TRB Snap Search: Rail Safety Innovations

TRB’s involvement in research on Rail Safety Innovations from 2020-2022

The Transportation Research Board (TRB) provides innovative, research-based solutions to improve how we move. TRB is part of the National Academies of Sciences, Engineering, and Medicine, an independent, non-profit institution that provides objective advice on scientific, engineering, and medical issues.

A resource to the nation and to the transportation community worldwide, TRB provides an extensive portfolio of services:

- Opportunities for information exchange on current transportation research and practice
- Management of cooperative research and other research programs
- Analyses of national transportation policy issues and guidance on federal and other research programs
- Publications and access to research information from around the world

All available Snap Searches can be accessed online here: [http://www.trb.org/InformationServices/Snap.aspx](http://www.trb.org/InformationServices/Snap.aspx)

TRB Research

TRID – The world’s largest and most comprehensive bibliographic source on all modes and disciplines of transportation
- Click here to view search results on TRB published research Rail Safety Innovations within the past two years.

Subject Webpage

- Rail Research at TRB

Specialty Reports

- Critical Issues in Transportation 2019
- COVID-19 Addendum to Critical Issues in Transportation
- Racial Equity Addendum to Critical Issues in Transportation

Recent Reports & Publications

- IDEA Safety Projects
  - Report 42 - Railroad Tunnel Inspections for Maintenance and Replacement Prioritization Using Untethered Ground Penetrating Radar and LIDAR Capable Unmanned Aerial Vehicles (UAVs)
  - Report 38 - Minimization of Weld Failures by Means of Gas and Shrinkage Porosity Reduction
  - Report 37 - Measuring Behavior of Railroad Bridges under Revenue Traffic using Lasers and Unmanned Aerial Vehicles (UAVs) for Safer Operations: Implementation
  - Report 36 - Onboard High-Bandwidth Fiber-Optic Sensing System for Broken Rail Detection

- Transit Cooperative Research Program (TCRP)
  - IDEA Report 95 - Connected and Automated Parking Feasibility – A Pilot Study
  - IDEA Report 92 - Augmented Reality Dispatcher Interface
  - Report 233 - Strategies for Deterring Trespassing on Rail Transit and Commuter Rail Rights-of-Way, Volume 1: Guidebook
  - Report 233 - Strategies for Deterring Trespassing on Rail Transit and Commuter Rail Rights-of-Way, Volume 2: Research Overview
  - Report 229 - Assessing and Mitigating Electrical Fires on Transit Vehicles
  - Report 218 - Characteristics and Elements of Non-Punitive Employee Safety Reporting Systems for Public Transportation
  - Report 212 - Stray Current Control of Direct Current-Powered Rail Transit Systems: A Guidebook

Current & Upcoming Projects

- Current Projects
  - NCHRP 08-111 - Effective Decision-Making Methods for Freight-Efficient Land Use
  - TCRP A-46 - Quantitative Procedures for Designing and Operating Ferry Transit Services
- **Upcoming Projects**
  - TCRP D-19 - Detecting and Mitigating Low-Level DC Fault Currents in Transit Systems (Phase II TCRP Project D-17)
  - TCRP J-05/Topic 19-03 - Navigating the Complexities of Sensitive Security Information (SSI) and Protected Critical Infrastructure Information (PCII)
  - TCRP Synthesis J-07/Topic SB-34 - Coordination of Public Transit Services and Investments with Affordable Housing Policies

Reports from the [National Academies Press](https://www.nap.edu) on Safety Innovations

- [Investing in Resilient Infrastructure in the Gulf of Mexico](https://www.nap.edu)
- [Service Life Assessment and Predictive Modeling for an Aging Critical Infrastructure](https://www.nap.edu)
- [Engineering for Pandemics: Preparedness, Response, and Recovery](https://www.nap.edu)
- [The Future of Electric Power in the United States](https://www.nap.edu)
- [Exploring the Current Landscape of Consumer Genomics](https://www.nap.edu)
- [Compounded Topical Pain Creams - Review of Select Ingredients for Safety, Effectiveness, and Use](https://www.nap.edu)
- [Regulating Medicines in a Globalized World](https://www.nap.edu)
- [A Quadrennial Review of the National Nanotechnology Initiative](https://www.nap.edu)
- [Evidence-Based Practice for Public Health Emergency Preparedness and Response](https://www.nap.edu)

Committees & Panels

**Sign-up to be a committee "Friend"**

**TRB Standing Committees** – Search by transportation mode and committee topic

- AMR30 - Transportation for National Defense
- AP065 - Rail Transit Systems
- AR000 - Rail Group
- AR010 - Intercity Passenger Rail
- AR020 - Passenger Rail Transportation
- AR030 - Railroad Operating Technologies
- AR040 - Freight Rail Transportation
- AR050 - Railroad Infrastructure Design and Maintenance
- AR060 - Rail Transit Infrastructure Design and Maintenance
- AR070 - Rail Safety
- AR080 - Highway/Rail Grade Crossings
- AT010 - Freight Transportation Economics and Regulation
- AT020 - International Trade and Transportation
- AT030 - Agricultural and Food Transportation
- AT040 - Transportation of Hazardous Materials
- AT045 - Intermodal Freight Transport
- E1008 - Rail Safety Innovations Deserving Exploratory Analysis (IDEA)

**Task Forces** - Search for *task force* under committee here

Councils

- A001C - Young Members Coordinating Council

Recent and Upcoming Events

**Upcoming TRB Conferences** – Use left hand menu to filter events

**TRANSED: Mobility, Accessibility, and Demand Response Transportation Conference**

*September 12-16, 2022*

Online
Conference on Scenario Planning in Transportation Planning
September 19-21, 2022
Washington, D.C.

Upcoming Events – In the Upcoming Events tab under Types, choose what event you are interested in, search titles by keyword

Past Events - In the Past Events tab under Types, choose what event you are interested in, search titles by keyword

TRB’s Transportation Research Information Services (TRIS)

TRIS includes the TRB Library and the TRIS Databases (listed below) which are available free on TRB’s website.

The TRB Library provides information services to TRB staff, sponsors, TRB Committee members and panels and researchers. Access to the TRB Library is a benefit to TRB sponsors and TRB committee members.

In cooperation with your State DOT Library or Information Service, the TRB Library provides:

- Reference and research assistance
- Literature searches
- Articles for TRB Committee work

The TRB Library provides training on effective and efficient use of the following TRIS resources:

- Transportation Research International Documentation (TRID) – trid.trb.org - The world’s largest and most comprehensive bibliographic source on all modes and disciplines of transportation
- Transportation Research Thesaurus (TRT) – trt.trb.org - A tool to improve the indexing and retrieval of transportation information.
- Research in Progress (RIP) Database – rip.trb.org - Current or recently completed transportation research projects
- Research Needs Statements (RNS) – rns.trb.org - Research needs as identified by TRB Technical Activities standing committees
- Publications Index (PubsIndex) Database – pubsindex.trb.org - The papers, articles and reports published by the Transportation Research Board, Strategic Highway Research Programs or the Marine Board

Contact or Questions: TRBLibrary@nas.edu