

# BETTER ROADS SAFER ROADS

## HOW TO EFFECTIVELY HANDLE COMPLAINTS

HOW TO MAKE BETTER DECISIONS  
ON ADDRESSING PAVEMENT NEEDS

APPLYING THE SYSTEMIC SAFETY  
APPROACH TO LOCAL ROADS

INCIDENT INVESTIGATIONS:  
HELP PREVENT HISTORY FROM  
REPEATING ITSELF

# BETTER ROADS SAFER ROADS

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- TxLTAP -

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The FEMA-4272-DR declaration made the Hazard Mitigation Grant Program (HMGP) available statewide.



The Local Technical Assistance Program (LTAP) is a nationwide effort financed by the Federal Highway Administration and individual state departments of transportation. Its purpose is to translate into understandable terms the best available technology for roadways, bridges, bicycle and pedestrian facilities, and public transportation for city and county roadway and transportation personnel. The TxLTAP, operated by the University of Texas at Arlington, is sponsored by the Texas Department of Transportation (TxDOT) and the Federal Highway Administration. This newsletter is designed to keep you informed about new publications, techniques, and training

## LETTER FROM TxLTAP ADMINISTRATION

### Back to the Basics: Gravel Roads

In early October, TxLTAP hosted Texas' first Gravel Roads Academy workshop in Hill County. This was our first "special event", and we were thrilled with the turnout. From evaluation feedback and all the friendly goodbyes we received, it seems our participants were pleased too. The event included 40 folks from 5 different counties and the audience was a mixture of county commissioners, road crew supervisors, heavy equipment operators and truck drivers.

During the day-long workshop, Ken Skorseth, America's gravel road expert, reviewed the basics of gravel road construction and maintenance while also discussing what constitutes "good gravel", new equipment options and how to properly prep roads for dust control and stabilization options.

The day's highlight was an opportunity to see best practices at work. As our workshop host county, Hill County provided a stretch of road and use of its heavy equipment to demonstrate how to properly prep a gravel surface for stabilization. Not only did the audience get an opportunity to see the motor grader and water truck do their jobs, it also watched as magnesium chloride was applied to stabilize the gravel material and provide dust control.

Watch our newsletter and website for announcements on future Gravel Road Academies!

*Work smart and safe,*

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# REQUEST FOR PROPOSALS FOR TXDOT TRAFFIC SAFETY FY 2018 FUNDING IS OPEN

The Texas Department of Transportation's (TxDOT) Request for Proposals (RFP) for FY 2018 General Traffic Safety Grants was published in the Texas Register on November 4, 2016 and is now open. Proposals are due on January 9, 2017 at 5:00 p.m. CST.

This RFP is for general traffic safety grants only and does not include solicitations for Selective Traffic Enforcement Program (STEP) proposals as in previous years. STEP proposals will be submitted under a separate process for FY 2018.

For additional information on the FY 2018 Traffic Safety RFP, please visit [www.txdot.gov/apps/eGrants/eGrantsHelp/rfp.html](http://www.txdot.gov/apps/eGrants/eGrantsHelp/rfp.html)

# ROAD RAGE:



## HOW TO EFFECTIVELY HANDLE COMPLAINTS

*by Marc Shepherd, UTA Instructor*

**T**here are few things in this world that impact our lives more than transportation. Everyone depends on a good road. Asphalt, concrete, and steel are the ingredients of economic success. While keeping roads and highways in top shape is important, knowing how to handle public complaints and concerns about your maintenance or construction project is just as critical. Cones, lane closures, and detours can churn up aggravation from even the most patient motorist.

On any given day in Texas, there are hundreds to thousands of road projects ranging from major reconstruction projects to relatively simple road surfacing jobs. No matter the size of your project, knowing how to effectively respond to complaints can make your project run smoother and perhaps save you some unnecessary grief.

Here are a few tips that can help you handle some of the toughest critics, and perhaps even turn them into your strongest ally.

## RESPOND QUICKLY.

We live in the electronic age. People want information and they expect a quick response. Social media can take a simple problem and spread it around cyberspace before you know there is even an issue. Act fast. If you receive a complaint, contact the person as soon as possible to find out their concerns. The same goes with emails. Don't wait days before responding to emails. Send an acknowledgment thanking them for their concerns and a commitment to solving the problem immediately. Once you have looked at the issue, make sure to follow up with the person. Provide a time-frame as to when you hope to have an answer and stick to it.

## KEEP COOL.

Managing your emotions is one of the marks of a true professional. However, it is not easy to keep calm in a heated situation. A level head and calm temper can take a hot situation from boiling point to room temperature. Raising your voice and

trading verbal jabs will not win you points. It will only make the problem worse. Keeping your composure is a sure way to help an upset person calm down. It also allows you to get a better understanding of their concerns.

