NATIONAL ACADEMIES
Sciences
Engineering
Medicine

TRB TRANSPORTATION RESEARCH BOARD

TRB Webinar: Liability Neutral Language—Best Practices

June 21, 2023

2:00 – 3:00 PM

PDH Certification Information

1 Professional Development Hours (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.

ENGINEERING
RCEP
REGISTERED CONTINUING EDUCATION PROGRAM

CLE Credit Information

1.0 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 discuss the concepts of liability neutral language and its use in engineering publications, press releases, e-mails, and other forms of communication.

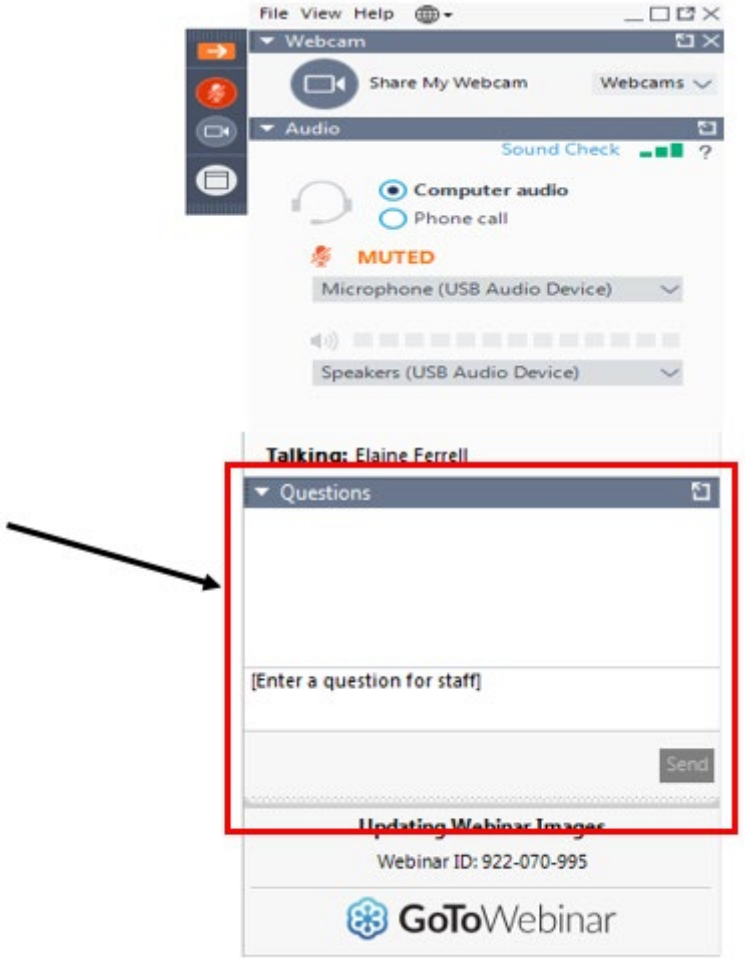
Learning Objectives

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

- Use language that does not increase the risk of litigation for the agency

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

Brelend C. Gowan
bcgowan@hotmail.com
Attorney at Law & Legal Consultant

Heidi Skinner
Heidi.skinner@sdcounty.ca.gov
County of San Diego

Terri Parker
Terri.Parker@modot.mo.gov
Missouri Department of Transportation

Guidelines for Drafting Liability Neutral Transportation Engineering Documents and Communication Strategies

Terri Parker, Assistant Chief Counsel
Missouri Department of Transportation
June 2023

Documents and Methods of Communication

Multiple communication methods are used between public agencies, academics, and practitioners and their target audiences, whether the audience is staff, external stakeholders, or media

Interaction with the public, public partners, and other practitioners occurs via press releases, emails, and social media and documents such as asset management plans, internal guidance and projections for spending

Use accurate and precise language - avoid language that contains opinions, inaccuracies, or conclusions

What does this mean?

No question what these signs mean

Choose Each Word Carefully

Use liability neutral language in safety studies, research papers, policies and manuals

The following list is a sample of words that can create unintended liability or responsibility for an agency. It is by no means comprehensive.

Better	Insufficient
Clearly	Is needed
Concern	Mandatory
Danger/Dangerous	Obstacle
Deficient	Poor
Edge/Shoulder Drop off	Problem
Ensure	Require
Essential	Risk/Risky
Excessive	Shall
Hazard	Should
Hot Spot	Trap
Imperative	Unsafe
Inadequate	Worse

Use of “certain” words

Phrases such as “consideration should be given” and “wherever possible” **appear** to provide flexibility to agency staff with responsibilities of reading and interpreting policy. **However**, “wherever possible” and similar phrases should not be used - while they emphasize the importance of the instruction, they also require action to be taken.

The use of the terms “strategies” or “guidelines” or “toolbox” do not have the same legal effect as the words “standards” and “policy” and can be considered as substitutes for those words.

