TRB Webinar:

The Power of Clear Language in Highway Safety Documentation

March 2, 2026

1:00 PM – 2:30 PM (eastern)

PDH Certification Information

1.5 Professional Development Hour (PDH) – see follow-up email

You must attend the entire webinar.

Questions? Contact Andie Pitchford at TRBwebinar@nas.edu

The Transportation Research Board has met the standards and requirements of the Registered Continuing Education Program. Credit earned on completion of this program will be reported to RCEP at RCEP.net. A certificate of completion will be issued to each participant. As such, it does not include content that may be deemed or construed to be an approval or endorsement by the RCEP.

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NATIONAL ACADEMIES Sciences Engineering Medicine

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CLE Credit Information

1.25 Continuing Legal Education Credits from the American Bar Association

You must attend the entire webinar

TRB did not seek approval for this workshop from the state board, we advise you contact your state board to see if credit would be accepted

See email following webinar for the certificate to provide to your board

Purpose Statement

This webinar will examine how carefully chosen language—and the avoidance of certain terms and phrases—can reduce the risk of misinterpretation or misuse of safety-related documents in legal and professional settings. Drawing on examples from a style and usage guide developed to inform safety research, this webinar will highlight words and phrases that carry legal implications and explain their potential effects.

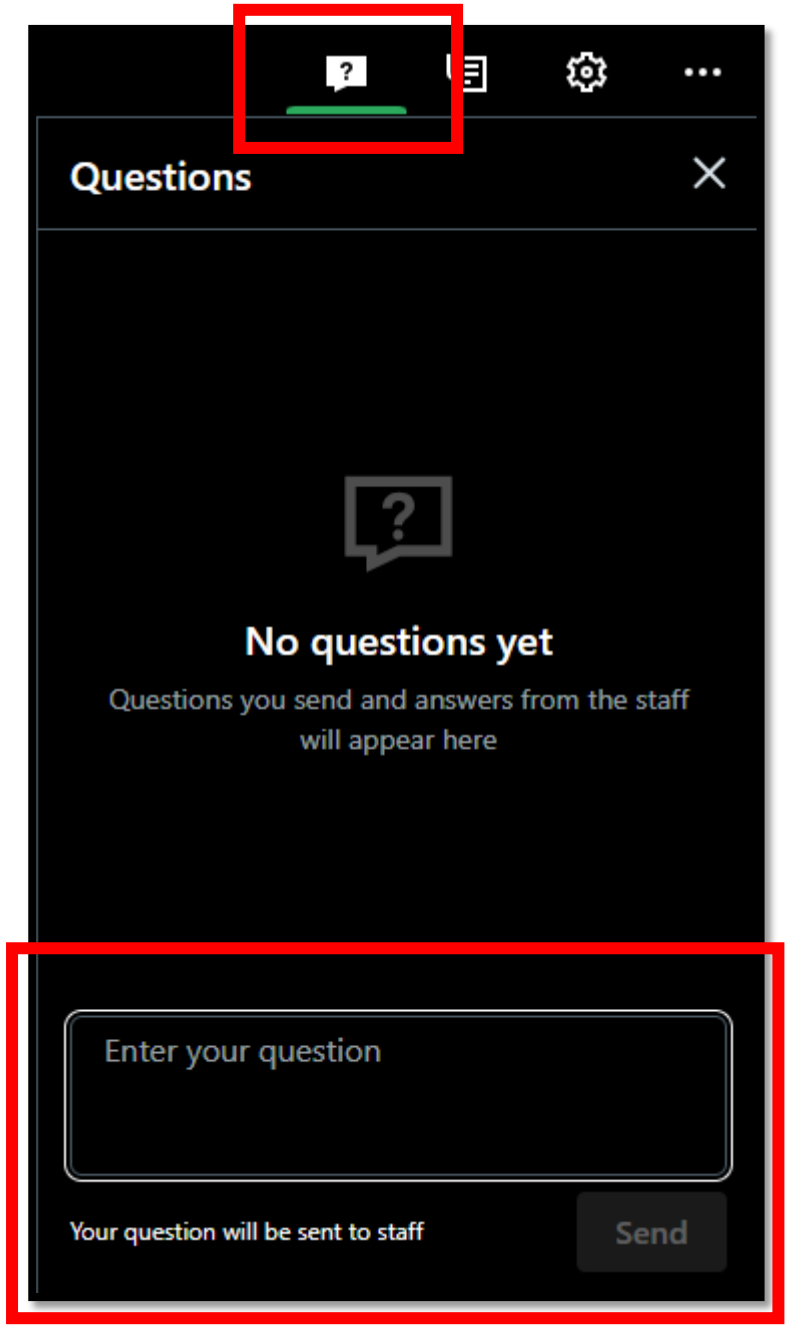
Learning Objectives

At the end of this webinar, participants will be able to:

- Understand the purpose and structure of the Style and Usage Guide developed for HSM2,
- Identify and categorize problematic language, and
- Apply practical strategies to revise technical content

Questions and Answers

- Please type your questions into your webinar control panel
- We will read your questions out loud, and answer as many as time allows



