TRB Snap Search: Operations & Traffic Management

TRB's involvement in research on Operations & Traffic Management from 2022-2023

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 on Operations & Traffic Management within the past year.

Subject Webpage

- [Operations & Traffic Management Research at TRB](http://www.trb.org/)

Recent Reports & Publications

- **Airport Cooperative Research Program (ACRP)**
  - Report 247 - Airfield Pavement Markings: Effective Techniques for Removal and Temporary Applications
  - Report 237 - Primer and Framework for Considering an Airport Noise and Operations Monitoring System
  - Report 231 - Evaluating the Traveler's Perspective to Improve the Airport Customer Experience
  - Report 230 - Enhancing Academic Programs to Prepare Future Airport Industry Professionals
  - Report 229 - Airport Collaborative Decision Making (ACDM) to Manage Adverse Conditions
  - Synthesis 116 - Airport Parking Pricing Strategies
  - Synthesis 117 - Agricultural Operations on Airport Grounds

- **Behavioral Traffic Safety Cooperative Research Program (BTSCRP)**

- **National Cooperative Highway Research Program (NCHRP)**
  - IDEA Report 228 - A Retroreflective Road Lane Marking Tape 1,000X Brighter than Existing Technology
  - IDEA Report 217 - A Real-Time Proactive Intersection Safety Monitoring and Visualization System Based on Radar Sensor Data
  - IDEA Report 209 - An Automated System for Pedestrian Facility Data Collection from Aerial Images
  - IDEA Report 190 - Self-de-icing LED Signals for Railroads and Highway Intersections
  - Report 1006 - Guide to Understanding Effects of Raising Speed Limits
  - Report 1005 - Motorcycle Crashes into Traffic Barriers: Factors Related to Serious and Fatal Injuries
  - Report 1003 - Guide to Alternative Technologies for Preventing and Mitigating Vehicle Intrusions into Highway Work Zones
  - Report 981 - Development of Guidelines for Quantifying Benefits of Traffic Incident Management Strategies
  - Report 978 - Initiating the Systems Engineering Process for Rural Connected Vehicle Corridors, Volume 1: Research Overview

Updated 11/16/2022
Current & Upcoming Projects

**Transit Cooperative Research Program (TCRP)**
- **IDEA Report 95** - Connected and Automated Parking Feasibility – A Pilot Study
- **Report 238** - Quantitative Procedures for Designing and Operating Ferry Transit Services
- **Report 237** - Fare-Free Transit Evaluation Framework
- **Report 234** - Measuring and Managing Fare Evasion
- **Synthesis 159** - Assessing Equity and Identifying Impacts Associated with Bus Network Redesigns

**Report 969** - Traffic Signal Control Strategies for Pedestrians and Bicyclists
**Synthesis 587** - Use of Smart Work Zone Technologies for Improving Work Zone Safety
**Synthesis 575** - Lighting Practices for Isolated Rural Intersections
**Synthesis 561** - Use of Vehicle Probe and Cellular GPS Data by State Departments of Transportation
**Web-Only Document 328** - Safety Effects of Raising Speed Limits to 75 mph and Higher
**Web-Only Document 327** - Serious and Fatal Motorcycle Crashes into Traffic Barriers: Injury Information
**Web-Only Document 322** - Alternative Technologies for Mitigating the Risk of Injuries and Deaths in Work Zones: Conduct of Research
**Web-Only Document 318** - Safety Prediction Models for Six-Lane and One-Way Urban and Suburban Arterials
**Web-Only Document 301** - Guidelines for Quantifying Benefits of Traffic Incident Management Strategies