## LISTEN AND EMPATHIZE.

Put yourself in the driver's seat. Try to see it from their point of view sitting behind the wheel. Sincerely listen to their concerns with an open ear and open mind. Write down the issue and repeat it back to the person. Make sure to thank them for bringing it to your attention. It shows you are interested in resolving the issue and understand their concern. More importantly, they may have a legitimate concern. Many potentially dangerous problems have been averted simply because a motorist complained about a confusing traffic control setup or a missing sign.

## INVOLVE THEM IN THE PROCESS.

As a transportation professional you are the expert in your field. However, the average motorist does not know the difference between Porous Friction Course and seal coat. Most complaints usually stem from two areas; people do not understand the reason for the project, or they are frustrated because they are not properly informed. Sometimes both. Explain why the work is necessary. Describing why you are breaking up what may seem to them to be a "perfectly good road" to make base repairs can clear up quite a bit of confusion. Keep it simple, yet

informative. Avoid long technical terms. Instead, put it in terms most people would understand. For instance, comparing a road base repair project to repairing a home's foundation makes for an easy explanation.

## SHOW THE GREATER VISION.

People like leaders with a vision and are more likely to accept your explanation if you show them how that vision impacts their lives. Showing how the project is part of a long range transportation strategy shows you to be forward-thinking and looking out for their well-being. Explain how your project will make their road safer for them and their children.

## BE HONEST. NEVER LIE. KEEP YOUR WORD.

If you say you will look at a problem, make sure to do it. People can sense when they are being deceived. If you make a mistake, admit it. Few things will defuse a situation than admitting when you are wrong, and nothing will destroy your credibility more than being dishonest.

You will not solve every concern or problem. But simply listening and showing a genuine care for people goes a long way in making your project successful and building your credibility with your public.



# CORRECTIVE BEHAVIORS AND REMINDERS: HOW TO APPROACH PEOPLE

By Richard Hawk

Pointing out another person's mistakes or unsafe behavior can be the toughest part of a safety professionals' job. That's because nobody enjoys being told they're doing something wrong.

I struggled with this when I first became a full-time safety supervisor. Whenever I left my office to begin an inspection, the first workers to see me would call out "Haaaw-wwk!" This was a warning to let everybody know I was "on the move." And when I came upon a work crew, the first thing they would do when they saw me was check to make sure they were wearing their personal protective equipment. Sound familiar?

Eventually, I learned how to deal with this reaction. But more important, I worked on my disciplining skills so that when I had to point out a problem, it was accepted more easily.

I had a few mentors who helped me get better at this unpleasant task. One of them, an experienced safety manager, gave me this piece of advice: "Make it into a 'sandwich.' Tell them something positive – that's the first slice of bread. Then mention the 'problem' – that's the stuff in the middle. Then cover it with another enjoyable slice of bread." I've used his advice many times – and it works!

Here are a few other ways to make speaking with employees about their behavior and worksite more palatable:

## Approach people with a positive demeanor.

If you come across someone with a scowl on your face or a look of consternation, the person will get defensive before you say a word. You don't have to be jolly, but at least be pleasant. If it's not a serious infraction and the person is not a repeat offender, then why not even joke around a bit? I used to tell short jokes or have a funny saying I'd tell employees after we said hello. Certainly anything that involves a person's safety is a serious matter, but remember that your goal is to change a behavior, not dish out punishment. If the people you speak with enjoy your visit – or at least don't mind it – you're more likely to accomplish that goal.

## Don't raise your voice.

When you yell at someone, they'll pay more attention to your volume than what you're saying. Even if a serious infraction is involved, stay calm and keep your voice at a normal level. That way, what you say and the instructions you give are more likely to sink in. I've conducted many incident investigations involving serious violations,

and I learned that I could get much more information during an interview if I spoke to a person kindly.

## Let them tell their story first.

Even if the person is dead wrong, if you let them explain why they are violating a safety rule before you tell them to stop it, you can use what they said to frame your response. I've heard a long list of lame excuses in my career, and you probably have too. Still, I know that if I let the person explain their position, they are more likely to listen to me because I listened to them.

You also can ask them if you can do anything that will help them work safer next time. For something like not using the correct type of ladder, it may be that enough ladders aren't available or that they're stored in a remote location. That's a situation you may be able to change.

## Give plenty of praise.

Most times when you come upon a worksite, you'll find that more positive things than problems are going on. If you notice the positive behaviors and praise people about them often, then when you do have to dish out discipline, it won't taste as bad. In fact, if you do it right, it may turn out as enjoyable as a tasty sandwich!



