOT) says in a collision with a train, you are 40 times more likely to be killed than in a collision with another car.

STAYING SAFE AROUND TRAIN TRACKS

TXDOT RECOMMENDS DRIVERS:

- Slow down when approaching crossings and look both ways.
- Turn down your stereo and listen for a train.
- If red lights are flashing or if crossing arms have been lowered, stop.
- Never stop on the tracks. A train going 50 miles per hour needs more than a mile to stop.
- Be sure all tracks are clear before crossing there may be more than one set.
- Texas law requires motorists to yield the right of way to trains.
 It is also against the law to cross tracks if a train is visible or to drive around gates that have been lowered at a railroad crossing. If the gates are down and no train is coming, the road is closed.

OPERATION LIFE SAVER RECOMMENDS:

- Only cross at a designated public crossing area.
- Do not cross tracks immediately after a train passes as there may be a second.
- Obey all signs and warning lights/signals at a crossing.
- Trains run at all hours, so always use caution.
- Stay alert by avoiding distractions, such as using cell phones.
- If you stall on the tracks, get everyone out and run far from the tracks. Call law enforcement or locate the Emergency Notification System sign and call the number provided.

Visit Operation Lifesaver Rail Safety Education at <u>oli.org/safety-near-trains</u> for more information about safety near trains.

WHERE HIGHWAYS MEET RAILS: CROSSING SAFETY

TRAINING UPDATES FROM THE NATIONAL HIGHWAY INSTITUTE

by Thomas Elliott and Christine Kemker

More than 200,000 highway-rail grade crossings exist across the United States, more than half of which are under jurisdiction of a public authority. To keep these crossings safe for vehicles, bicycles, and pedestrians, the Federal Highway Administration (FHWA) offers funds through the Railway-Highway Crossings (Section 130) Program to eliminate hazards at public highway-rail grade crossings. In fiscal year 2020, \$245 million was allocated to improve safety at railway-highway crossings.

States interested in using Section 130 funds or other grants to improve their highway-rail crossings should enroll their personnel in NHI's newest course, Where Highways Meet Rails: Crossing Safety. This course will help practitioners who are responsible for planning, engineering, design, construction, or maintenance of highway-rail crossings navigate the planning and funding process and maximize the safety impact of their rail projects.

The training provides information on highway-rail crossings and grade crossing components, including program/ project development and administration. Participants will learn to evaluate highway-rail crossings for safety issues and identify regulations and requirements applicable to the crossings.

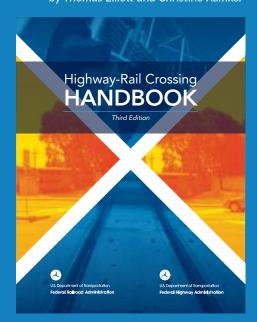
In addition, the course is offered in a unique training format. Inspired by massive open online courses (MOOC), the training combines independent self-paced elements that have interactive learning opportunities

with peers and expert instructors. In an efficient and effective way, this MOOC-like format allows participants to fit the training into their schedules while also benefiting from the experience of other industry professionals. Learners will have opportunities to discover local area examples (rural crossings, metropolitan crossings, or both) by working through focused application assignments. This tailors each participant's experience based on relevant data and involves their local stakeholders.

This innovative, learner-focused format expands the depth of material that participants can study and maintains opportunities for engagement, both with the virtual instructor and with industry peers, while allowing participants to work at their own pace. With this approach, NHI is getting the information into the hands of people who can use it while minimizing disruptions.

Virtual materials include video, text, electronic publications, learner-based research, and the latest edition of the *Highway-Rail Crossing Handbook*. The course simulates the work that highway-rail crossing planners and engineers perform on a regular basis, and participants will have opportunities to apply the material in hands-on activities.

This course is expected to take an average of 16 hours over 12 weeks (1.5–2 hours a week). During this time, participants can work through the course materials and assignments at their own pace. At the end



of the 12-week course, participants who pass the final exam with a 70 percent or more earn 1.6 continuing education credits (CEUs).