Today's Presenters

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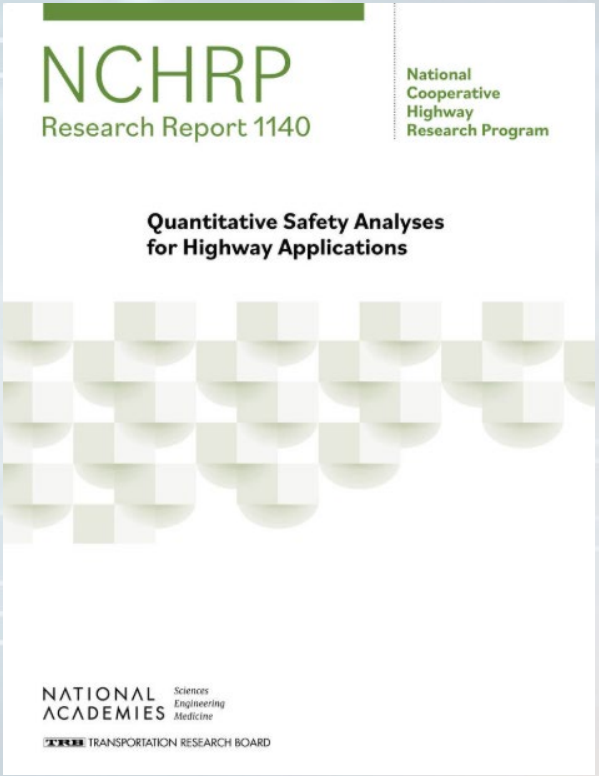
Washington State Department of Transportation

The Power of Clear Language in Highway Safety Documentation

The Need for Clear Language in Highway Safety Documentation

- NCHRP Project 17-71A: Proposed AASHTO Highway Safety Manual, Second Edition (HSM2)
  - Important that the HSM not inadvertently create tort liability implications in its content
  - Developed glossary of terms and phrases to be used and avoided in HSM2



NCHRP Research Report 1140: Appendix A

"Style and Usage Guide of Terms and Phrases to be Used and to be Avoided in HSM2"

Original Purpose

- Guide the research team in drafting and revising content for HSM2

Wider Application

- Guide authors of other highway safety documentation

The Power of Clear Language in Highway Safety Documentation

Clear Language and Context

Style and Usage Guide – Terms & Phrases to be Avoided

- Subjective Terms and Phrases Expressing Personal Opinion
- Vague and Ambiguous Terms and Phrases
- Terms and Phrases that are Directive or Mandatory
- Terms and Phrases Setting up for Failure
- Terms and Phrases that are Pejorative with Liability Implications

The Power of Clear Language in Highway Safety Documentation

Clear Language and Context

Subjective Terms and Phrases Expressing Personal Opinion

- Adequate/Sufficient/Inadequate/Insufficient/Deficient/Excessive
- Better/Best/Preferred/Preferable/Desired/Desirable
- Difficult
- Just
- Poor/Worse/Worst
- Safe/Unsafe

The Power of Clear Language in Highway Safety Documentation

Clear Language and Context

Vague and Ambiguous Terms and Phrases

- Safe/Safety
- Care should be taken/Use with Caution
- Often
- Problematic/Questionable/Troubling/Troublesome

The Power of Clear Language in Highway Safety Documentation

Clear Language and Context

Terms and Phrases that are Directive or Mandatory

- Essential/Imperative/Necessary
- Mandatory/Required/Regulation/Standard
- Shall/Must/
- Need/Needs
- No less than/No more than
- Should

The Power of Clear Language in Highway Safety Documentation

Clear Language and Context

Terms and Phrases Setting up for Failure

- Ensure
- Possible
- All
- Always/Will

The Power of Clear Language in Highway Safety Documentation

Clear Language and Context

Terms and Phrases that are Pejorative with Liability Implications

- A Concern/Is Concerned/Of Concern/Problem
- Danger/Dangerous/Hazard/Hazardous/Defect/Defective/Trap/Unsafe
- Risk/Risky/Risk Factors/Safety Risk/Level of Risk/Higher Risk Facilities
- Drop off
- Hot Spot/Black Spot
- Negative Effect
- Obstacle/Obstruction/ Unshielded/Unprotected
- Weak/Weakness

The Power of Clear Language in Highway Safety Documentation

Clear Language and Context

Example 1

"Users with normal vision, but poor contrast sensitivity, may have to get very close to a low-contrast target before detecting it.

Driver alertness on long tangent sections is often a concern, especially in rural areas.

Perception-reaction time—The amount of time and distance needed by one user to respond to a stimulus (e.g., hazard in road, traffic control device, or guide sign) depends on human elements, including information processing, driver alertness, driver expectations, and vision."

The Power of Clear Language in Highway Safety Documentation

Clear Language and Context

Example 1

"Users with normal vision, but decreased contrast sensitivity, may have to get very close to a low-contrast target before detecting it.

Driver alertness on long tangent sections can be an issue, especially in rural areas.

Perception-reaction time—The amount of time and distance needed by one user to respond to a stimulus (e.g., object in road, traffic control device, or guide sign) depends on human elements, including information processing, driver alertness, driver expectations, and vision. "

The Power of Clear Language in Highway Safety Documentation

Clear Language and Context

Example 2

"When using a systemic approach to network screening, this step involves identifying risk factors, which are traffic characteristics or roadway geometric characteristics that are associated with the focus crash types and/or severities. Risk factors are not necessarily the cause of crashes, but are simply associated with the occurrence of crashes. For example, if roadway departure crashes are the focus crash type, shoulder width less than four feet may be identified as a risk factor for those crashes. The systemic network screening process would then screen the network based on the presence of roadway shoulders less than four feet in width to identify locations with higher risk for roadway departure."

The Power of Clear Language in Highway Safety Documentation

Clear Language and Context

Example 2

When using a systemic approach to network screening, this step involves identifying traffic characteristics or geometric characteristics that are associated with the focus crash types and/or severities. These traffic characteristics or geometric features are not necessarily causes of crashes but are associated with the occurrence of crashes. For example, if roadway departure crashes are the focus crash type, a shoulder width less than four feet may be identified as potentially associated with the occurrence of those crashes. This means a shoulder width of less than four feet is a common characteristic at the locations where the roadway departure crashes occur, but close review of crash reports may indicate that a primary contributing factor to the crashes was some other factor, such as driver fatigue. The systemic network screening process would then screen the network based on the presence of roadway shoulders less than four feet in width to identify locations with a higher potential for roadway departure.

