

Overview of USDOT & FHWA National Efforts Toward Improving Highway Safety

Luncheon Discussion with
Permian Road Safety Coalition
October 23, 2024

Why Safety is a Top Priority to USDOT and FHWA?



Safety is the top priority of the U.S. DOT and FHWA. The United States has one of the highest traffic fatality rates in the industrialized world, double the rate in Canada and quadruple that in Europe.



Almost 95 percent of U.S. transportation deaths occur on our streets, roads, and highways, and these deaths have been on the rise over the past few years.



All FHWA programs are ultimately focused on significantly reducing deaths and serious injuries on America's roadways.

Why Safety is a Top Priority to USDOT and FHWA?

- Roadway fatalities in the United States had declined consistently for 30 years since 1975, but that decline stalled over the last decade. In 2020, roadway fatalities increased by 7.2 percent from the previous year, while vehicle miles traveled decreased across the board.
- Fatalities among pedestrians and bicyclists have been increasing even faster than the overall fatalities among all road users.
- Traffic crashes are a leading cause of death for teenagers in America and disproportionately impact people who identify as Black, American Indian, and Pacific Islander.

While less than 20 percent of Americans live in rural communities, almost 50 percent of roadway fatalities across the country are happening on rural roads.

Why Safety is a Top Priority to USDOT and FHWA?

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Safety is the top priority of the US DOT. For FHWA, this means a road system that is designed to protect its users, through implementing life-saving programs and infrastructure safety solutions.

FHWA's goal is to reduce transportation related fatalities and serious injuries across the transportation system, and for this reason it fully supports the vision of zero deaths and serious injuries on the Nation's roads.

National Roadway Safety Strategy (NRSS)

1

As the first step in working toward the long-term goal of zero roadway fatalities, the U.S. DOT released its National Roadway Safety Strategy (NRSS) in January 2022.

2

The NRSS adopts the Safe System approach and outlines key actions to significantly reduce serious injuries and deaths on America's highways, roads, and streets.

3

We are committed to supporting the NRSS and will collaborate with other modal agencies and external stakeholders to implement NRSS key actions.

National Roadway Safety Strategy (NRSS)



To support this vision, FHWA continues to collaborate with other US DOT agencies to implement the National Roadway Safety Strategy (NRSS), which outlines the Department's comprehensive approach to significantly reduce deaths and serious injuries to zero on our Nation's roadways.



Working with our stakeholders, and working across FHWA programs, we will use an interdisciplinary approach to improving safety and embrace a goal of zero deaths and serious injuries on America's roadways.

Safe System Approach



The NRSS adopted the Safe System approach, which was founded on the principles that humans make mistakes and that human bodies have limited ability to tolerate crash impacts.



FHWA also continues to work closely with our partners to advance safety culture and a safe system approach, encourage performance-driven transportation safety management practices, and advocate for the deployment of innovative safety countermeasures. Working together, we can strive toward zero, the only acceptable number.

Safe System Approach

- The zero deaths vision acknowledges that even one death on our transportation system is unacceptable and focuses on safe mobility for all road users.
- This idea was first adopted in Sweden in 1997 as "[Vision Zero](#)" and since then has spread around the world.



Safe System Approach

- Reaching zero deaths requires the implementation of a Safe System approach, which was founded on the principles that humans make mistakes and that human bodies have limited ability to tolerate crash impacts.
- In a Safe System, those mistakes should never lead to death. Applying the Safe System approach involves anticipating human mistakes by designing and managing road infrastructure to keep the risk of a mistake low; and when a mistake leads to a crash, the impact on the human body doesn't result in a fatality or serious injury.



APPROACH

Zero is our goal. A Safe System is how we get there.

Road design and management should encourage safe speeds and manipulate appropriate crash angles to reduce injury severity.

Safe System Approach

There are six principles that form the basis of the Safe System approach:

- humans make mistakes,
- humans are vulnerable,
- responsibility is shared,
- safety is proactive, and
- redundancy is crucial.
- deaths and serious injuries are unacceptable



APPROACH

Zero is our goal. A Safe System is how we get there.



THE SAFE SYSTEM

APPROACH

Zero is our goal. A Safe System is how we get there.