Interested practitioners can register for Where Highways Meet Rails: Crossing Safety, along with other safety training courses, at https://www.nhi.fhwa.dot.gov/. For more information, please contact Thomas Elliott at Thomas.elliott@dot.gov.

EVERYBODY GOES HOME

TEXAS TRAFFIC INCIDENT MANAGEMENT PROGRAM RECOGNIZED BY THE FEDERAL HIGHWAY ADMINISTRATION

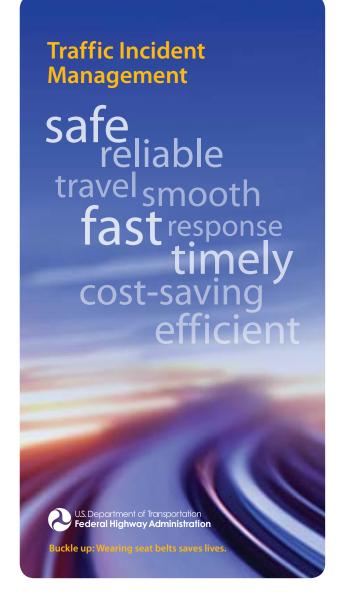
The Texas Traffic Incident Management (TIM) Program was recently recognized by the Federal Highway Administration (FHWA) for their efforts in training new TIM trainers. FHWA TIM program managers Jim Austrich and Paul Jodoin congratulated David McDonald, the Texas Statewide TIM Coordinator and the State TIM Team for using technology to train future TIM instructors on a virtual platform. Regardless of pandemic restrictions, first responders continued to perform their duties on the highways. Training for police and fire cadets continued and TIM training in academies became mandatory for Basic Peace Officer courses. Certified TIM instructors were becoming increasingly difficult to find to teach such a large number of men and women across the state of Texas.

In addition to the Train-the-Trainer recognition, Captain John Stevenson, Special Operations Coordinator for the Grand Prairie Fire Department, was recognized for his presentation on the March 2021 National Talking Tim Webinar, hosted by the FHWA. Captain Stevenson discussed the agency's \$65,000 investment to outfit two retired engines with lights, arrowboards, and traffic management attenuators (TMAs) for safety at traffic crashes. The TMAs are designed to rumple as they absorb impact from motorist collisions saving valuable equipment and lives on traffic incident scenes.



With travel and in-person classes canceled during the pandemic, McDonald developed a Virtual Train-the-Trainer class that spanned two-days and certified 77 new instructors in Texas over the course of three separate classes. This virtual platform allowed the classes to be taught throughout the state without incurring travel and accommodation costs.

The classes consisted of several instructors from various first responder disciplines, police, fire, and EMS. The instructors divided the courses of instruction among themselves in order to teach information best suited to their discipline. The students were able to interact using the chat box in MS Teams that was monitored by one of the instructors at all times.



PILOT **PROGRAMS** IN AUSTIN **TEXAS** LEVERAGING TECHNOLOGY TO MEET VISION ZERO GOALS

by Jason JonMichael, Assistant Director of Smart Mobility for the City of Austin

City of Austin believes data-driven solutions like these pilots can lead to improved safety outcomes

In September 2021, the City of Austin deployed TAPCO technology to test their Connected Vehicle Pedestrian Crosswalk Warning System. This pilot will test the system's ability to improve pedestrian safety by informing drivers when they are approaching pedestrians who are crossing the street. When the crosswalk's push-button is activated, the system will send communications to nearby connected vehicles that pedestrians are present and crossing the street in their intended path. Connected vehicles have the ability to use this wireless technology to communicate with infrastructure and other vehicles, and their features include displaying basic safety messages to drivers. The system also provides warnings to drivers of non-connected vehicles using highly visible, rectangular rapid flashing beacons on both sides of the road.