- **ACRP Insight Event**
- **ACRP 03-39** - Effective Collaboration to Plan and Respond to Communicable Disease Threats
- **ACRP 03-52** - Guidelines for Adapting and Managing Airport Common Use Programs
- **ACRP 03-63** - Modernizing Air Cargo Operations and Infrastructure at U.S. Airports
- **ACRP 03-66** - Guidebook for Digital Twin Programs at Airports
- **ACRP 04-26** - Uncontrolled Terminal Evacuations: Planning, Response, and Recovery
- **ACRP 07-17** - Update to ACRP Report 40: Airport Roadway Analysis and Curbside Congestion Management Strategies
- **ACRP 09-21** - Asset Information Handover Guidelines: From Planning and Construction to O&M
- **ACRP 10-31** - Guidebook for Virtual Airport Ramp Control Operations Facilities
- **ACRP 10-32** - U.S. Airport Industry Adoption of Automated Ground Vehicle Systems
- **ACRP 11-02/Task 37** - Periodic Report on Transformative Technology at Airports
- **ACRP 11-08(20-01)** - ACRP Insight Event—Future of Aviation
- **ACRP Synthesis 11-03/Topic S01-26** - The Landscape of the FBO Industry in 2022
- **ACRP Synthesis 11-03/Topic S02-22** - Airport Programs that Reduce Landside Vehicle Carbon Emissions
- **ACRP Synthesis 11-03/Topic S03-17** - Airport Centric Advanced Air Mobility Market Study
- **ACRP Synthesis 11-03/Topic S04-26** - Managing a Flight Diversion with an Emergency Response at Small, Non-Hub, or General Aviation Airports
- **ACRP Synthesis 11-03/Topic S10-19** - Airport Landside Operations Data and Collection Method
- **ACRP Synthesis 11-03/Topic S10-20** - Resilience Partnerships with the Air National Guard and other Military Organizations
- **BTS/CRP BTS-06** - MPO and SHSO Coordination on Behavioral Traffic Safety
- **NCHRP 02-26** - Implementation of Life-Cycle Planning Analysis in a Transportation Asset Management Framework
- **NCHRP 03-114(01)** - Planning and Evaluating Active Traffic Management Strategies
- **NCHRP 03-126** - Transportation Operations Manual
- **NCHRP 03-128** - Business Intelligence Techniques for Transportation Agency Decision Making
- **NCHRP 03-129** - Essential Communications
- **NCHRP 03-134** - Determination of Encroachment Conditions in Work Zones
- Wrong-Way Driving Solutions, Policy, and Guidance
- Evaluating the Performance of Right-Turn-On-Red Operation at Signalized Intersections (with single and dual right-turn lanes)
- Application of Big Data Approaches for Traffic Incident Management (TIM)
- Next Generation of the USLIMITS2 Speed Limit Setting Expert System
- Evaluating the Impacts of Real-Time Warnings and Variable Speed Limits on Safety and Travel Reliability during Weather Events
- Leveraging Existing Traffic Signal Assets to Obtain Quality Traffic Counts and Enhance Transportation Monitoring Programs
- Gaps and Emerging Technologies in the Application of Solid-State Roadway Lighting
- Methods for Assigning Short-Duration Traffic Volume Counts to Adjustment Factor Groups for Estimating AADT
- Guidebook for Data and Information Systems for Transportation Asset Management
- Accessing America’s Great Outdoors: Forecasting Recreational Travel Demand
- Reliability and Quality of Service Evaluation Methods for Rural Highways
- Guide for Truck Parking Information Management Systems
- Utilizing Cooperative Automated Transportation (CAT) Data to Enhance the Use of Freeway Operational Strategies
- Improving Public Transportation in Rural Areas and Tribal Communities
- Estimating Benefits of Closing Gaps in Active Transportation Networks
- Best Practices for Data Fusion of Probe and Point Detector Data
- Modern Solutions to Safe and Efficient Work Zone Travel
- Determining the Impact of Connected and Automated Vehicle Technology on State DOT Maintenance Programs
- Operational Performance and Safety Effects of Arterial Weaving Sections
- Design Options to Reduce Turning Motor Vehicle–Bicycle Conflicts at Intersections
- Estimating Effectiveness of Safety Treatments in the Absence of Crash Data
- Roadside Encroachment Database Development and Analysis
- Developing Safety Performance Functions for Rural Two-Lane Highways that Incorporate Speed Measures
- Crash Modification Factors (CMFs) for Intelligent Transportation System (ITS) Applications
- Guide for Intersection Control Evaluation
- Safety Effectiveness Assessment of Advanced Highway-Rail Grade Crossing Improvements
- Assessing Safety Effectiveness of Treatments and Technologies at Highway-Rail Grade Crossings
- Developing Crash Modification Factors for Alternative Intersections
- Sustaining Zero-Fare Public Transit in a Post COVID-19 World: A Guide for State DOTs
- Collective and Individual Actions for State Departments of Transportation Envisioning and Realizing the Next Era of America’s Transportation Infrastructure – Phase I
- Enhancements of Climatic Inputs and Related Models for Pavement ME Using LTPP Climate Tool (MERRA-2)
- Best Practices in Rural Service Assessment
- Impacts of Connected, Automated Vehicle Technologies on Traffic Incident Management Response
- Preparing Transportation Agencies for Connected and Automated Vehicles in Work Zones
- System Mobility and Emerging Technologies (SMET): Strategic Planning Session and Research Roadmap Development
- Proposed AASHTO Guidelines for Implementation of MASH for Sign Supports, Breakaway Poles, and Work Zone Traffic Control Devices
- Telecommuting, Remote Work, and Hybrid Schedules: Managing the Shift to a Flexible Work Future
- Regulatory Relief of Commercial Vehicle Weight Requirements for Emergency Transportation of Critical Commodities
- Guidebook for Implementation of UAS Operational Capabilities
- Automated System for Large-Scale Intersection Marking Data Collection and Condition Assessment
- Identifying the Current Practice of Contrast Pavement Markings by Departments of Transportation
- Micromobility Policies, Permits, and Practices
- Critical Findings for Tunnel Functional Systems
o NCHRP Synthesis 20-05/Topic 54-05 - Practices for Statewide and MPO Coordination
o NCHRP Synthesis 20-05/Topic 54-13 - Truck Escape Ramp Design and Operation
o TCRP B-49 - Improving Public Transportation in Rural Areas and Tribal Communities
o TCRP D-21 - Planning for the Future of Intermodal Passenger Facilities: Guide and Decision-Making Framework
o TCRP Synthesis I-07/Topic SA-55 - On Street Bus Operations Management
o TCRP Synthesis I-07/Topic SB-36 - Dynamic Optimization on ADA Paratransit Service
o TCRP Synthesis I-07/Topic SG-20 - Performance Metrics in Third Party Contracts for Bus Operations and Maintenance
o Transit IDEA J-04/IDEA 99 – Bike Love