Safe Systems Approach

- Making a commitment to zero traffic deaths means addressing all aspects of safety through the following five Safe System elements that, together, create a holistic approach with layers of protection for road users:
 - safe road users
 - safe vehicles
 - safe speeds
 - safe roads, and
 - post-crash care.



THE SAFE SYSTEM

APPROACH

Zero is our goal. A Safe System is how we get there.

Safe System Approach


- The Safe System approach requires a supporting [safety culture](#) that places safety first and foremost in road system investment decisions.
- To achieve our zero deaths vision, everyone must accept that fatalities and serious injuries are unacceptable and preventable.

Definition of Transportation Safety Planning

Transportation Safety Planning is a comprehensive, system-wide, multimodal, proactive process that better integrates safety into surface transportation decision-making.




The mission is to reduce transportation fatalities and serious injuries by supporting comprehensive, system-wide, multimodal, data-driven, and proactive regional and statewide transportation planning processes that integrate safety into surface transportation decision-making.




It is important for these processes to consider projects and strategies to increase the safety of the transportation system for both motorized and non-motorized users.

Federal Regulations (Safety Requirements)

23 CFR 450.306(d)(4) states that an MPO shall integrate in the metropolitan transportation planning process, directly or by reference, the goals, objectives, performance measures, and targets described in the HSIP, SHSP, Public Transportation Agency Safety Plan in 49 U.S.C. 5329(d), and other safety and security planning and review processes, plans, and programs, as appropriate.



23 CFR 450.324(h) encourages the inclusion of a safety element in the MTP that incorporates or summarizes the priorities, goals, countermeasures, or projects for the MPA contained in the HSIP and SHSP, as well as (as appropriate) emergency relief and disaster preparedness plans and strategies and policies that support homeland security (as appropriate) and safeguard the personal security of all motorized and non-motorized users.



Safety also appears in the Metropolitan Transportation Planning rule as a consideration in the CMP (23 CFR 450.322), Development and Content of the MTP (23 CFR 450.324), and Development and Content of the TIP (23 CFR 450.326).

Transportation Performance Measures PM-1 (Highway Safety)

- 23 CFR 490.207 requires five performance measures for carrying out the HSIP, each based on a 5-year rolling average:
 - Number of fatalities on all public roads,
 - Rate of fatalities per 100 million vehicle miles traveled (VMT) on all public roads,
 - Number of serious injuries on all public roads,
 - Rate of serious injuries per 100 million VMT on all public roads, and
 - Number of non-motorized fatalities and non-motorized serious injuries on all public roads.

Integrating Safety into the MPO Transportation Planning Process



FAST Act Metropolitan Planning Factor- Increase the safety of the transportation system for motorized and non-motorized users.



The metropolitan transportation planning process should be consistent with the Strategic Highway Safety Plan (SHSP) and with transit safety and security planning processes and programs.

Integrating Safety into the MPO Transportation Planning Process



How has the MPO integrated the following performance-based plans and processes into the metropolitan transportation planning process?

- o State DOT's Highway Safety Improvement Program
- o State DOT's Strategic Highway Safety Plan



What does the system performance report communicate about the past condition and performance for the highway safety performance measures and targets under PM-1 (Safety)?

Questions for Discussion

1. How is the safety planning factor considered in your MPO planning process?
2. How does the TMA safety process relate to the State of Texas SHSP?
3. Describe the MPO's collaborative process for developing safety goals, objectives, transportation performance measures, and strategies for your metropolitan planning area.
4. How will the State DOT, MPO, and provider of public transportation coordinate safety performance data? How is safety addressed as a specific goal in your MTP and transportation planning process?
5. Does your MTP Update include a system performance report for safety that documents the performance measures and targets, evaluates past condition and performance, and reports progress achieved in meeting performance targets?

Safe System Approach (For Additional Information)



APPROACH

Zero is our goal. A Safe System is how we get there.

Learn more about the Safe System approach from the following materials:

- FHWA – [Safe System Special Edition of Public Roads Magazine](#)
- FHWA – [Safe System Approach flyer](#) and [Safe System Approach presentation](#)
- PIARC – [The Safe System Approach](#)
- Perth, Australia – [video](#) explains how redundancy in Safe System can save lives
- FHWA YouTube Video Safe Systems Approach: <https://www.youtube.com/watch?v=mLRmv5db1b0>
- Other [Resources](#)

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