The Power of Clear Language in Highway Safety Documentation

Clear Language and Context

Example 3

Possible contributing factors for the following types of crashes along roadway segments include: . . .

Obstruction in or near roadway

Inadequate lighting

Inadequate pavement markings

Inadequate signs, delineators, guardrail

Slippery pavement

Roadside design (e.g., inadequate clear distance)

Inadequate roadway geometry

Excessive speed

Example 3

Possible contributing factors for the following types of crashes along roadway segments include: . . .

Object in or near roadway

Lighting

Pavement markings

Signs, delineators, guardrail

Pavement surface

Roadside design (e.g., clear distance)

Roadway geometry

Speed

Example 4

Adaptation relates to changes in user behavior, which may be desired or undesired. For example, a desired adaptation is drivers becoming more familiar with how to navigate a roundabout, while an undesired adaptation is increasing speed through a roundabout as drivers become more familiar.

Example 4

Adaptation relates to changes in user behavior, which may reduce crash potential or increase crash potential. For example, an adaptation that may reduce crash potential is drivers becoming more familiar with how to navigate a roundabout, while an adaptation that may increase crash potential is increasing speed through a roundabout as drivers become more familiar..

Conclusion

Safety documentation should reflect the principles of the Style and Usage Guide:

- Context is important
- Without personal opinion
- Be clear and unambiguous
- Leave room for engineering judgment
- Not set unachievable goals.
- Avoid tort liability implications

WORDS MATTER

COMMUNICATING THE SAFE SYSTEM APPROACH IN THE 21ST CENTURY

John Milton, PhD, PE, RSP2IB, PTOE
Director of Transportation Safety, State Safety Engineer
Washington State Department of Transportation

WHAT CONSTITUTES A LEGAL LIABILITY?

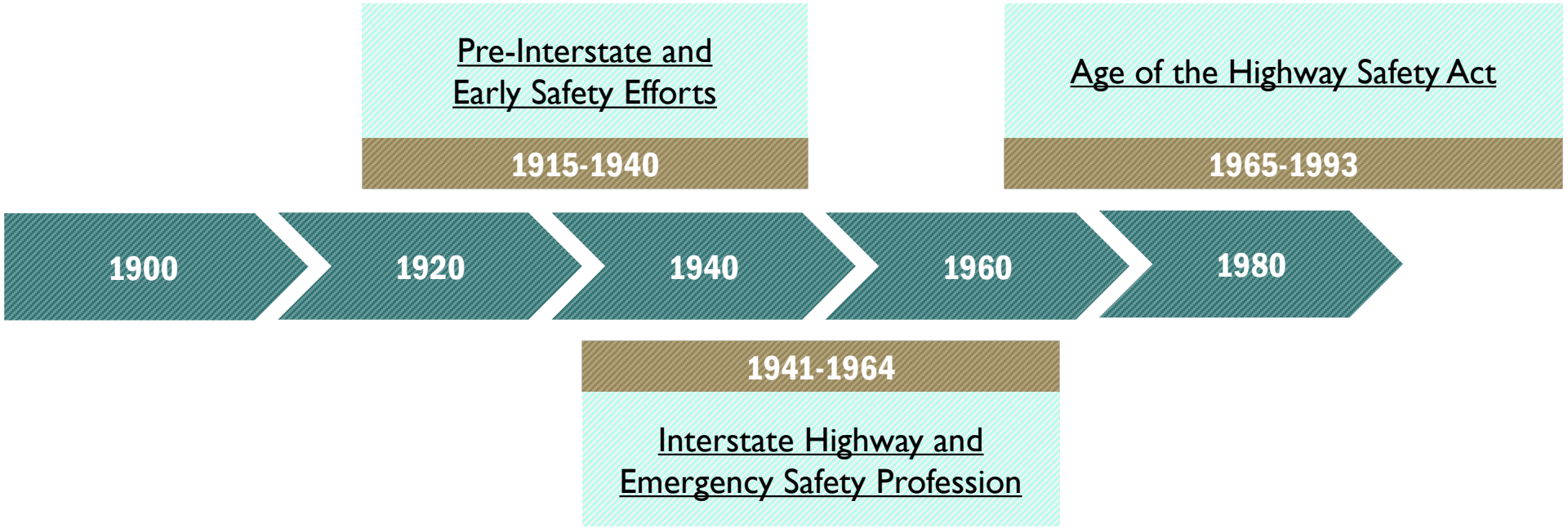
- You have a **duty** to maintain a reasonably safe highway for ordinary travel
- A duty to correct exists when you knew or should have known have about a condition, and **you failed in the duty** to correct in a reasonable time
- **Damages** were caused to the plaintiff as a result of the breach of duty
- The condition was a **proximate cause** to the injury

WHAT IS SAFETY?