• Upcoming Projects
  o ACRP 02-98 - Airport Energy Resiliency Primer and Roadmap
  o ACRP 03-69 - Identifying Congestion and Safety Risks Due to Heterogeneous Airport Curbside Activity and Remedial Solutions
  o ACRP 03-70 - Incorporating Emerging Technologies into Airport In-Terminal Concession Programs
  o ACRP 03-74 - ACRP WebResource to Support Research into Air Traveler Choice Models
  o ACRP 06-08 - Human Factors in Airport Operations
  o ACRP 10-33 - Incorporating Emerging Transportation and Ground Access Technologies at Airports
  o ACRP 10-35 - Automatic Dependent Surveillance-Broadcast (ADS-B) Airport Traffic Count Validation and Recommendations
  o ACRP 11-08(20-02) - ACRP Insight Event--On-Demand Aviation Services for Passengers and Goods
  o NCHRP 03-143 - Warrants for a Pedestrian Traffic Control Signal and for Other Pedestrian Traffic Control Devices
  o NCHRP 03-145 - National Traffic Sensor System Evaluation Program
  o NCHRP 03-147 - LED Applications on Traffic Control Devices
  o NCHRP 03-146 - Guide for Transportation Operations Manual Implementation
  o NCHRP 03-148 - Capabilities, Requirements, Planning, and Preparing to Virtually Operate Traffic Management Systems (TMS)
  o NCHRP 03-149 - Signal Timing Manual: Development of the Third Edition
  o NCHRP 05-27 - Practitioners’ Guide for Lighting at Innovative Intersections/Interchanges, including Roundabouts
  o NCHRP 07-34 - Artificial Intelligence for Transportation Systems Management and Operations Applications
  o NCHRP 08-130 - Best Practices in Coordination of Public Transit and Ride Sharing
  o NCHRP 08-138 - Guide to the Integration of Transportation Systems Management and Operations into Transportation Asset Management
  o NCHRP 08-141 - A Guidebook for Local Truck Parking Regulations
  o NCHRP 08-143 - Guide to the Application of Spatial Segmentation on Travel Time Reliability Measures
  o NCHRP 08-144 - Best Practices in Determining Rural Transit Fleet Size – How to Provide Service forChanging Demographics of Rural Ridership (Right-sizing of Rural Transit Fleets)
  o NCHRP 08-146 - Integrating Resiliency into Transportation System Operations
  o NCHRP 15-79 - Development of Guidance for Non-Standard Roadside Hardware Installations
  o NCHRP 15-82 - Effects of Operating Speed and Posted Speed Limit in Conjunction with Roadway Geometric Design on Safety Performance for High-Speed Rural Highways and Freeways
  o NCHRP 17-109 - Crash Modification Factors for Automated Traffic Signal Performance Measures
  o NCHRP 17-111 - Speed Management Strategies to Improve Pedestrian and Bicyclist Safety on Arterials and Higher-Speed Roadways
  o NCHRP 17-114 - Integrated Strategies for Managing High Travel Speeds
  o NCHRP 17-115 - Guide for Marked Crosswalk Design, Spacing, Placement, and Safety
  o NCHRP 17-118 - Understanding the Impacts of Operational Changes on Safety Performance
  o NCHRP 17-119 - Conflict-Based Crash Prediction Method for Intersections
  o NCHRP 17-122 - Evaluation of Trespassing Detection and Warning Systems in the Vicinity of Highway-Rail Grade Crossings
  o NCHRP 19-23 - Revenue-Related Strategies for New Mobility Options
  o NCHRP 20-123(18) - Development of a New Transportation System Operations Strategic Plan
  o NCHRP 22-42 - Impact Performance Assessment of Barrier Performance at High Speeds
  o NCHRP 23-13(04) - Scoping Supply Chain Challenges and Solutions amid COVID-19
  o NCHRP 23-13(06) - Assessing the Equity and Workforce Mobility Implications of the Expansion of E-Commerce and Direct-to-Consumer Delivery Services
  o NCHRP 23-19 - Practices for Transportation Agency Procurement and Management of Advanced Technologies
  o NCHRP 23-28 - Changes to 4.9 Ghz Spectrum Access and Authorization – What You Need to Know
  o TCRP B-50 - Accessible Public Bus and Rail Passenger Information for Riders with Vision Disabilities
  o TCRP I-05/Topic 19-05 - Legal Issues Surrounding Disasters and Evacuations
Reports from the National Academies Press on Operations & Traffic Management