Surplus Language

Surplus language can be words that are redundant or duplicative or words that seek to explain a concept that does not require explanation

Surplus language can impact the clarity of an idea or provide a plaintiff's lawyer with a theory of negligence that would not have been apparent from a clearly written sentence

What should I say?

"Consider" the use of these words

In some contexts, even "liability neutral" words may create liability for an agency. Neutral words must be considered in context to determine the risk of liability with the words' use. A list of illustrative words that provide flexibility is provided below.

Application of engineering judgment	Guideline
As soon as practicable	May
Criteria/factors that may be considered	Normal
Consider	Potentially contributing factors
Can	Roadside "feature" or "condition" or "object" or "device" rather than "hazard" or "risk"
Candidates for shielding	Strategy
Could	Toolbox
Difference in elevation rather than edge or shoulder drop off	When/Where feasible
Factors that contribute to the probability	

Language Found in Policies

Semadeni v. Ohio Department of Transportation

Suit filed against Ohio Department of Transportation after decedent struck by debris thrown from a bridge as he passed under an overpass. Plaintiff claimed that Semadeni's death was the result of ODOT's negligent failure to install protective fencing on the overpass.

Five years before the crash occurred, in response to repeated instances of objects being thrown from overpasses, ODOT instituted a policy that required the installation of protective fencing on all bridges unless "adequate justification for not doing so [could] be furnished."

Consider a schedule or timetable for implementation of the policy to avoid liability. Determine a reasonable implementation period based upon engineering judgment and availability of funds.

Agency Discretion and Engineering Judgment

Rothrock v. United States

The court found the DOT immune from suit, declining to replace its judgment with the DOT's judgment, reasoning that the DOT had to balance factors such as cost and safety.

Plaintiff was injured when his car left the road on I-65 in Indiana and rolled down a steep embankment. Plaintiff alleged that the accident was caused by the absence of a guardrail at the location where the vehicle left the road.

When a policy, guideline or standard allows the use of engineering judgment, an agency may be able to avoid liability, if it has acted in an otherwise reasonable manner. Documentation of the thought process and analysis undertaken by the agency during the decision-making process will aid the agency in defense of dangerous condition claims.

Examples from Policy Documents

Data obtained by extensive review of DOT documents found online

Reviewed policy manuals from multiple state and local agencies, published research papers and national guidance

Reworking to be Liability Neutral

"Due to the dynamic nature of the work zone environment, recoverable designs are achieved first by not allowing unprotected ~~hazards~~ conditions created by construction activities ~~(such as drop-offs~~)(such as a differential between the elevation of the roadway and the shoulder of more than two inches) within the work zone clear zone area and second by shielding unavoidable ~~hazards~~ conditions like utility poles with positive protection devices. Traversable designs are achieved by maintaining the minimum allowable side slope of 1 to 3 in a ~~hazard-free~~ location that usually requires a significant roadside width for high-speed roadways."

"When relocation is not possible, mitigation, or doing things to ~~make a hazard~~ shield a feature or condition ~~less dangerous~~, can be a good compromise between maintaining the work zone clear zone and shielding ~~hazards~~ objects in the work zone. However, there are limitations that must be considered, including constructability, time duration, and roadway width and length. *For example, constructing a 4 to 1 wedge of compacted surfacing material to smooth* drop-offs differences *in elevation between the road and shoulder may be* possible feasible *with shoulder delineation and proper signing of the ~~drop-off condition~~ elevation differential*. The longer the duration of work, the more practical this approach becomes."

Reworking to be Liability Neutral

"The use of the DR-46 MBA under guardrail reduces the risk likelihood of the motorcyclist impacting dangerous guardrail posts."

Taken from an advertisement for guardrail:

Reworking to be Liability Neutral

ROADWAY CLEAR ZONES GUIDANCE

- "On rural local streets and rural collector routes the clear zone ~~shall be 6 feet~~ provides a benefit to the driver. ~~and on.~~ On rural collectors the clear zone ~~shall~~ may be 11 feet.
- Rural local streets have a clear zone of 6 feet, subject to the geometrics of the road and engineering judgment.
- Where ~~hazards~~ objects are within the clear zone, guardrail or barrier wall ~~shall be provided~~ should be considered at least 6 feet off the traveled way.
- For urban sections, the clear zone is 4 feet from face of curb. On urban local streets the clear zone may be reduced to 2.5 feet ~~under unusual~~ conditions as determined with the application of engineering judgment.
- Documentation of any departure from this guidance by the roadway designer should be kept with the project file."

Schedule Policy Reviews

- Instructional manuals should be subjected to a scheduled comprehensive technical review to search for guidance and phrases that are confusing or inaccurate
- Agency personnel who implement the policy must be involved with its review
- Counsel should be actively involved in revisions of policy

Protections Under 23 U.S.C. § 407

Studies that contain information that an agency has gathered to evaluate highway safety appurtenances may be helpful to the agency in identifying areas that require attention such as improperly placed guardrail posts or guard cable which has not been properly maintained.

23 U.S.C. § 407 provides for the protection of reports, surveys, schedules, lists, or data compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential accident sites, hazardous roadway conditions, or railroad-highway crossings.