TAPCO's pilot will evaluate the system's ability to enhance safety on Austin's roadways and mid-block crosswalks. According to the National Highway Traffic Safety Administration in 2019, 6,205 pedestrians died in vehiclerelated crashes. Mid-block crosswalk systems have shown to significantly increase driver yield rates. Because of this, the Vision Zero program has heavily invested in and deployed midblock crosswalks systems across Austin. This pilot will also help the city develop a process for retrofitting older infrastructure with the new connected vehicle technology.

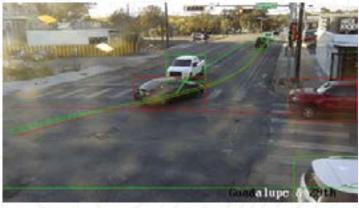
3M and MicroTraffic have developed an artificial intelligence near-miss detection system to assess risks and proactively identify opportunities for intersection safety improvements.



During the first phase of the pilot, 3M and MicroTraffic measured near-miss incidents at selected intersections across Austin to proactively identify opportunities for safety improvements. Near misses included potential incidents between vehicles or involving vulnerable road users like pedestrians, cyclists, and e-scooter riders. Based on the detected risks and data gathered, 3M and MicroTraffic provided recommendations for low-cost safety improvements like high-visibility reflective treatments around traffic signals and on crosswalk markings—for each intersection. After the low-cost safety improvements were implemented, another round of data will be captured to determine how productive these countermeasures were in preventing incidents. Intersection safety analytic pilots like this ensure that the City of Austin remains an early adopter of innovation that can eliminate all serious injuries and fatal crashes on its streets.

Recently, the Smart Mobility Office partnered with Velodyne Lidar to test their lidar-based solution. Velodyne's solution uses Lidar, which stands for Light Detection and Ranging, as a method to detect all road users including vehicles, pedestrians, and cyclists in real time. Velodyne's Intelligent Infrastructure Solution will monitor traffic data at East 7th and Springdale and provide categorized monitoring data on pedestrians, cyclists, cars, and trucks. This intersection has also been identified in the High-Injury Network (HIN), which identifies streets in Austin with a relatively high





A host of pilot programs underway in Austin, Texas, aim to improve roadway safety by leveraging high- and low- technology solutions. They are part of an effort to help Austin reach its goal of zero serious injuries and fatalities on the roadway—an initiative known as Vision Zero.

number of serious injury and fatal crashes. The HIN is used to identify locations where engineering, education, or enforcement interventions should be prioritized to have the most impact in improving safety. Austin Transportation is interested in Lidar-based solutions because of the technology's potential to protect personal identifiable information while still helping the Department collect important traffic data that will help the city achieve its Vision Zero goals.

TAPCO, Velodyne, 3M, and MicroTraffic are all partnering with Austin Transportation's Smart Mobility Office to test their technologies. All three of these pilots will produce information that could help shape policy, educational programs, or changes to the city's infrastructure that will help Austin reach its Vision Zero goals. The city believes data-driven solutions like these pilots can lead to improved safety outcomes.



The Federal Highway Administration (FHWA) and the Roadway Safety Foundation (RSF) recently honored seven projects with National Roadway Safety Awards for 2021. Representing some of the very best highway safety practices, the seven winners were selected from a nationwide field of applicants for the awards, which are sponsored jointly by FHWA and RSF. Begun in 1999, the biennial program honors projects and programs that cost-effectively help the nation achieve progress toward eliminating highway fatalities and serious injuries.

Preliminary data from the National Highway Traffic Safety Administration show that 38,680 people died in motor vehicle traffic crashes in 2020 - a 7.2% increase from 2019. This increase occurred despite a 13.2% decrease in vehicle miles traveled due to the pandemic and is the highest number of fatalities since 2007.

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"Projects like these save lives by significantly discouraging dangerous driving," said Greg Cohen, Executive Director of the Roadway Safety Foundation. "Countless future travelers, whose lives and limbs will be spared by these innovations, will owe

an unknowing debt of gratitude to today's honorees. We urge DOTs across the nation to look at Bellevue and other awardees' innovations and replicate them wherever possible"

Applicants were encouraged to nominate projects and programs that are innovative, effective and cost efficient. The awards covered two categories: A) Infrastructure and Operational Improvements, and B) Program Planning, Development and Evaluation.