- Planning the Future Space Weather Operations and Research Infrastructure
- Enhancing Operational Effectiveness of U.S. Naval Forces in Highly Degraded Environments: Autonomy and Artificial Intelligence in Unmanned Aircraft Systems
- Enabling DoD’s Test Ranges and Infrastructure to Meet Threats and Operational Needs in the 21st Century
- Aviation After a Year of Pandemic

Committees & Panels

Sign-up to be a committee "Friend"

TRB Standing Committees – Search by transportation mode and committee topic

- ACP00 - Operations
- ACP10 – Regional Transportation Systems Management and Operations
- ACP15 – Intelligent Transportation Systems
- ACP20 – Freeway Operations
- ACP25 – Traffic Signal Systems
- ACP30 – Vehicle-Highway Automation
- ACP35 – Managed Lanes
- ACP40 – Highway Capacity and Quality of Service
- ACP50 – Traffic Flow Theory and Characteristics
- ACP55 – Traffic Control Devices
- ACP60 – Access Management
- ACP80 - Traffic Simulation
- AKD10 – Performance Effects of Geometric Design
- AKD80 – Roundabouts and other Intersection Design and Control Strategies
- AKR10 – Maintenance and Operations Management
- AMR20 – Disaster Response, Emergency Evacuations, and Business Continuity
- AR080 – Highway/Rail Grade Crossings
- AV095 - New Users of Shared Airspace