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# HOW TO MAKE BETTER DECISIONS ON ADDRESSING PAVEMENT NEEDS

*Beth Visintine, Gonzalo R. Rada, James M. Bryce, Senthil Thyagarajan, and Nadarajah Sivaneswaran*

***The public has high expectations of transportation infrastructure. Namely, pavements and bridges should be in good repair and provide consistent, high-quality service.***

To meet these goals, the State and local departments of transportation charged with managing these assets work to achieve and sustain a desired state of good repair over the life cycle of the assets at minimum practicable cost.

Through pavement management systems, TxDOT and other DOTs employ a strategic and systematic process that focuses on managing each asset over its life cycle. That process typically involves a structured sequence of maintenance, preservation, rehabilitation, and reconstruction actions.

The challenge is making the best use of limited agency resources, while providing an optimum level of service to road users. Accomplishing that goal requires monitoring the condition of the pavement network and forecasting its performance in order to plan effectively for future construction actions. Predicting when to apply treatments to achieve and sustain a desired level of service at the minimum practicable life-cycle cost is critical to managing pavements. In essence, knowing--or being able to estimate--the future condition of pavement sections is the rational basis for making informed decisions regarding pavement infrastructure.

However, multiple ambiguities are

associated with the commonly used terminology--"remaining service life"--from how to define it to how different agencies interpret, apply, and exchange data on pavement conditions. For example, does the phrase refer to the time from the present to when the pavement is expected to fail--meaning it needs major, costly work--or from the present to when it reaches an unacceptable level of service requiring some intervention, which could be less extensive and less costly? As a result, agencies have tended to focus on dealing with the worst, more costly problems first, rather than using an approach based on the lowest life-cycle cost for managing their assets.

Seeking to eliminate the ambiguities inherent in the existing terminology, and ultimately reduce the costs of maintaining the Nation's transportation assets, researchers working with the Federal Highway Administration are exploring an alternative terminology based on the concept of remaining service interval. The key difference between the two concepts is that while remaining service life computes the time until a pavement reaches a predefined terminal condition, remaining service interval computes the time until any treatment is applied to achieve and sustain a desired level of service over the life cycle of the assets at

the minimum practicable cost.

Here's what you need to know about the remaining service interval concept and how it can improve the practice of managing pavements.

## **What's Wrong with Remaining Service Life?**

Engineers typically define the term "remaining service" as the period over which a pavement section adequately performs its desired function or performs to a desired level of service. The phrase "remaining service life" often refers to the time from the present to when a pavement reaches an unacceptable condition, requiring a construction intervention. Although predicting the time until a treatment should be applied is a critical component at all levels of decision making, the current terminology poses a number of challenges with regard to interpreting and using relevant data properly, as well as exchanging information among agencies on pavement condition and performance.

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# “BECAUSE PAVEMENTS ARE REPAIRABLE SYSTEMS, USE OF THE WORD ‘LIFE’ IS AN IMPROPER CONCEPT, GIVEN THAT PAVEMENTS DO NOT ‘DIE’. CORRECTABLE COMPONENT FAILURES DO NOT DEFINE THE SYSTEM LIFE.”

*Gary Elkins, Senior Associate Engineer with Amec Foster Wheeler*

Another common definition of remaining service life is the time until the next rehabilitation or reconstruction action. But rehabilitation and reconstruction are two different actions in terms of the condition of the pavement at the time of construction, and their associated costs vary dramatically. Attempting to interpret estimates of remaining service life from mixed rehabilitation and reconstruction segments provides little information to decision makers. Also, the timing of future rehabilitation or reconstruction will depend on what lower level treatments are applied during the rehabilitation period.

An unintended consequence of using current remaining service life terminology is that it may promote the more costly “worst-first” approaches to correcting pavement deficiencies, where the pavement is allowed to deteriorate to poor condition or its “threshold limit” before taking steps to preserve or rehabilitate it. By expressing pavement condition in terms of remaining service life, decision makers and laymen alike expect pavements in the worst condition to be treated first. This is not ideal for managing pavements, as it tends to cost the most and results in an overall pavement condition that is inferior to that achievable through other approaches.



## DEFINING REMAINING SERVICE INTERVAL

Beginning in 2008, FHWA spearheaded research to develop the concept of remaining service interval under contract DTFH61-08-D-00033-T-09001, “Definition and Determination of Remaining Service and Structural Life.” The results of that research are reported in Reformulated Pavement Remaining Service Life Framework (FHWA-HRT-13-038) and Pavement Remaining Service Interval Implementation Guidelines (FHWA-HRT-13-050).

Remaining service interval does not simply consider the end of life as promulgated by the remaining service life philosophy, but instead takes into account the complete spectrum of maintenance and rehabilitation activity applied to the pavement system.