This law provides that the data gathered for these purposes shall not be subject to discovery or admitted into evidence in a court proceeding arising from an occurrence at a location that is mentioned or addressed in those reports, surveys, schedules, lists, or data.

Safety studies in the custody should not be published or allowed into the public domain.

Match Field Conditions to Language in Guidance

A conflict between written policy and the application of the policy in the field will usually be resolved in favor of the plaintiff rather than the DOT. Example – policy says repair within 24 hours, practice in field varies considerably

Policy or guidance language must match the practices in the field and all instructions should be written so that it is easy to understand and interpret for all employees

What if that's "not practical"?

Document the Decision-Making Process

- Who
- What
- When
- Where
- Why
- How

Questions?

Resources:

- National Academies of Sciences, Engineering, and Medicine. 2020. *Guidelines for Drafting Liability Neutral Transportation Engineering Documents and Communication Strategies*. Washington, DC: The National Academies Press. https://doi.org/10.17226/25894.

- U.S. Department of Transportation Federal Highway Administration. 2008. *Specification Writer's Guide*. Washington, DC: The U.S. Department of Transportation. Microsoft Word - FLH Style Guide 04-15-08.doc (dot.gov)

PUTTING LIABILITY NEUTRAL (AND NON-NEUTRAL) LANGUAGE TO THE TEST

Showing the Difference in Litigation Outcomes When Liability Neutral Language is Used to Document Design, Operational and Maintenance Decisions.

Presented by Heidi A. Skinner

Assistant County Counsel, San Diego County Counsel

LEARNING LIABILITY NEUTRAL LANGUAGE

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.

Foreword

In the legal system, transportation engineering documents drafted by the transportation industry include manuals, studies, research documents, memoranda, and email. These documents are frequently used by litigants and courts as evidence bearing on the standard of care 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 and language that can have legal implications by promoting clear, direct, objective, and fact-based expression.

This digest may be used as a practical resource for developers and reviewers of engineering documents, researchers, practitioners, and those who implement safety projects.

TEST CASE – **NOT** USING LIABILITY NEUTRAL LANGUAGE

- Collision on a two-lane, rural roadway
- Non-standard shoulder widths of 1-2 feet
- Vehicle loses traction in a curve
- Vehicle leaves the roadway off to the right, goes into the dirt, corrects left, and crosses over the double yellow lines into oncoming traffic
- Vehicle hits vehicle traveling in the traffic lane on the wrong side of the road
- Catastrophically injured driver and moderate injuries to passenger
- Plaintiffs allege the pavement differential between the edge of the roadway and the roadway caused the vehicle to "shoot" over into oncoming traffic

HISTORICAL SHOULDER DROP-OFF RESEARCH

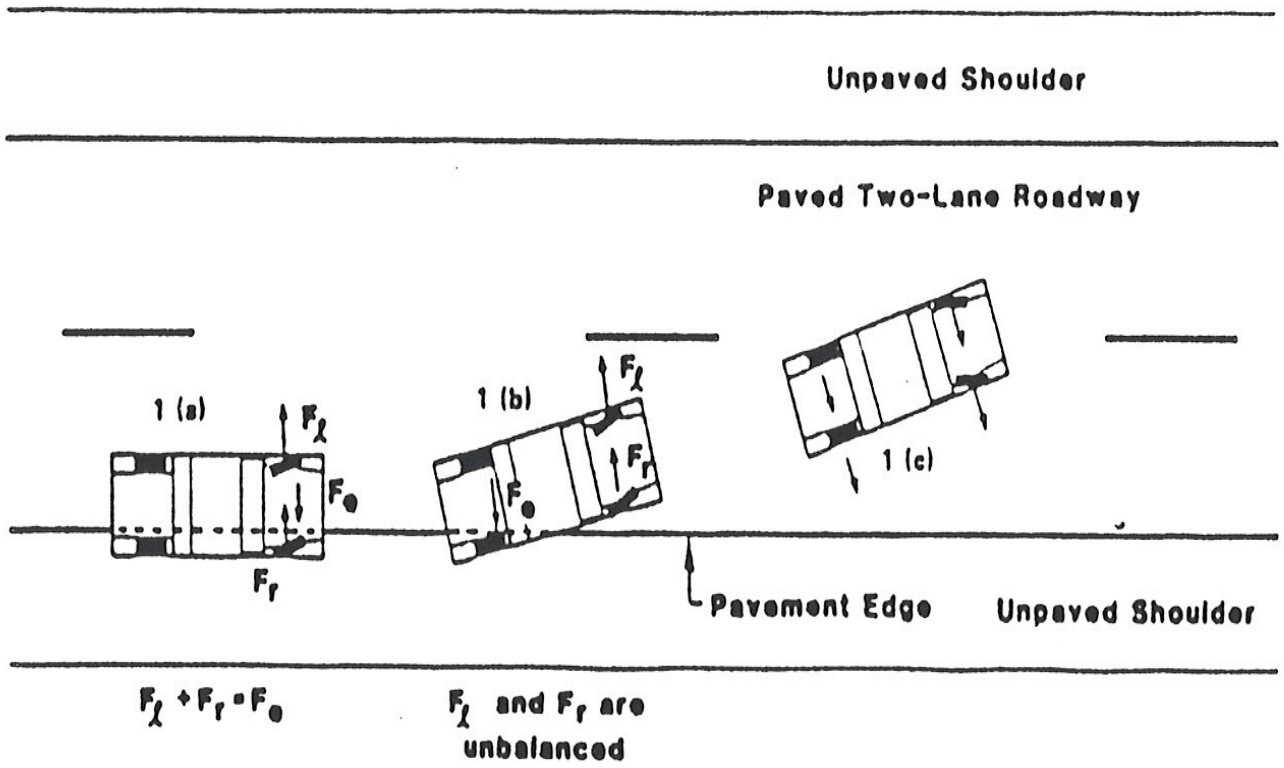
- The Effect of Longitudinal Edge of Paved Surface Dropoff on Vehicle Stability, California Department of Transportation March 1976 (51 pages);
- Vehicle Controllability in a Pavement/Shoulder Edge Climb Maneuver, SAE Technical Series, 780620, June, 1978 (74 pages);
- The Influence of Roadway Surface Discontinuities on Safety, TRB, National Research Council – Washington D.C. 1984 (20 pages);
- The Influence of Pavement Edge and Shoulder Characteristic on Vehicle Handling and Stability, January 1986 (58 pages);
- Pavement Edge Drop-Final Report, January 1986 (80 pages);