Task Forces - Search for task force under committee here

Policy Study

- B0024 - Research and Technology Coordinating Committee (FHWA)

CRP Panels

- D08119 - Developing Data Standards and Guidance for Transportation Planning and Traffic Operations – Phase I
- D08138 - Connecting Transportation Asset Management (TAM) and Transportation System and Management Operations (TSMO)
- D08146 - Integrating Resiliency into Transportation System Operations
- D17101 - Applying the Safe System Approach to Transportation Planning, Design, and Operations in the United States
- D2007424 - Best Practices for the Operations of Movable Bridges from Remote Locations
- D2012318 - Development of a New Transportation System Operations Strategic Plan
- DA0135 - Transportation Network Companies (TNCs): Impacts to Airport Revenues and Operations
- DA0289 - Industry Survey - Benefits and Costs for Airport Noise and Operations Monitoring Systems
- DA0348 - Advanced Ground Vehicle Technologies (AGVT) for Airside Operations
- DA0363 - Modernizing Air Cargo Operations and Infrastructure at U.S. Airports
- DA0608 - Human Factors in Airport Operations
- DA0717 - Update ACTP Report 40: Airport Curbside and Terminal Area Roadway Operations
- DA0921 - Guidelines for the Effective Transition of Asset Data from Design/Construction to Operations and Maintenance
- DA1031 - Guidebook for Virtual Airport Ramp Control Operations Facilities
- DA1032 - Airside Automated Ground Vehicle Technology (AGVT) Demonstration to Support Airport Operations
- SAS1016 - Airport Operations Training at Small Airports
- SAS1019 - Airport Landside Operations Data and Collection Method
- Use of Probe Data for Freight Planning and Operations
- Practices to Identify and Mitigate PFAS Impacts on Highway Construction Projects and Maintenance Operations
- Practices for Capturing Costs of Maintenance Operations in Maintenance Management Systems
- On Street Bus Operations Management
- Performance Metrics in Third Party Contracts for Bus Operations and Maintenance
- Ferry Transit Operations and Capacity Guidebook

Councils
- Young Members Coordinating Council
- City Transportation Issues Coordinating Council
- Rural Transportation Issues Coordinating Council

Recent and Upcoming Events

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

- **International Conference on Road Weather and Winter Maintenance**  
  *May 9-10, 2023*  
  *Washington, D.C.*

- **National Aviation System Planning Symposium**  
  *May 15-18, 2023*  
  *Irving, CA*

- **Innovations in Travel Analysis and Planning Conference**  
  *June 4-6, 2023*  
  *Indianapolis, IN*

- **Marine Transportation System Innovative Science and Technologies Toward Greater Sustainability**  
  *June 19-22, 2023*  
  *Washington, D.C.*

- **National Conference on Transportation Asset Management**  
  *July 8-11, 2023*  
  *Boston, MA*

- **TRB International Conference on Low Volume Roads**  
  *July 23-26, 2023*  
  *Cedar Rapids, IA*

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

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**TRB’s Transportation Research Information Services (TRIS)**

TRIS includes the [TRB Library](https://library.trb.org) and the [TRIS Databases](https://library.trb.org/ris) (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](https://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](https://trt.trb.org) - A tool to improve the indexing and retrieval of transportation information.
- **Research in Progress (RiP) Database** – [rip.trb.org](https://rip.trb.org) - Current or recently completed transportation research projects
- **Publications Index (PubsIndex) Database** – [pubsindex.trb.org](https://pubsindex.trb.org) - The papers, articles and reports published by the Transportation Research Board, Strategic Highway Research Programs or the Marine Board
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