The concept of remaining service interval is based on the idea that a pavement’s maintenance and rehabilitation requirements cannot be defined by a single value representing the end of its life. Instead, pavements should be described based on intervals used to communicate the amount of time before a treatment is required to provide an acceptable or above-acceptable level of service at the lowest practicable life-cycle cost. Implicit in this change in terminology is the idea that describing a pavement using service intervals more closely reflects how pavements are maintained. That is, not all pavements are allowed to reach terminal serviceability. Also implicit in this change in the terminology is that a given pavement can be described using a string of numbers that represents an optimal treatment sequence and timing.

The remaining service interval considers life-cycle costs in proposing a structured

sequence of actions to maintain, preserve, repair, rehabilitate, and replace pavements to provide needed functions safely and reliably over the life cycle of the asset at minimum practicable cost. Further, remaining service interval has the ability to unify the outcome of different management approaches for determining needs by focusing on when and what treatments are needed, as well as the service interruption created. This approach to managing pavements also can enhance communication, because the remaining service interval provides details of the sequenced actions needed to manage the assets, as opposed to assigning a single ambiguous term to the pavements.



## TAKEAWAYS FROM THE STUDY

As affirmed through this research, the concept of remaining service interval can enhance the decision-making process, as well as improve how maintenance and rehabilitation needs related to pavements are communicated to stakeholders at all levels. In addition, remaining service interval is directly in line with MAP-21 and the FAST Act and can help DOTs as they move away from fixing the worst pavements first to an approach based on the lowest life-cycle cost. By implementing this concept, DOTs can optimize the timing of treatments, ultimately leading to lower costs and comparable conditions for road users from year to year.

The key takeaway from the study is this: Optimal decisions about pavement management should not be predicated on condition-based threshold values for treatments. Instead, to minimize the life-cycle costs, DOTs should consider applying treatments well before pavements reach threshold conditions of deterioration. Therefore, an important step toward implementing the remaining service interval concept is the development of a procedure to determine optimal strategies for scheduling pavement maintenance and rehabilitation.

As part of implementing the remaining service interval at the agency level, the researchers recommend that DOTs reevaluate their approach to treatment

selection and strategy optimization to ensure that the objective function used in the analysis adequately captures agency goals. To help DOTs move away from threshold-driven decision-making, future research could focus on techniques for optimization at the network level. The continuous growth in computational resources has brought optimization techniques that used to be too computationally intensive into the realm of possibility.

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Visit the TxLTAP Library for a copy of the *Pavement Remaining Service Interval (FHWA-HRT-13-039)* and *Application and Validation of Remaining Service Interval Framework for Pavements (FHWA-HRT-16-053)* publications or contact Nadarajah Sivaneswaran at 202-493-3147 or [nadarajah.sivaneswaran@dot.gov](mailto:nadarajah.sivaneswaran@dot.gov) for more information.

Article excerpts reprinted from the Federal Highway Administration's September/October 2016 issue of *Public Roads*.

# APPLYING THE SYSTEMIC SAFETY APPROACH TO LOCAL ROADS

In 2015, fatalities in traffic crashes in rural areas of Texas accounted for 54.52% of our state's traffic fatalities. There were 1,925 deaths in rural traffic crashes. Crashes on rural and local roads are typically spread over hundreds or thousands of miles and are not as densely clustered as crashes in urban areas. Systemic improvements can address these rural crashes because they focus on high-risk roadway features not specific locations. The systemic approach to safety involves improvements that are widely implemented based on high-risk roadway features correlated with particular severe crash types. While it is not possible to predict where fatal crashes will occur, it is possible to use the roadway characteristics associated with particular severe crash types to predict the locations that are most likely to experience a fatal crash in the future using the systemic approach to safety. The approach is also beneficial for urban areas particularly in

addressing crashes involving pedestrians, bicyclists, and motorcyclists.

Local and rural road owners rely upon crash data to identify and treat safety problems. The traditional "spot location" approach is focused on treating a specific location based on crash history. The "systemic approach" acknowledges that crash frequency or rates at specific locations alone are not always sufficient to determine which countermeasures to implement and where to implement them. This is often true on low-volume local and rural roadways where crash frequencies are lower and crash data are sometimes sparse or incomplete. Systemic implementation of safety countermeasures helps to address the most serious crash types on the entire road system, not just at specific high-crash spot locations.



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The systemic safety approach is a two-pronged effort to reduce crashes and serious injuries on the roadways. This approach offers a means to: (1) identify crash types (e.g. intersection, roadway departure, pedestrians) and the location-related factors that contribute to the highest number of fatal and serious injury crashes of each type, and (2) widely implement low-cost countermeasures over several locations with similar crash characteristics and/or similar roadway features. Typically, systemic safety improvements are low-cost, require little maintenance, have documented crash reductions, and address specific crash types or crash risk factors (e.g., narrow shoulders).