HISTORICAL SHOULDER DROP-OFF RESEARCH

- Elimination or Mitigation of Hazards Associated with Pavement Edge Drop-off During Roadway Resurfacing, February 1998 (24 pages);
- Safety Impacts of Pavement Edge Drop-offs, September 2006 (146 pages);
- Safety Evaluation of the Safety Edge Treatment, Publication Number FHWA-HRT-11-024, April 2011, Bate-stamped CT-Parv-00316 to CT-Parv-000406 (91 pages);
- Safety Evaluation of the Safety Edge Treatment, Year 1 Interim Report; MRI Project No. 110495.1.001, April 2008 (79 pages);
- Safety Evaluation of the Safety Edge Treatment, Year 2 Interim Report; MRI Project No. 110495.1.001, May 2009 (79 pages);

VEHICLE CONTROLLABILITY IN A PAVEMENT/SHOULDER EDGE CLIMB MANEUVER

Figure 1. Loss of vehicle control caused by driver's attempt to return to the roadway.



NON-NEUTRAL

- Dangerous/Hazardous
- Worse/Worst
- Unacceptable/Insufficient
- Unsafe
- Concern/Problem

NON-NEUTRAL LANGUAGE ON DISPLAY

Jonathon.Vigil@dot.anywherecounty.anystate.gov

From: Vigil, Jonathon K@DOT

Sent: Wednesday, April 20, 2015

To: J.Smith@dot.anywherecounty.anystate.gov

Subject: Highway Maintenance Project Status

Attachments: LD0605 RFI

Jonathon;

After reviewing the T-dot Traffic Safety Report, I agree with you – the location of SR-525 in Anywhere County stretching along Old Gulch Lane, is **unacceptable**. The **hazard** created by the pavement differential makes the area **unsafe** for negligent drivers.

Given the **danger** presented by the drop-off I am not understanding why the project has not been greenlighted to move forward asap! We need to speak with the Director if this is not resolved immediately.

Jonathon Vigil
Senior Transportation Engineer, Project LD0605
Project Construction Offices
1001 East Loop Drive
Anwhere East, USA
(010) 840-7509

Transportation Agency Mission: Provide safe and sustainable, equitably based transportation networks to increase global, national, regional and local transportation projects.

THE VERDICT

SUPERIOR COURT OF THE STATE OF EVERYWHERE
FOR THE COUNTY OF ANWHERE

We answer the questions submitted to us as follows:

1. Was JACKSON BROWN negligent?

X Yes ____ No

If you answered yes to question 1, then answer question 2. If you answered no, insert the number zero next to JACKSON BROWN's name in question 8, skip question 2 and answer question 3.

2. Was JACKSON BROWN's negligence a substantial factor in causing harm JOHN J. SMITH and JULIE A. SMITH

____ Yes X No

If you answered yes to question 2, then answer question 3. If you answered no, insert the number zero next to Jackson Brown's name in question 9, and answer question 4.

3. Was the property of the COUNTY OF ANYWHERE in a dangerous condition at the time of the accident?

X Yes ____ No

If you answered yes to question 3, then answer question 4. If you answered no, insert the number zero next to the name of the COUNTY OF ANYWHERE in question 9, skip questions 4 through 7, and answer question 8.

4. Did the dangerous condition the COUNTY OF ANYWHERE's property create a reasonably foreseeable risk that this kind of injury would occur?