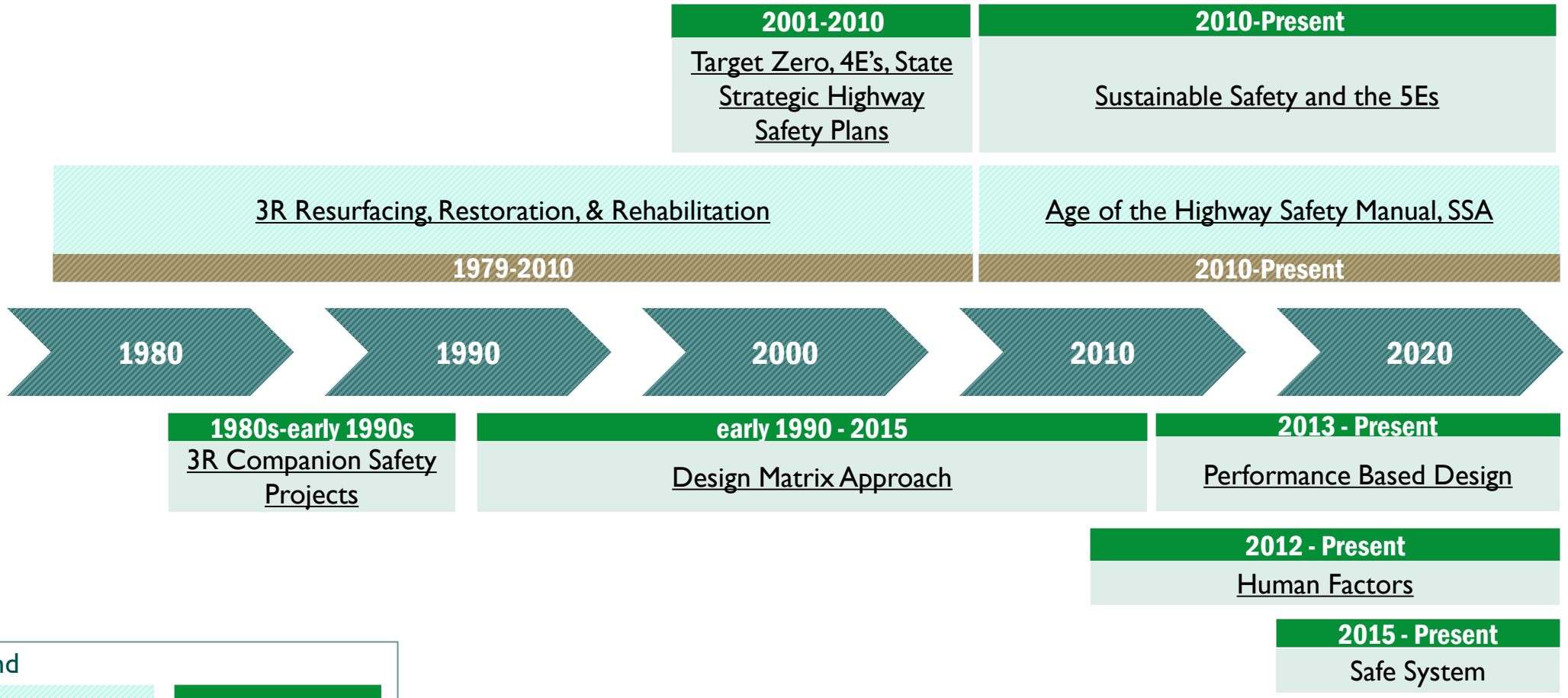
WHO DECIDES WHAT IS SAFE?

DON'T WE INCREASE TORT LIABILITY WITH THE SAFE SYSTEM?

FEDERAL SAFETY APPROACH HAS EVOLVED



STATES HAVE EVOLVED WITH THE FEDERAL EVOLUTION



FHWA Safe System Approach

FUNDAMENTAL CHANGE IN HOW AGENCIES MAKE DECISION RELATE TO SAFETY

When we focus on the principles and elements of the Safe System how we view safety changes. This translates into changes in manuals, guidance and decision-making practices.

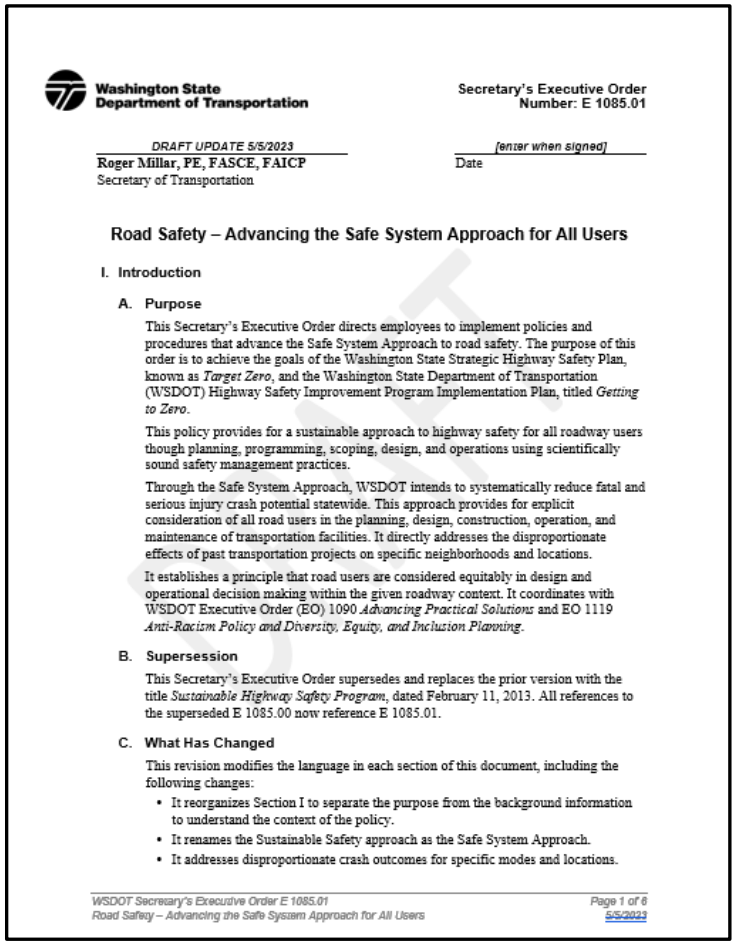
Washington Safe System Approach

WHY DIFFERENT WORDING FROM FHWA?