### Benefits of Systemic Safety Approach

The application of the systemic safety approach offers the following benefits:

- Systemic safety improvements can reduce overall fatal and severe crashes of certain types within a jurisdiction more effectively than applying safety improvements at a small number of spot locations.
- The approach allows an agency to adapt for all levels of data availability and can help prioritize data collection needs.
- Countermeasures implemented systemically are typically low-cost improvements.
- Systemic safety improvements help agencies broaden their safety efforts and consider other risk factors in addition to crash history when identifying locations for potential safety improvement.

- Systemic safety improvements can be incorporated into planning, design, and maintenance policies, defended in tort liability cases, and used to develop a multi-year program of projects.
- The approach can bolster public confidence because it allows the agency to implement a proactive safety program.

Systemic safety improvements can be promoted for future use in written policy, implemented through explicit roadway safety improvement projects, and included in capital projects and ongoing maintenance activities.

### Resources

The Systemic Approach to Safety website (<http://safety.fhwa.dot.gov/systemic/>) provides a variety of resources to support implementation of the systemic approach to safety such as case studies; fact sheets; narrated presentations; and the Systemic Safety Project Selection Tool which presents a step-by-step process to conduct systemic safety analysis, considerations for balancing safety investments between spot and systemic safety improvements, and techniques for evaluating the success of systemic safety projects and programs.

Just as specific processes for conducting site analysis vary widely, the systemic approach used by individual agencies will vary. Some of the challenges include the following:

- Data availability dictates the level of detail in the analysis. While a systemic analysis can be completed with nearly any amount of data, using more data will allow for more refinement of potential risk factors.
- Resource availability determines the extent of improvements that can be made. Resources may also impact the level of analysis that can be completed.
- An agency's established priorities may define the direction of the analysis.
- The relationship between the State and local agencies may impact the funding available for systemic improvements on non-state routes as well as the extent systemic improvements are applied to non-state routes.

For systemic training and technical assistance, submit a request through the safety peer-to-peer program at [http://rspcb.safety.fhwa.dot.gov/p2p/p2p\\_app.aspx](http://rspcb.safety.fhwa.dot.gov/p2p/p2p_app.aspx).

Article excerpts reprinted from the Federal Highway Administration's *Safe Roads for a Safer Future*.

# INCIDENT INVESTIGATIONS: THOROUGH FOLLOW-UP CAN HELP PREVENT HISTORY FROM REPEATING ITSELF

by Tom Musick

Preventing workplace fatalities and injuries is every safety professional's goal. However, when incidents occur, an investigation must take place. That means securing the site, gathering evidence, speaking with witnesses and filing detailed reports that identify the root causes of the incident. No second can be wasted, especially in the early stages of the investigation, when memories are fresh and the scene has not been touched. In other words, an incident investigator's role is far greater than simply filling out forms.

"First off, you want to figure out what happened, how it happened and why it happened so you can try to prevent it from happening again," said Steve Bump, a corporate industrial hygienist at Richland, WA-based safety services provider Dade Moeller. "Second, you have to document the scene because there are going to be injury claims. There are almost always going to end up being some type of legal ramifications, so there is a lot of documentation involved."

## Calm under fire

Incident investigators usually need a number of tools to handle all of the technical aspects of their job. For instance, they need a camera, a voice recorder, measuring devices, a flashlight, sample containers, padlocks, barricade tape and investigation forms. But another crucial element for an incident investigator is much more difficult to quantify. He or she must have an even-tempered personality and not be rattled by highly stressful situations.

University of Cincinnati Professor James T. O'Reilly served as a crisis manager at Procter & Gamble for 24 years. O'Reilly, who has authored 50 textbooks – many of which deal in part with incident investigations – said the right attitude is necessary for conducting a fair, thorough investigation. "Being calm when everyone else around you is going crazy is an essential attribute of the job," he said. "The fact that things have suddenly gone wrong and a fire or explosion or something like that occurred is quite unfortunate, of course, but it is important that you remain calm as the person who is going to interact with injured people and first responders."

Bump agreed that an even-keeled approach is needed to achieve the best results. "Keep the emotions out," Bump said. "When you are at the accident scene, sometimes it may come off as a little cold, but you almost have to be like [Joe] Friday: 'Just the facts.'"

## How does one achieve calmness?

As with everything, experience helps. People with little or no experience might benefit from seeking out veteran incident investigators for advice about what to expect. Preparation is important. O'Reilly recommends "tabletop" exercises in which several

people – including a safety manager, site manager, fire chief and other emergency responders – join together for a model exercise focusing on how to respond if an incident takes place. "Tabletop exercises are better than paper exercises," O'Reilly said. "You say, 'What happens if this occurs? What door, what gate are we going to use for the rescue equipment?' 'You might answer, 'If we have a crisis here, we'd evacuate people through this gate, fire trucks are going to come this way, EMS is going to come this way.' Tabletops make it more realistic."