X Yes ____ No

If you answered yes to question 4, then answer question 5. If you answered no, insert the number zero next to the name of the COUNTY OF ANYWHERE in question 9, skip questions 5 through 7, and answer question 8.

5. Did the COUNTY OF ANYWHERE have notice of the dangerous condition of its property for a long enough time to have protected against it?

X Yes ____ No

If you answered yes to question 5, then answer question 6. If you answered no, insert the

number zero next to the name of the COUNTY OF ANYWHERE in question 9, skip questions 6 and 7, and answer question 8.

6. Was the COUNTY OF ANYWHERE's failure to take sufficient steps to protect against the risk of injury created by the dangerous condition of its property reasonable under the circumstances?

____ Yes X No

If you answered yes to question 6, insert the number zero next to the name of the COUNTY OF ANYWHERE in question 9. If you answered no, then answer question 7.

7. Was the dangerous condition of the COUNTY OF ANYWHERE a substantial factor in causing harm to JOHN J. SMITH and JULIE A. SMITH?

X Yes ____ No

If you answered no to question 7, insert the number zero next to the name of the COUNTY OF ANYWHERE in question 9. Whether you answered yes or no to question 7, answer question 8.

8. What are Plaintiffs' damages?

JOHN J. SMITH :

a. Past and Future economic loss: $3479,852.00

b. Past and Future non-economic loss: $10,000,000

JULIE A. SMITH

a. Past and Future economic loss: $23,703.00

b. Past and Future non-economic loss: $10,000,000

9. What percentage of responsibility for harm to JOHN J. SMITH and JULIE A. SMITH do you attribute to the following:

JACKSON BROWN 0 %

COUNTY OF ANYWHERE 100 %

TOTAL 100%

Signed: [signature] Presiding Juror

Dated: June 15, 2020

JUROR COMMENTS

How could you not know it was dangerous with all the studies?!?

It took way too long to make such a simple fix. I pay my taxes so that roads like this do not happen. I just cannot believe the County knew it was unsafe and did nothing for 2 years.

You admitted it wasn't safe!! So you should have handled it.


SHOULDER
DROP
OFF

TEST CASE – **USING** LIABILITY NEUTRAL LANGUAGE

- Collision on a two-lane, rural roadway
- Non-standard shoulder widths of 1-2 feet
- Vehicle crosses over the centerline into oncoming traffic
- Vehicle hits vehicle traveling in the traffic lane on the wrong side of the road
- Three fatalities, including the driver who crossed into the oncoming lane and one catastrophically injured passenger
- Plaintiffs allege the failure to install a median barrier led to the collision and their harms.

MEDIAN BARRIER STUDIES

- Median Study – 1952, 1958
- Effectiveness of Median Barriers – August 1964
- Median Barriers and Accident Prevention – October 1966
- Transportation Research Record, No. 1784, Statistical Methodology, Applications to Design, Data Analysis, and Evaluation – TRB 2002
- Keeping Traffic on the Right Side of the Road – 2005
- Experience with Cable Median Barriers in the United States: Design Standards, Policies and Performance – 2009

MEDIAN BARRIER STUDIES

- ❑ AASHTO Roadside Design Guide – 2011
- ❑ State Practices on Barrier Use in Wide Freeway Medians – 2015, Caltrans Division of Research, Innovation and System Information.
- ❑ A Comparison of freeway median crash frequency, severity, and barrier strike outcomes by median barrier type - 2018
- ❑ FHWA Publication – Safety Evaluation of Cable Median Barriers in Combination with Rumble Strips on the Inside Shoulder of Divided Roads - Technical Report FHWA-HRT-17-070.

U.S.Department of Transportation
Federal Highway Administration

OFFICE OF SAFETY
Proven Safety Countermeasures

8%
of all fatalities on divided highways are due to head-on crashes.[1]

Safety Benefits:
Median Barriers Installed on Rural Four-Lane Freeways

97%
reduction in cross-median crashes.[2]

For more information on this

Median Barriers

Median barriers are longitudinal barriers that separate opposing traffic on a divided highway and are designed to redirect vehicles striking either side of the barrier. Median barriers significantly reduce the number of cross-median crashes, which are attributed to the relatively high speeds that are typical on divided highways. AASHTO's ***Roadside Design Guide*** (RDG) recommends guidelines for the use of median barriers on high-speed, fully controlled-access roadways for locations where the median is 30 ft in width or less and the average daily traffic (ADT) is greater than 20,000 vehicles per day (vpd). For locations with median widths greater than 50 ft and where the ADT is less than 20,000 vpd, a median barrier is optional. For locations where the median is between 30 and 50 feet, the RDG suggests an analysis to determine the cost effectiveness of median barrier installation. Median barriers can be cable, metal-beam, or concrete.