To be positive and actionable

- The words here are statements without context
- That may work, but it can also be used as an all-inclusive statement
- If used, consider how these words are defined based on specific jurisdictional perspectives and needs (consult counsel)

EXECUTIVE POLICY - OPERATIONAL POLICIES



Washington State Department of Transportation

Secretary's Executive Order
Number: E 1085.01

DRAFT UPDATE 5/5/2023
Roger Millar, PE, FASCE, FAICP
Secretary of Transportation

[enter when signed]
Date

Road Safety – Advancing the Safe System Approach for All Users

I. Introduction

A. Purpose

This Secretary's Executive Order directs employees to implement policies and procedures that advance the Safe System Approach to road safety. The purpose of this order is to achieve the goals of the Washington State Strategic Highway Safety Plan, known as *Target Zero*, and the Washington State Department of Transportation (WSDOT) Highway Safety Improvement Program Implementation Plan, titled *Getting to Zero*.

This policy provides for a sustainable approach to highway safety for all roadway users though planning, programming, scoping, design, and operations using scientifically sound safety management practices.

Through the Safe System Approach, WSDOT intends to systematically reduce fatal and serious injury crash potential statewide. This approach provides for explicit consideration of all road users in the planning, design, construction, operation, and maintenance of transportation facilities. It directly addresses the disproportionate effects of past transportation projects on specific neighborhoods and locations.

It establishes a principle that road users are considered equitably in design and operational decision making within the given roadway context. It coordinates with WSDOT Executive Order (EO) 1090 *Advancing Practical Solutions* and EO 1119 *Anti-Racism Policy and Diversity, Equity, and Inclusion Planning*.

B. Supersession

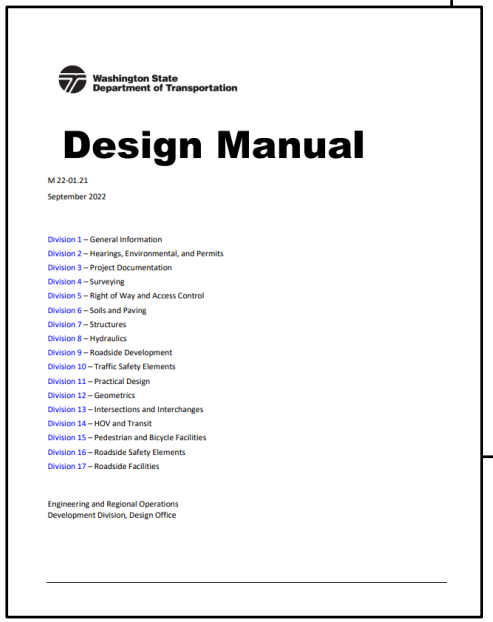
This Secretary's Executive Order supersedes and replaces the prior version with the title *Sustainable Highway Safety Program*, dated February 11, 2013. All references to the superseded E 1085.00 now reference E 1085.01.

C. What Has Changed

This revision modifies the language in each section of this document, including the following changes:

- It reorganizes Section I to separate the purpose from the background information to understand the context of the policy.
- It renames the Sustainable Safety approach as the Safe System Approach.
- It addresses disproportionate crash outcomes for specific modes and locations.

WSDOT Secretary's Executive Order E 1085.01
Road Safety – Advancing the Safe System Approach for All Users
Page 1 of 6
5/5/2023



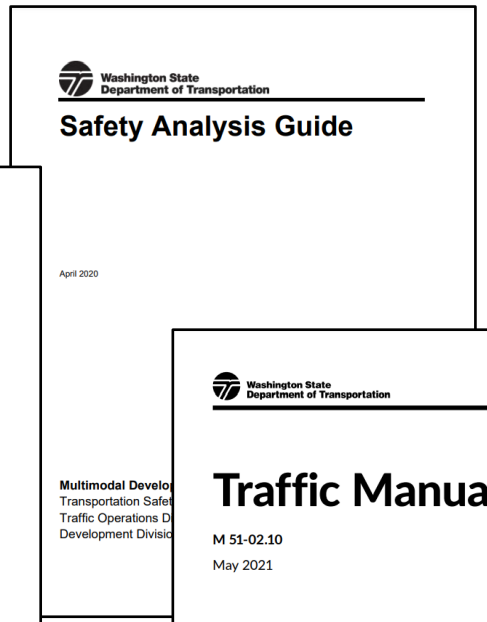
Washington State Department of Transportation

Design Manual

M 22-01.21
September 2022

Division 1 – General Information
Division 2 – Hearings, Environmental, and Permits
Division 3 – Project Documentation
Division 4 – Surveying
Division 5 – Right of Way and Access Control
Division 6 – Soils and Paving
Division 7 – Structures
Division 8 – Hydraulics
Division 9 – Roadside Development
Division 10 – Traffic Safety Elements
Division 11 – Practical Design
Division 12 – Geometrics
Division 13 – Intersections and Interchanges
Division 14 – HOV and Transit
Division 15 – Pedestrian and Bicycle Facilities
Division 16 – Roadside Safety Elements
Division 17 – Roadside Facilities

Engineering and Regional Operations
Development Division, Design Office



Washington State Department of Transportation

Safety Analysis Guide

April 2020

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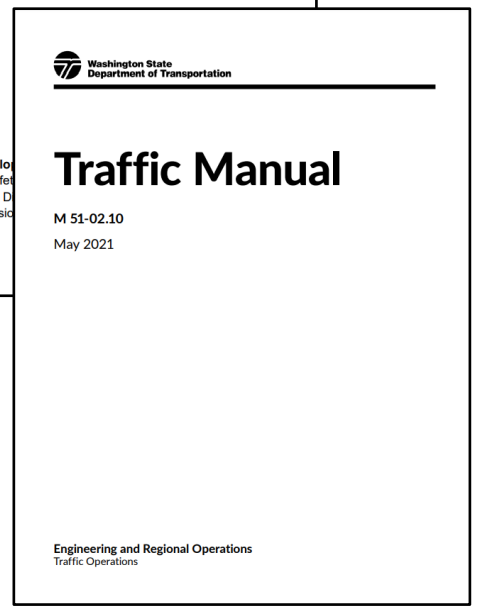
Transportation Safet
Traffic Operations D
Development Divisio



Washington State Department of Transportation

Traffic Manual

M 51-02.10
May 2021

Engineering and Regional Operations
Traffic Operations

IMPLEMENTING THE SAFE SYSTEM EFFECTIVELY

The Safe System will take time to achieve; it is important to have a means to prioritize projects and strategies for reducing crash potential and very importantly how to communicate your processes.