From dozens of entries, a highly credentialed, expert panel of judges selected the seven winners and three honorable mentions. They winners are:

• FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) for its use of smart Work Zone Safety Technologies for Arterial Roads, which are burdened with higher fatality rates than interstates. FDOT studied the use of Active Work Zone Awareness Devices (AWADs), which employ radar in combination with LED signs to warn drivers of upcoming work zones, displays their travel speed and delivers safety messaging. FDOT went a step further by linking the AWADs to drivers using the Waze navigation app. The initiative's impressive results include vehicle speeds entering arterial work zones dropping by 10.6 percent, safe driving behavior increasing by 39 percent, and risky driving declining by 34 percent.

- NORTH CAROLINA DEPARTMENT OF TRANSPORTATION (NCDOT) for its Long-Life Pavement Markings Safety Initiative to reduce lane departure crashes, a major safety challenge in a state where 14,000 fatal and serious-injury lane departure crashes occurred between 2015 and 2019. Designed to help drivers better see markings when driving on curvy roads, in inclement weather or at night, NCDOT tested the long-life markings on more than 400 miles of roadway, recording an overall 13 percent reduction in lane departure crashes. The long-life markings also are designed to provide at least five to seven years of adequate retro-reflectivity and pavement delineation, as compared with approximately two years from standard markings, thereby being more cost efficient in the long term.
- VILLAGE OF WHITEFISH BAY, WI for its Community-Wide Safety Improvements. Confronting a decade-long increase in crashes involving the most vulnerable road users, the Milwaukee suburb deployed a series of low-cost solutions to reduce risks to pedestrians and cyclists. These included dynamic speed feedback signs, "yield to pedestrian" signage, design changes such as high-visibility crosswalks, installation of median in the center of highways, lengthier pedestrian intervals at signals and better street lighting. A simple but noteworthy improvement is the installation of "Danish Offsets." Widely deployed in Denmark, crosswalk paths are oriented to provide more direct sight lines for pedestrians to observe oncoming vehicles. Since 2015, community-wide crashes are down 39 percent and signs point to a continued downward trend.
- CITY OF BELLEVUE, WA for its application of a Video Analytics Program that is helping achieve tangible progress toward the city's Vision Zero commitment. Prevailing practice in highway safety management typically relies on backward-looking crash data, an inherently reactive process. By contrast, Bellevue is utilizing cutting-edge video analytics to identify safety challenges in near-real-time, enabling the city to proactively address those challenges. The smart technologies convert raw video from existing traffic cams into flow, speed and conflict event data. In addition to identifying hot spots, Bellevue's video analytics program also provides rapid insight on how countermeasures perform. As just one example, Bellevue made traffic signal operations changes at 124th Avenue Northeast and Northeast Eighth Street and observed a 60 percent reduction in critical conflicts at the intersection.
- BROWARD METROPOLITAN PLANNING ORGANIZATION for its innovative Complete Streets Master Plan, which is measurably improving safety on Wilton Drive in the Fort Lauderdale area and promises similar benefits on other local roadways. With the single highest number of pedestrian fatalities in the entire nation (1,675 between 2010 and 2019), Broward worked with localities and other stakeholders to redesign the bustling Wilton Drive, eliminating a vehicular travel lane in each direction in order to

install buffered bike lanes, mid-block crossing medians, wider sidewalks, better lighting and other improvements. Witnessing a 66 percent decrease in bicycle and pedestrian crashes and a 75 percent reduction in severe-injury and fatal crashes - alongside a 50 percent improvement in corridor travel times - Broward is moving forward with similar improvements for 20 other projects.