- **Cable barriers** are flexible barriers, made from steel cables mounted on weak steel posts, resulting in less occupant impact force as it absorbs energy from the crash, capturing or redirecting the vehicle. Due to larger deflection, median width is an important consideration. These barriers are more adaptable to slopes typically found in medians. Cable barriers tend to require more frequent maintenance and repair than other barrier types.
- **Metal-beam guardrails** are considered semi-rigid barriers, where the W-beam or box-beam is mounted to steel or timber posts. When impacted, they are designed to deform and deflect, absorbing some of the crash energy and redirecting the vehicle. Metal-beam guardrails often do not require maintenance after minor impacts. They deflect less than cable barriers, so they can be located closer to objects where space is limited.
- **Concrete barriers** are usually rigid and result in little to no deflection. They redirect rather than absorb repositioning after an impact but are typically less maintenance than a post mounted barrier.

To reduce cross-median crashes, transportation agencies should review their head-on crash history on divided highways to identify hot spots. Agencies should also consider implementing a systemic approach to median barrier placement based on cross-median crash risk factors. Potential risk factors include:

- Traffic volumes.
- Vehicle classifications.
- Median crossover history.
- Crash incidents.
- Vertical and horizontal alignment.
- Median terrain configurations.

LIABILITY NEUTRAL

Consider

Where feasible

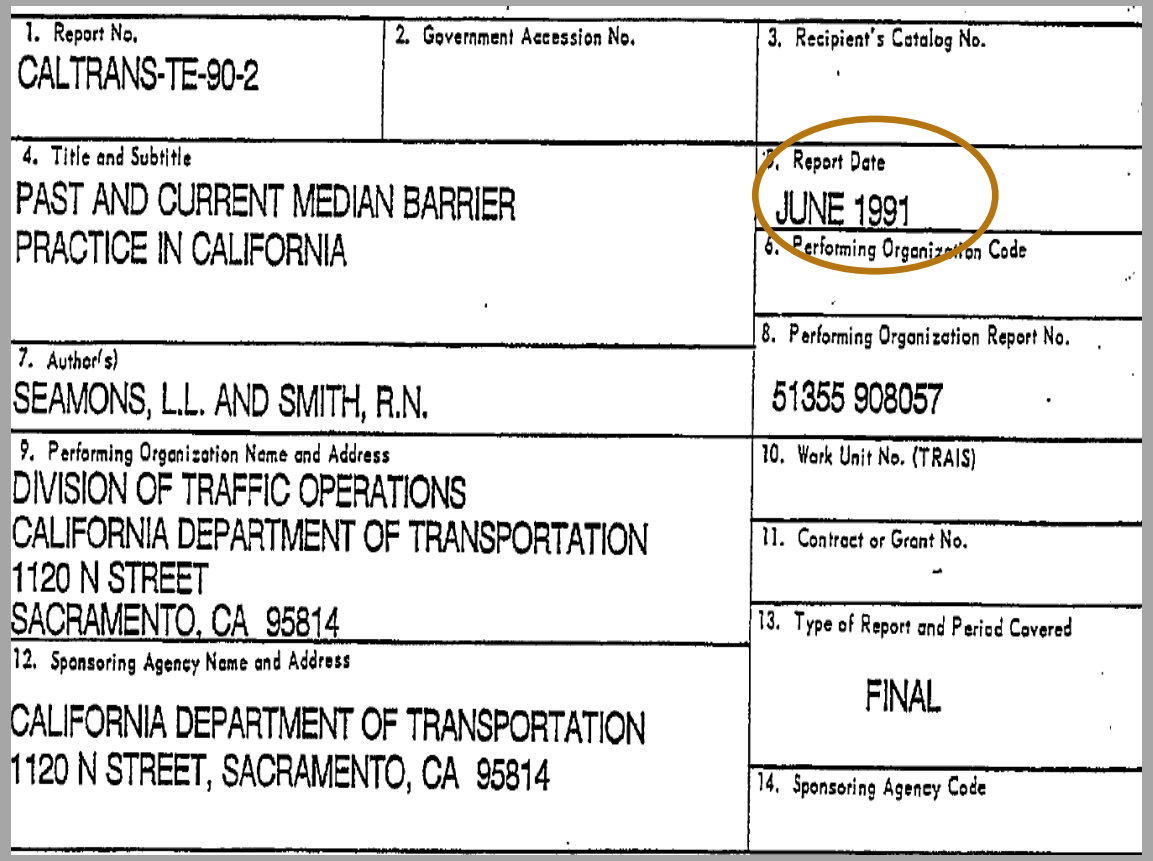
Enhance/Improve/Benefit

Supplement/Added

Discretionary

PUBLICATIONS AND THE LEGAL CONSTRUCT

The Practice



1. Report No.	2. Government Accession No.	3. Recipient's Catalog No.
CALTRANS-TE-90-2		
4. Title and Subtitle PAST AND CURRENT MEDIAN BARRIER PRACTICE IN CALIFORNIA		5. Report Date JUNE 1991 6. Performing Organization Code
7. Author(s) SEAMONS, L.L. AND SMITH, R.N.		8. Performing Organization Report No. 51355 908057
9. Performing Organization Name and Address DIVISION OF TRAFFIC OPERATIONS CALIFORNIA DEPARTMENT OF TRANSPORTATION 1120 N STREET SACRAMENTO, CA 95814		10. Work Unit No. (TRAIS) 11. Contract or Grant No.
12. Sponsoring Agency Name and Address CALIFORNIA DEPARTMENT OF TRANSPORTATION 1120 N STREET, SACRAMENTO, CA 95814		13. Type of Report and Period Covered FINAL 14. Sponsoring Agency Code