In documentation, outline how context, modal mix, and road user design is considered in tradeoff analysis. For instance, walking and biking changes may influence geometric design differently than in the past

Provide a process for decision making, documentation and how it can be done to reduce liability and erroneous conclusions

Address the use of opinions versus factual approaches in planning, programming, design, maintenance, operations.

Larger updates provide opportunities to address vague and opinion-based guidelines, criteria and standards.

Risk Managers and Legal Experts are available to assist with wording in both cases.

CONSIDERING TRADEOFFS BETWEEN TRADITIONAL AND THE SAFE SYSTEM APPROACH

Traditional

Standards - nominal

Congestion Reduction

Multilane, multileg intersections to reduce total vehicle crashes

Unprotected left turns, free right turns to reduce congest, increase free flow speeds

Signal Warrants, volume based, considerations for crashes and other road users

85% speed, pace car, design speed

Wide lanes, emergency parking for vehicles, reduced turbulence

Roadside design to reduce fatal and serious crashes

Safe System

Continuum - substantive

Mobility, but not at the expense of safety

Roundabout to reduce fatal and serious crashes for all road users,

Increased exposure, conflicts, speeds and crash potential for walking and biking, leading pedestrian intervals

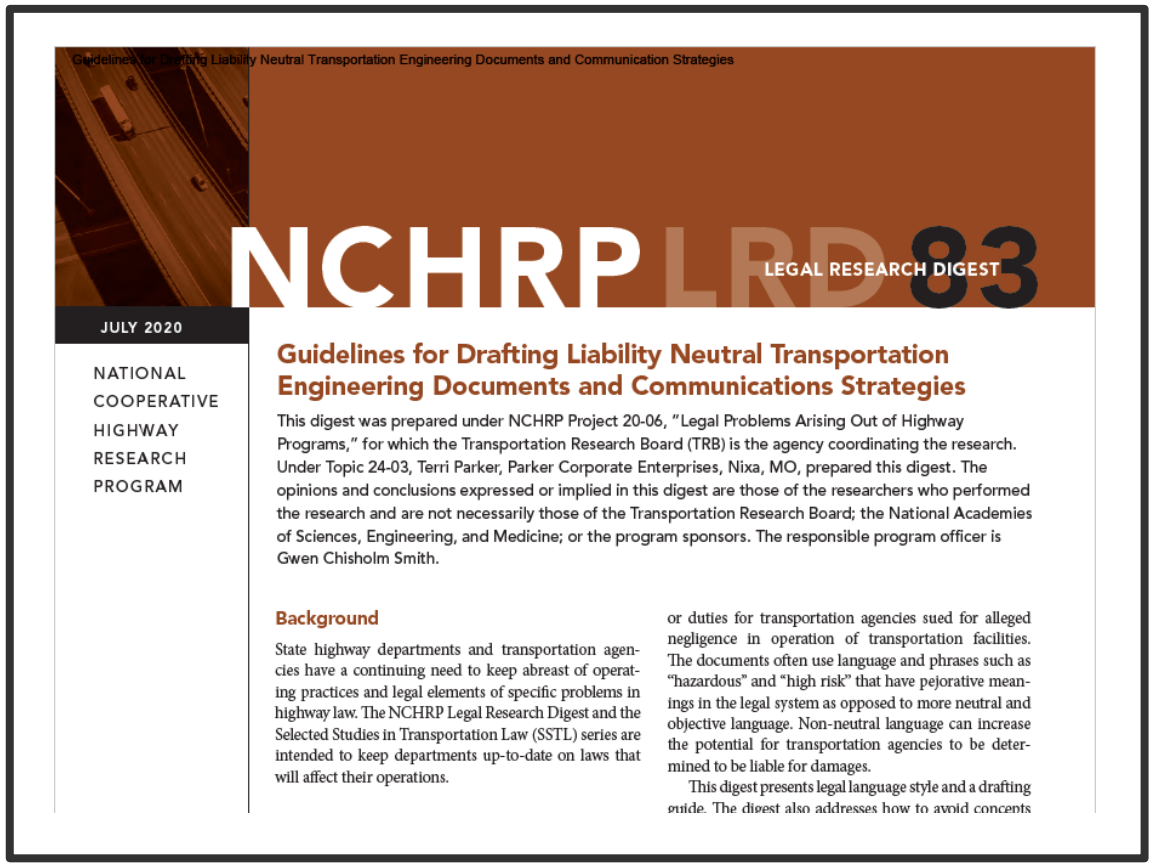
Roundabout first policy, change in intersection control evaluation, compact roundabouts

$KE = (½)MV^2$, Injury Minimization, Target Speeds

Time to cross, self enforcing roads, walking and biking separation

Roadside design to reduce fatal and serious crash potential

THE SAFE SYSTEM APPROACH NEED NOT INCREASE RISK



Guidelines for Drafting Liability Neutral Transportation Engineering Documents and Communication Strategies

NCHRP LRD 83

LEGAL RESEARCH DIGEST

JULY 2020

NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM

Guidelines for Drafting Liability Neutral Transportation Engineering Documents and Communications Strategies

This digest was prepared under NCHRP Project 20-06, "Legal Problems Arising Out of Highway Programs," for which the Transportation Research Board (TRB) is the agency coordinating the research. Under Topic 24-03, Terri Parker, Parker Corporate Enterprises, Nixa, MO, prepared this digest. The opinions and conclusions expressed or implied in this digest are those of the researchers who performed the research and are not necessarily those of the Transportation Research Board; the National Academies of Sciences, Engineering, and Medicine; or the program sponsors. The responsible program officer is Gwen Chisholm Smith.