## Look and listen

When an incident occurs, investigators need to act fast. Once the scene is safe, it's important to collect as much evidence as possible, as quickly as possible. Snapping photographs can help piece together evidence during later stages. "More photographic intelligence makes it better to reconstruct a scene," O'Reilly said. "It's more likely than not that in the week or the two weeks afterwards, something is going to be moved, something else is going to be in a different position. ... If you've got a photo, you'll have some basis to say, 'OK, this is where the machine was at the time.'"

A calm demeanor also helps when interviewing witnesses, which is an essential part of an investigation. The 14th edition of Administration & Programs, a textbook published by the National Safety Council, offers a five-step method for incident investigators to use when conducting witness interviews:

- Describe the purpose of the interview as a fact-finding mission, not a fault-finding mission.
- Invite the person to recount his or her version of the incident. Keep interruptions to a minimum.
- Ask questions about any items that require clarification.
- Repeat the facts back to the person to ensure you understand the sequence of events as described to you. This step helps prevent miscommunication at a later time.
- Discuss ways to prevent the incident from reoccurring. Ask the person for ideas that could help eliminate or reduce the hazards involved in the incident. By asking for suggestions, you show sincerity and reinforce the notion of simply looking for facts, as opposed to assigning blame.

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Bump said quickly preserving evidence and speaking with witnesses go hand in hand. "You have to gather everything you can as quickly as possible before it gets messed up," he said. "Because once you've lost control of the scene and lost the evidence, then you're flying blind. And then people start talking and they start comparing notes, and stories start changing. 'Well, maybe I didn't see what I thought I saw.' Stories start to converge, and maybe you start losing memories."

### Hold to principles

Incident investigators might be placed into difficult situations regarding personnel. Be ready for those moments, O'Reilly said. Be prepared to stand your ground and do what is right. "There will be incidents when you have to maintain your professionalism as an incident investigator," he said. "The factory manager might say to the incident investigator, 'Look, that's a really valuable employee. I don't want anybody to think that we're blaming it on Joe. If you

come to the conclusion that Joe did it, don't put that in your report.'"

Yet facts are facts. Incident investigators must remain objective and refuse to jump to conclusions. They must refuse to become caught up in workplace politics or worry about how they are going to protect the company and keep the incident from looking bad. "If your professional conclusion is yes, a human error occurred, and yes, the human error occurred while this person was in charge of the machine, don't accept the direction to bury that fault or to blame it on somebody else," O'Reilly said.

The end result is a safer workplace. "Obviously, something in the process happened where something went sideways," Bump said. "So, what was it? Let's figure that out. Let's do a thorough root-cause and fix this process."

## KEY POINTS

- An incident investigator should act quickly once the scene is secure to gather as much evidence and information as possible.
- A calm demeanor and clear communication style is most effective when conducting interviews with workers during an incident investigation, one expert says.
- Incident investigators cannot be concerned with workplace politics or worry about protecting the organization rather than finding the truth.

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# OSHA FACT SHEET FOCUSES ON ROOT CAUSE ANALYSIS AS PART OF INCIDENT INVESTIGATION

Washington – OSHA and the Environmental Protection Agency are urging employers to perform a root cause analysis after an incident or near miss occurs at a facility, in a recently released fact sheet.

The fact sheet defines a root cause analysis as a "fundamental, underlying, system-related reason why an incident occurred that identifies one or more correctable system failures." Root cause analysis is important for any incident related to OSHA's Process Safety Management Standard and EPA's Risk Management Plan rule, the fact sheet states.

Fixing only an immediate cause of an incident or near miss may not correct the entire problem, the agencies caution. Brainstorming, checklists, logic/event trees, timelines, sequence diagrams and causal factor determination should be used in combination while conducting a root cause analysis to pinpoint what happened, how and why the incident or near miss occurred, and what needs to be fixed to ensure it does not happen again.

The Root Cause Analysis Fact Sheet can be found in the TxLTAP Library.

*"Interviews and review of documents, such as maintenance logs, can be used to help answer these questions," the resource states. "Involving employees in the root cause investigative process, and sharing the results of those investigations, will also go a long way toward preventing future similar incidents."*

# FHWA RELEASES NEW DATA SHOWING NEARLY 20 PERCENT OF U.S. DRIVERS ARE OVER 65

WASHINGTON – The U.S. Department of Transportation's Federal Highway Administration (FHWA) published preliminary data showing that there are more drivers than ever before – an estimated 217.9 million – and that 42.8 million, or nearly one in five, are over 65 years old. The final data are expected to be published later this year.