The Findings

- Traffic volume/median-width warrant and accident warrants are effective in identifying locations for barrier installation.
- Accident warrants identify more locations than detailed engineering investigations indicate are justified.
- Concrete barrier accidents are somewhat more severe than thrie-beam in wider medians.
- Before and after study shows median area accidents will increase 10-20 percent with barrier installation on freeways, and on non-freeways, all accidents increase 50% or more.

ALVAREZ V. STATE OF CALIFORNIA (1999)
70 CAL. APP. 4TH 720, 724

The Policy Becomes the Legal Standard

MEDIAN BARRIER WARRANTS

Median barriers result in a trade-off. They prevent nearly all cross-median accidents, but usually result in an overall increase in accidents and injuries. A median barrier is a fixed object which, when hit, can cause serious injury either by direct impact or by deflecting vehicles back into traffic. In addition, a barrier eliminates half the recovery area for out-of-control vehicles. Based on studies of the effectiveness of median barrier placement, California has developed a median barrier policy. The policy reflects the fact that as traffic volumes rise, the chance that an errant vehicle will cross the median *725 and strike an opposing vehicle increases. But as the median reaches a certain width, it is less likely that those events will occur. With medians 46 feet or wider, regardless of traffic volume, the benefits of preventing cross-median accidents and injuries by barrier placement are outweighed by the disadvantages of the accidents and injuries generated by a barrier. The only exception to this rule is at those locations where there is a demonstrable history of excessive cross-median accidents: an accident rate of 0.12 fatal or 0.50 total cross-median accidents per mile per year.

DATA & INCREMENTAL IMPROVEMENTS ARE THE FOUNDATION OF THE DEFENSE

RESTRIPING

CENTERLINE MEDIAN BUFFER & RUMBLE STRIPS

SHOULDER WIDENING & CURVE REALIGNMENT

DAYTIME HEADLIGHT SECTION

CENTERLINE DELINEATORS

Installation on two- or three-lane facilities further depends on meeting all or most of the following minimum criteria:

1. An apparent increasing trend of severe cross-center-line accidents;

2. The normal long-term improvements such as adding lanes or facility upgrading are not immediately viable options due to funding or environmental constraints;

3. Other reasonable options such as buffer zone, barrier striping etc., have already proven ineffective at the location under study;

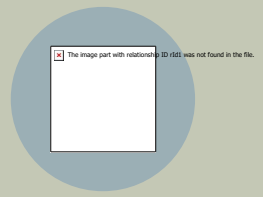
4. Operational features of the roadway include high speeds, high volumes, minimal ingress/egress, and few intersections;

5. After installation the roadway meets all minimum design standards as outlined by the State and Local Project Development Program.

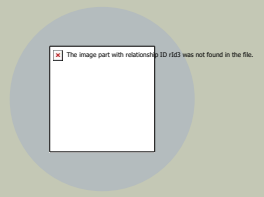
WHAT THE JURY SAID…

- ❑Reasonable trade off to use lesser methods first even if not eliminating "cross over" accidents.
- ❑Driver Responsibility is important.
- ❑Lots of roadways like this, but it is not feasible to put in median barrier in every location.
- ❑Plaintiffs did not show that the other methods did not work – they simply claimed that the collision meant the roadway was safe – but that is now what the court instructed us."

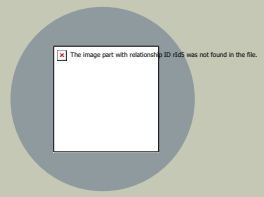
CONSISTENCY IN LANGUAGE



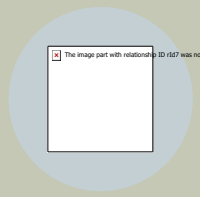
POLICIES



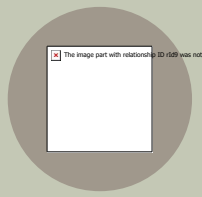
PRESENTATIONS



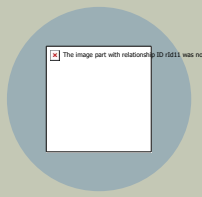
STUDIES AND RESEARCH



EMAILS



REPORTS



MANUALS

ANY QUESTIONS??