Background

State highway departments and transportation agencies have a continuing need to keep abreast of operating practices and legal elements of specific problems in highway law. The NCHRP Legal Research Digest and the Selected Studies in Transportation Law (SSTL) series are intended to keep departments up-to-date on laws that will affect their operations.

or duties for transportation agencies sued for alleged negligence in operation of transportation facilities. The documents often use language and phrases such as "hazardous" and "high risk" that have pejorative meanings in the legal system as opposed to more neutral and objective language. Non-neutral language can increase the potential for transportation agencies to be determined to be liable for damages.

This digest presents legal language style and a drafting guide. The digest also addresses how to avoid concepts

- Tort risk exists in all that you do, consider what you say and how you say it.
- Provide facts, Not opinions!
- State positive action, versus negative problems.
- Consider a person who understand risk reviewing manual changes, planning documents, etc.
- Use NCHRP LRD83

JUST THE FACTS MA'AM!

TO REDUCE CONFUSION MIGHT WE SAY:

- The location is a known problem area.
- The talus slope is weak.
- The maintenance tech must ensure.

- The location is evaluated on a schedule basis for …….
- The talus slope has been modified for falling rock protection.
- The maintenance tech is to evaluate conditions and use judgment in ……..

TO REDUCE CONFUSION MIGHT WE SAY:

- The maintenance activity will improve the hazardous condition.
- We intend to improve the safety at the problem location.
- The location is substandard.

- The striping is intended to provide additional driver information…or is intended to reduce the potential for collisions.
- The signal modification was completed with the intent to reduce the frequency and severity of crashes at Intersection X on Highway Y from driver red light running.
- The location was developed using the 19XX design manual or barrier design…….at the very least say the location is non-standard versus substandard.

KEY LEGAL ISSUES VARY BY STATE: FOR WASHINGTON

- Joint and several liability
- No damage caps
- The actions you take in the field or as an engineer can be questioned
- The fact that somebody is not wearing a seatbelt can't be brought into court.
- The fact that you don't have enough money to fix something is not a defense.

HOW WOULD YOU DESCRIBE THIS HIGHWAY CONDITION?

Documentation of conditions are important. Often in situations like the one shown we use words that can be misconstrued.

Here treatment was consistent with guidance for this type of roadway.

One might say treated "SR 101 from MP 1-5, per maintenance sanding and treatment guidance at 8:00AM."

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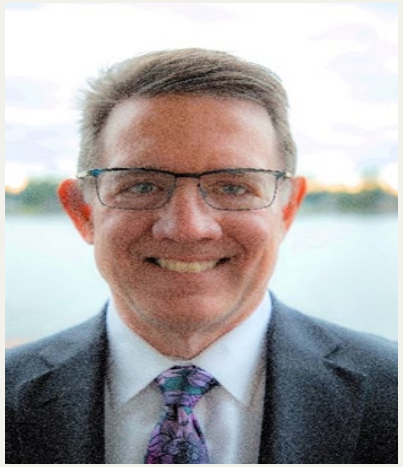

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Washington State Department of Transportation

Upcoming events for you

July 12-15, 2026

65th Annual Workshop on Transportation Law

https://www.nationalacademies.org/events/1089

https://www.nationalacademies.org/trb/events

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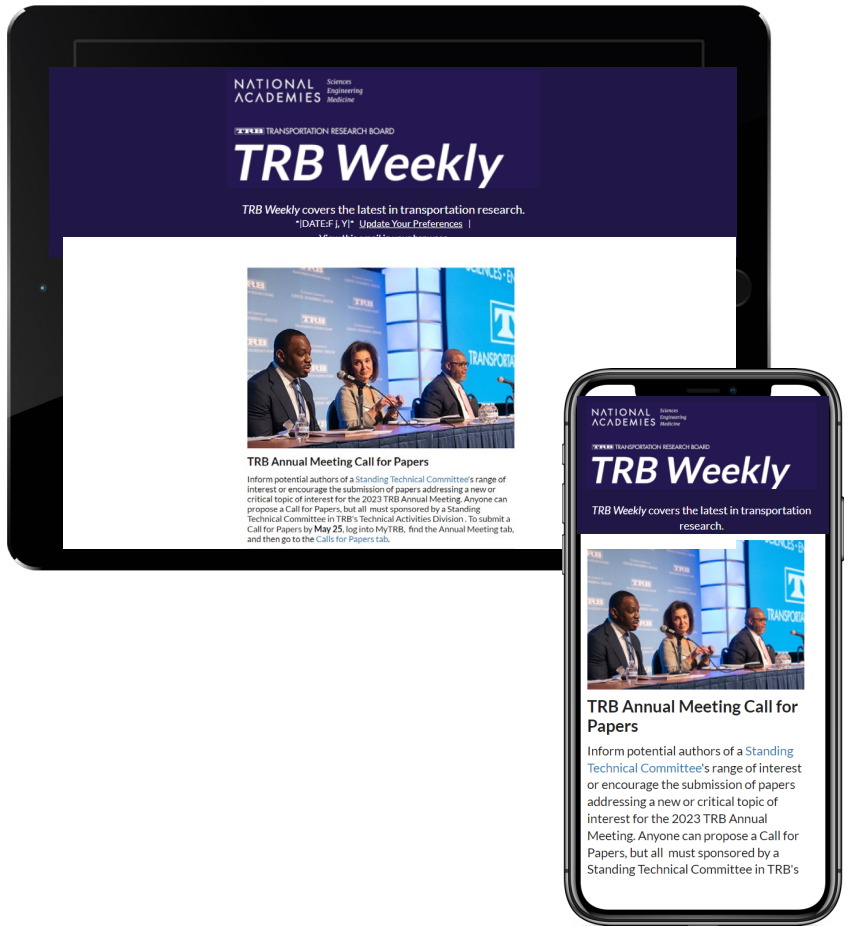