Drivers over 65 remain one of the fastest growing demographic groups among U.S. drivers. With a 2 percent increase, representing 4.4 million more drivers over 65 than in the previous year, it is the biggest single-year percent increase on record for that population.

These new figures support U.S. Transportation Secretary Anthony Foxx's "Beyond Traffic," a 30-year vision for future transportation, which predicts a 77 percent increase among drivers over age 65 by 2045.

The data collected from all 50 states and Washington, D.C., show there were 217.9 million licensed drivers in 2015. Drivers who are 80 or older increased by 1.1 percent since 2014. At 110.4 million, women drivers outnumbered the 107.6 million men drivers last year, continuing a trend that began in 2005.

FHWA researchers continue to develop and improve safety enhancements for America's roads to address the challenges facing older drivers, ranging from declining vision to decreased flexibility and psychomotor performance, and changes in perceptual and cognitive performance. Some innovations include longer merge lanes, roundabouts, better lighting, more visible signage and other intersection improvements.

The number of teen drivers increased slightly for the first time in two years, rising to 8.73 million from 8.5 million in

2014, but continuing to remain at a near-record low. By comparison, there were nearly 10 million teen drivers in 2008.

The data show 56 million drivers between the ages of 20-34, generally known as "millennials," which accounted for nearly one in four U.S. drivers last year – up slightly from the 54.9 million reported in 2014.

The final data will be published later this year in FHWA's "Highway Statistics," an annual compilation of information about drivers, vehicles and roads. The data reflect the growing demands on the U.S. highway system and inform decisions by transportation policy makers, researchers and academia.

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Additional information about how the FHWA designs roads for older drivers can be found in "Handbook for Designing Roadways for the Aging Population," available online at [http://safety.fhwa.dot.gov/older\\_users/handbook](http://safety.fhwa.dot.gov/older_users/handbook), which offers substantial information on the methods and techniques used to accommodate this growing driver demographic.



## USDOT ANNOUNCES \$8.9 MILLION GRANT FOR CONNECTSMART IN HOUSTON

WASHINGTON – The U.S. Department of Transportation's (USDOT) Federal Highway Administration (FHWA) announced an \$8.9 million grant for the Houston District of the Texas Department of Transportation to implement a variety of intelligent systems technologies in the City of Houston.

"Providing more transportation options helps connect people to jobs and supports economic growth," said U.S. Transportation Secretary Anthony Foxx. "Making business and services more accessible will improve the quality of life of residents in Houston."

The Texas Department of Transportation received the \$8.9 million grant under FHWA's Advanced Transportation and Congestion

Management Technologies Deployment (ATCMTD) program to deploy advanced technologies as part of Houston's ConnectSmart. The project will integrate transportation management systems across the various modes of transportation to benefit drivers and carpoolers, transit riders and bicyclists. The system will provide additional real-time information on carpooling, ridesharing and the availability of shared electric bicycles.

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*Continue on the next page.*

“This project is truly multi-modal and will improve the safety and reliability of Houston’s transportation system for everyone,” Federal Highway Administrator Gregory Nadeau. “It will help relieve congestion and enhance the region’s economic vitality.”

The award was part of a larger announcement totaling \$56.6 million to fund advanced technologies in various areas in the country. The ATCMTD program funds technologies that address the concerns outlined in Beyond Traffic, the USDOT report issued last year that examines the challenges facing America’s transportation infrastructure over the next three decades, such as a rapidly growing population and increasing traffic.

ATCMTD was established under the “Fixing America’s Surface Transportation” Act. State departments of transportation, local governments, transit agencies, metropolitan planning organizations and other eligible entities were invited to apply under the program. More information on the Advanced Transportation and Congestion Management Technologies Deployment (ATCMTD) Program can be found at [www.fhwa.dot.gov/fastact/factsheets/advtranscongmgmtfs.cfm](http://www.fhwa.dot.gov/fastact/factsheets/advtranscongmgmtfs.cfm)