• CALIFORNIA DEPARTMENT OF TRANSPORTATION

(CALTRANS) for its transformative 2020-2024 Strategic Highway Safety Plan (SHSP) to reverse a trend of rising fatalities and injuries on state roads. With an average of 10 people dying every day on California roads, Caltrans created a highly targeted approach to safety with its SHSP update. It designates highpriority challenge areas, expands and diversifies membership of the SHSP committee, implements the program with innovative tools, and evaluates progress on a continual basis. Four newly adopted guiding principles undergird the SHSP: Integrate equity, implement a safe system approach, double down on what works, and accelerate advanced technology. The plan is instrumental to the state achieve no traffic fatalities and serious injuries by 2050.

• TEXAS DEPARTMENT OF TRANSPORTATION (TXDOT) and Texas A&M Transportation Institute (TTI) for its all-new Safety Scoring Tool. With fatalities on Texas rural non-interstate roads occurring at twice the rate of other Texas roads, TxDOT partnered with the Texas A&M Transportation Institute to develop a userfriendly means of evaluating the safety performance of rural highway design elements. The scoring tool assesses the total effects of changes in lane and shoulder width, horizontal and vertical curve geometry, clearances to objects, and other factors. The tool is now required for all rural two and multi-lane nonaccess controlled projects, ranging from routine maintenance to complete reconstructions, fostering a proactive, rather than passive or reactive, approach to safety.

The honorable mentions are: The Florida Department of Transportation for its Local Technical Assistance Program to improve the skills and increase the knowledge of the transportation workforce on roadway safety via virtual training and technical assistance; the Montana Department of Transportation for its reconstruction of an antiquated segment of U.S. Highway 89 that provides a key entrance to Glacier National Park; and the Town of Portland, Ct. for its formation of a grassroots Complete Streets Group to coordinate with local officials in writing, adopting, and implementing a Complete Streets Policy.

Winners were selected by an expert panel of judges from a variety of disciplines. For complete details on each of the winners, and for more information on the national awards program, visit roadwaysafety.org/awards.



The 2021 Texas Department of Transportation (TxDOT) Highway Safety Improvement Program (HSIP) Call for projects opened in September 2021. The TxDOT HSIP is designed for highway safety projects that eliminate or reduce the number and severity of traffic crashes. It is limited to improvements that address the crash types identified in the Texas Strategic Highway Safety Plan (SHSP). Funds are provided for construction and operational improvements both on and off the state highway system. Funding is available statewide for this program and focuses primarily on improving safety and reducing severe crashes. Local governments are encouraged to work closely with TxDOT Area Offices and local authorities in identifying locations with the highest need for safety improvements. The Call for Projects closes December 17, 2021.

More information on the 2021 TxDOT HSIP Call, along with the TxDOT HSIP Manual can be found here https://www.txdot.gov/insidetxdot/forms-publications/publications/highway-safety.html.



For more information, visit txltap.org

Call 817-272-9678 or email 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.

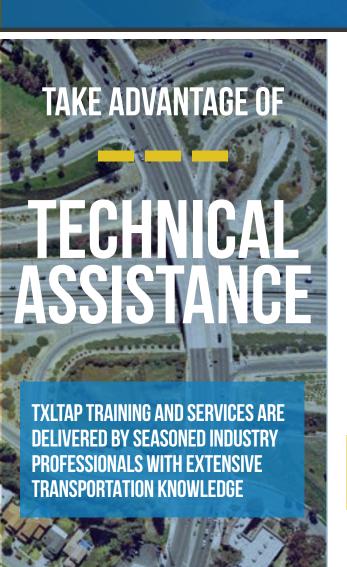
EQUIPMENT LENDING LIBRARY

Equipment, such as traffic counters, a portable radar speed sign, handheld retrorefelctometer, digital ball bank indicator, fall protection gear, dynamic cone penetrometer and more, is available for loan at nocost to local government agencies throughout Texas.

HEAVY EQUIPMENT

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 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?

Call 817-272-9678 or email txltap@uta.edu to request assistance.





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Learn more at TxLTAP.org

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