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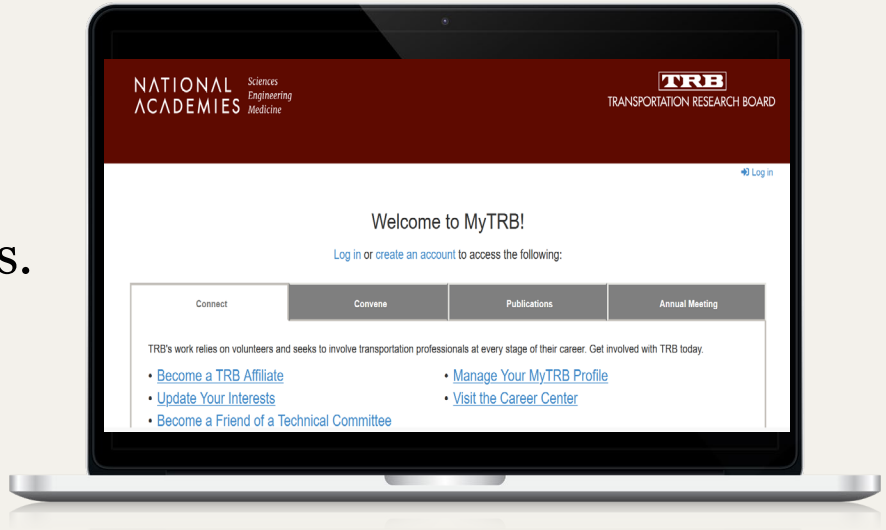

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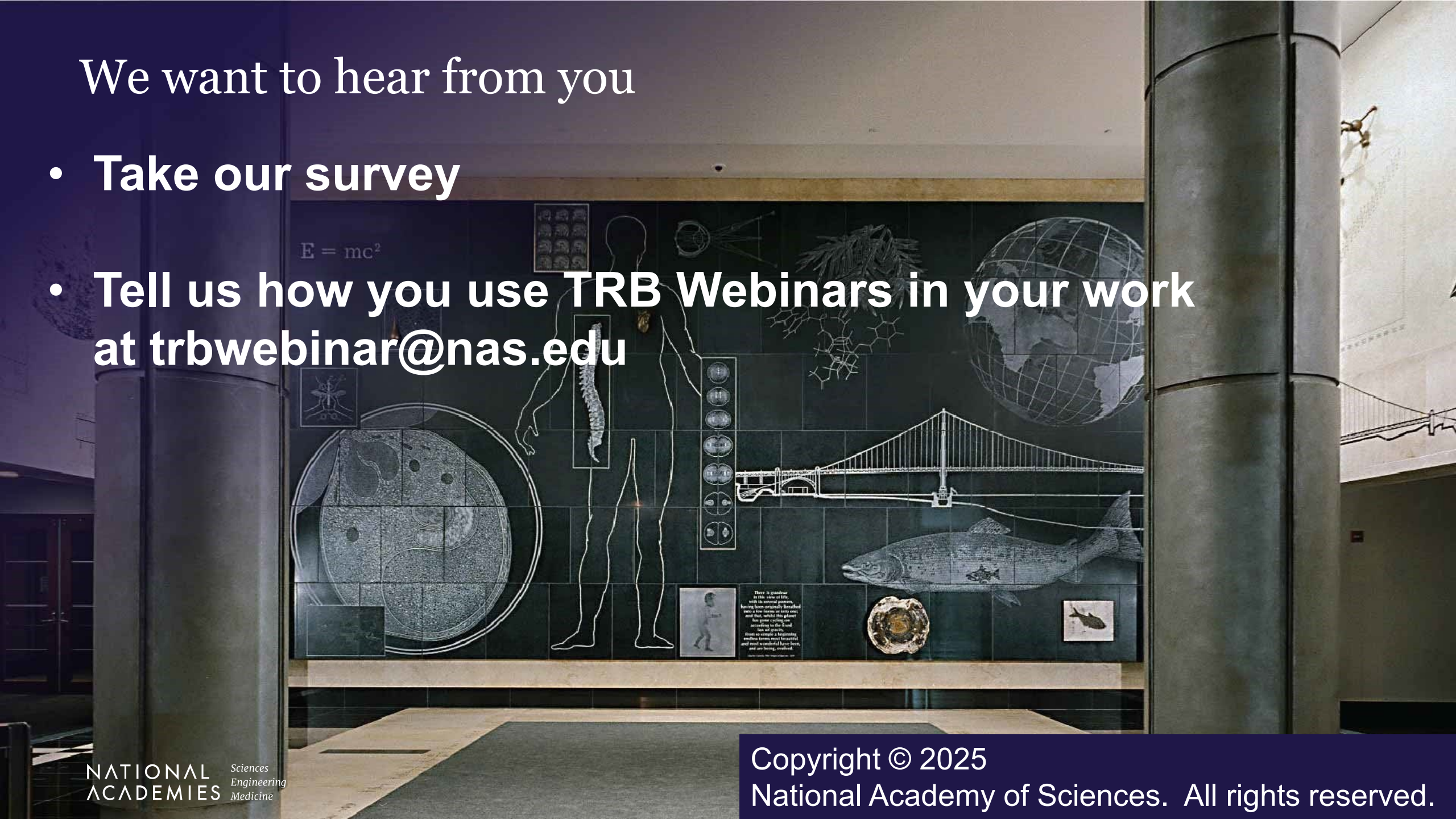

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