## HAZARD MITIGATION GRANT PROGRAM OPEN FOR MAY/JUNE SEVERE WEATHER AND FLOODING

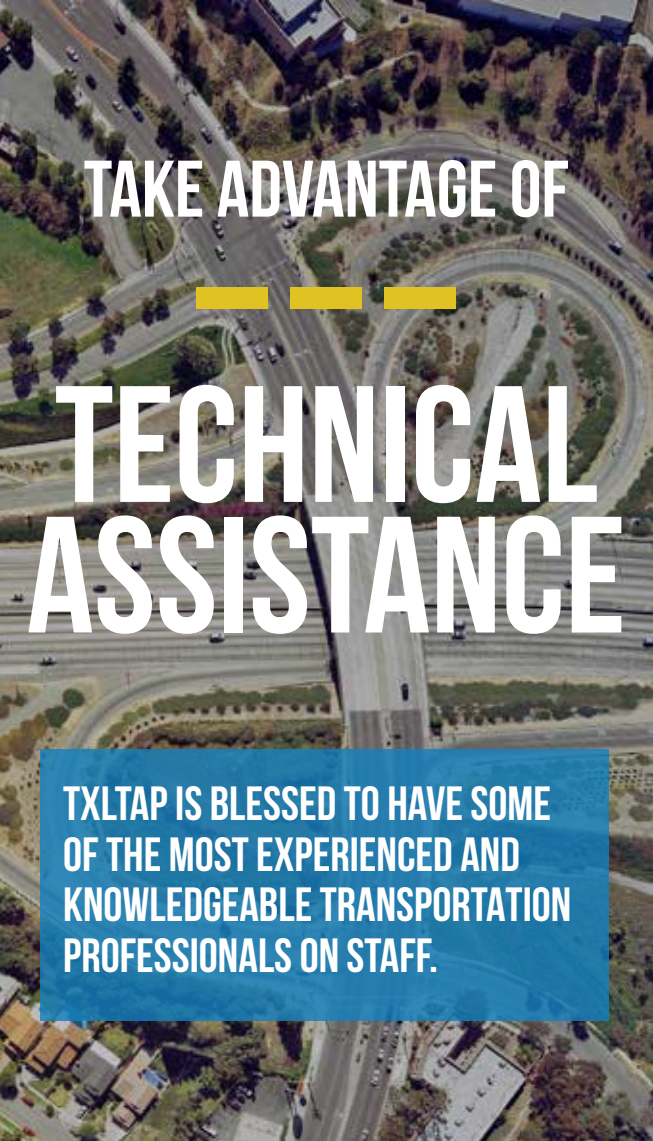
Austin, Texas - As a result of the severe weather and flooding events between May 26 and June 24, 2016, the state of Texas was granted a Presidential Disaster Declaration by President Obama. The FEMA-4272-DR declaration made the Hazard Mitigation Grant Program (HMGP) available statewide. The application deadline is Friday, January 20, 2017. The following approach will be used in the distribution of funds from DR-4272:

- Priority consideration will be given to those projects that mitigate the impact of high winds and flooding.
- Priority consideration will be given to counties declared under DR-4272.
- A portion of the funding will be applied to initiative projects such as stand-alone generators, warning systems, and public information campaigns.
- A portion of the funding will be applied to mitigation planning projects.

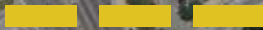
If approved by FEMA, to be eligible to receive the award, an applicant must have a current FEMA approved Hazard Mitigation Action Plan in place, unless applying for a planning grant.



Questions or comments should be directed to:  
Texas Division of Emergency Management (TDEM) Mitigation Section at  
[TDEM-Mitigation@dps.texas.gov](mailto:TDEM-Mitigation@dps.texas.gov) or 512-424-5489.



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**TXLTAP IS BLESSED TO HAVE SOME OF THE MOST EXPERIENCED AND KNOWLEDGEABLE TRANSPORTATION PROFESSIONALS ON STAFF.**

This staff includes retired maintenance managers, heavy equipment operators, road crew chiefs, civil and transportation engineers, inspectors, and the public works directors who all worked on the state's road system and in a nutshell "have been there, done that." Now Texas' local roadway agencies can directly benefit from their street smarts.

While training and information sharing at conferences or through a newsletter can do a lot of good, TxLTAP recognizes sometimes there is just nothing like rolling up your sleeves, experiencing the problem first hand and then offering a meaningful solution. That's why in addition to hosting classes and publishing Better Roads, Safer Roads, our program offers local roadway agencies an opportunity to consult directly with a TxLTAP subject matter expert to specifically address your organization's unique issue. And like all resources TxLTAP offers, there is no charge to receive our help or expertise.

Do you need information on proper method for fixing 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 the roads and developed a training presentation specific to your needs?

Take advantage of our technical assistance service!  
Call 817-272-9678 or email us at [txtlap@uta.edu](mailto:txtlap@uta.edu). We're ready to help!

FEB. 23, 2017

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**HILL COUNTRY  
YOUTH EVENT  
CENTER**

**Texas Association of County Engineers and Road Administrators'**

# WINTER TRAINING WORKSHOP

Our Winter One-Day workshop is scheduled for February 23, 2017. It will be held in Kerrville, TX at the Hill Country Youth Event Center. The Texas Association of County Engineers and Road Administrators is pleased to have the University of Texas at Arlington's Public Works Institute teach on roadway maintenance topics. Application has been made for County Commissioners to earn 5.5 continuing education credit.

The registration fee is \$40 per person. An additional \$10 processing fee will be necessary for County Commissioners desiring continuing education credits. Contact Markie Casebier at 512-260-1376 with questions on how to register for the event.





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