Today's presenters

Brelend C. Gowan
bcgowan@hotmail.com
Attorney at Law & Legal Consultant

Heidi Skinner
Heidi.skinner@sdcounty.ca.gov
County of San Diego

Terri Parker
Terri.Parker@modot.mo.gov
Missouri Department of Transportation

NATIONAL ACADEMIES *Sciences Engineering Medicine*

Upcoming events for you

July 19, 2023

TRB Webinar: Community-Based and Equitable Transportation Response in Disaster

July 23-26, 2023

TRB Workshop on Transportation Law

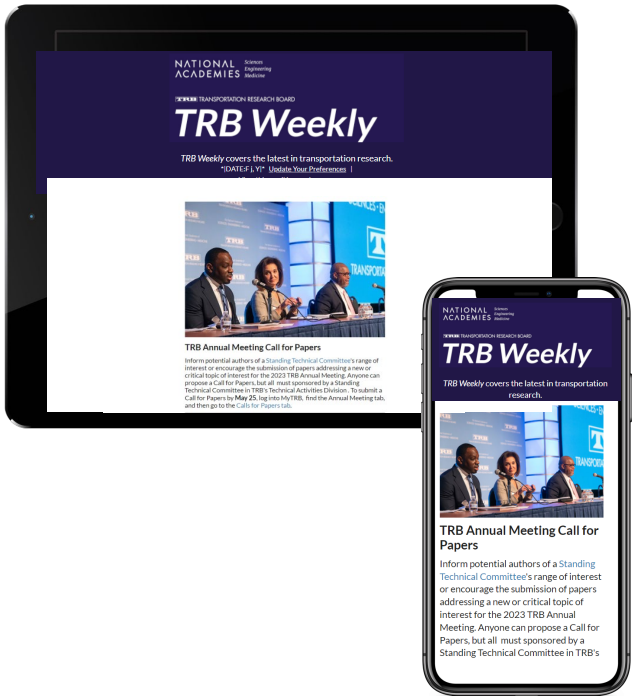
https://www.nationalacademies.org/trb/events

Subscribe to *TRB Weekly*

If your agency, university, or organization perform transportation research, you and your colleagues need the *TRB Weekly* newsletter in your inboxes!

Each Tuesday, we announce the latest:

- RFPs
- TRB's many industry-focused webinars and events
- 3-5 new TRB reports each week
- Top research across the industry



Spread the word and subscribe!
https://bit.ly/ResubscribeTRBWeekly

Discover new TRB Webinars weekly

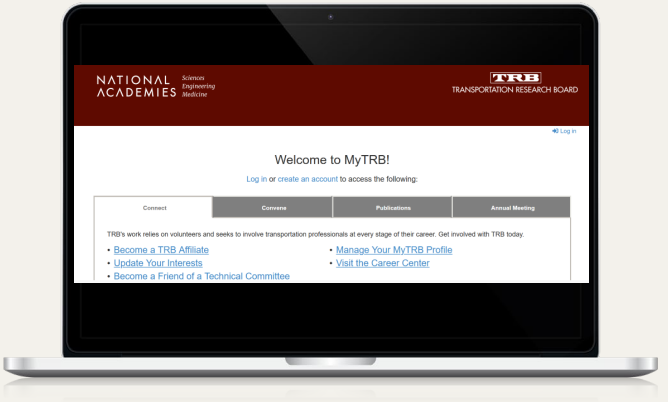
Set your preferred topics to get the latest listed webinars and those coming up soon every Wednesday, curated especially for you!

https://mailchi.mp/nas.edu/trbwebinars

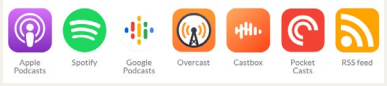
And follow #TRBwebinar on social media

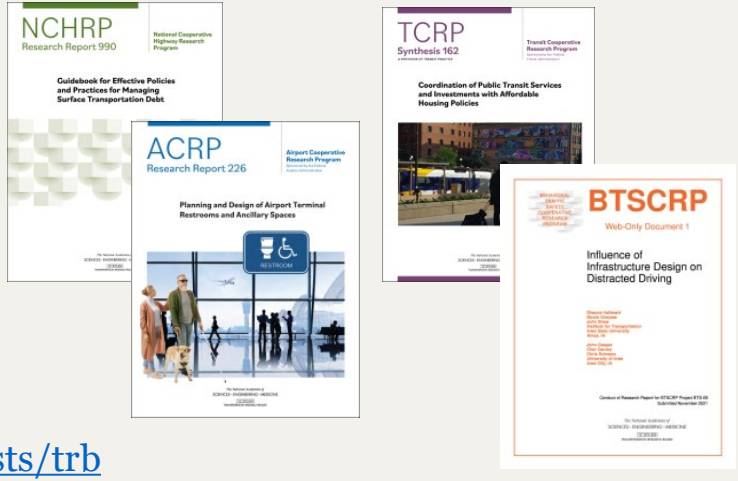
Get involved

https://www.nationalacademies.org/trb/get-involved



- **Become a Friend of a Standing Technical Committee**
  Network and pursue a path to Standing Committee membership
- **Work with a CRP**
- **Listen to our podcast**





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

We want to hear from you

- **Take our survey**
- **Tell us how you use TRB Webinars in your work at trbwebinar@nas.edu**

NATIONAL ACADEMIES Sciences Engineering Medicine