TRB Snap Search: Operations & Traffic Management

TRB’s involvement in research on Operations & Traffic Management from 2019-2020

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)](http://www.trb.org/)
  - Impacts on Practice - Redesigning the Communications Center at Phoenix–Mesa Gateway Airport
  - Report 220 - Guidebook for Developing a Zero- or Low-Emissions Roadmap at Airports
  - Report 207 - Optimizing the Use of Electric Preconditioned Air (PCA) and Ground Power Systems for Airports
  - Report 201 - Airport Emergency Communications for People with Disabilities and Others with Access and Functional Needs
  - Synthesis 105 - Airport Surface Weather Observation Options for General Aviation Airports
  - Synthesis 99 - Emergency Working Groups at Airports

- Conference Proceedings
  - Proceedings 56 - Socioeconomic Impacts of Automated and Connected Vehicles

- [IDEA Report](http://www.trb.org/)
  - Safety IDEA Report 29 - Self- Deicing LED Signal for Railroads and Highway Intersections

- [National Cooperative Freight Research Program (NCFRP)](http://www.trb.org/)
  - Report 39 - Freight Transportation Resilience in Response to Supply Chain Disruptions

- [National Cooperative Highway Research Program (NCHRP)](http://www.trb.org/)
  - NCHRP 25-25/Task 105 - A Guidebook for Communications between Transportation and Public Health Communities
  - NCHRP 20-1111 - Successful Practices for State Transportation Research Office's Complying with 2 CFR 200
  - NCHRP 20-65/Task 77 - Lessons Learned and Impacts to Date of State DOT Implementation of New Federal Transit Asset Management and Public Transportation Agency Safety Requirements
  - IDEA Report 193 - Turning Movement Counts on Shared Lanes: Prototype Development and Analysis Procedures
  - Report 934 - Traffic Forecasting Accuracy Assessment Research
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<tr>
<th>Report 929</th>
<th>Unsignalized Full Median Openings in Close Proximity to Signalized Intersections</th>
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<td>Road User Understanding of Bicycle Signal Faces on Traffic Signals</td>
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**Transit Cooperative Research Program (TCRP)**
- IDEA Report 89 - Dynamic Vehicle to Infrastructure TCIP Communications Laboratory Proof of Concept
- IDEA Report 84 - Development of a Mass-Based Automated Passenger Counter
- Synthesis 149 - Transit Signal Priority: Current State of the Practice
- Synthesis 139 - Transit Service Evaluation Standards

**Transportation Research Circulars**
- E-Circular 261 - Preparing for Automated Vehicles and Shared Mobility: Mini-Workshop on the Economic Implications of Automated Vehicles and Shared Mobility
- E-Circular 253 - Transformational Technologies in Transportation: Impacts on Traditional Research Processes and Programs
- E-Circular 247 - TRB Forum on Preparing for Automated Vehicles and Shared Mobility: Mini-Workshop on the Importance and Role of Connectivity
- E-Circular 244 - Mobility on Demand: A Smart, Sustainable, and Equitable Future

**TRB Special Reports**
- Report 329 - Renewing the National Commitment to the Interstate Highway System: A Foundation for the Future

**Current & Upcoming Projects**

**Current Projects**
- ACRP 01-36 - Advancing the Practice of State Aviation System Planning
- ACRP 01-37 - Performance Measures for State Aviation Agencies
- ACRP 01-40 - Evaluating the Traveler's Perspective to Improve the Airport Customer Experience
- ACRP 01-43 - Conducting Consumer Research of Air Passengers
- ACRP 02-85 - Commercial Space Vehicle Emissions Modeling
- ACRP 02-86 - Understanding Impacts to Airports from Temporary Flight Restrictions
- ACRP 03-48 - Advanced Ground Vehicle Technologies (AGVT) for Airside Operations
- ACRP 03-49 - Effective Collaboration to Plan and Respond to Communicable Disease Threats
- ACRP 03-51 - Electric Aircraft on the Horizon -- An Airport Planning Perspective
- ACRP 03-52 - Guidelines for Adapting and Managing Airport Common Use Programs
- ACRP 06-05 - Guidance for Diversity in Airport Businesses Contracting and Workforce Programs
- ACRP 06-07 - Enhancing Academic Programs to Prepare Future Airport Industry Professionals
- ACRP 08-03 - Construction Safety and Phasing Plans
- ACRP 09-18 - Rapid Airfield Concrete Pavement Slab Replacement and Patching
- ACRP 10-27 - Using Collaborative Decision Making to Enhance the Management of Adverse Conditions
- ACRP 09-19 - Airfield Pavement Markings - Effective Techniques for Removal and Temporary Applications
- ACRP 11-02/Task 32 - Airport Environmental Research Roadmap
- ACRP 11-08/20-01 - ACRP Insight Event--Future of Aviation
- BTS/SCR BTS-01 - Guidance for Employer-Based Behavioral Traffic Safety Programs for Drivers in the Workplace
- BTS/SCR BTS-02 - Variable Message Signs
- BTS/SCR BTS-06 - MPO and SHSO Coordination on Behavioral Traffic Safety
- BTS/SCR BTS-07 - Assessing the Impacts of Connected, Automated, and Autonomous Vehicles on the Future of Transportation Safety (jointly funded with NCHRP 17-91)
- NCHRP 02-26 - Implementation of Life-Cycle Planning Analysis in a Transportation Asset Management Framework
- NCHRP 02-27 - Making Targets Matter: Managing Performance to Enhance Decision-Making
- NCHRP 03-126 - Transportation Operations Manual
- NCHRP 03-129 - Essential Communications
- NCHRP 03-128 - Business Intelligence Techniques for Transportation Agency Decision Making
- NCHRP 03-130 - Guide for Roundabouts
- NCHRP 03-133 - Traffic Signal Design and Operations Strategies for Non-Motorized Users
- 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)
- Algorithms to Convert Basic Safety Messages into Traffic Measures
- Guide for Snow and Ice Control Operations
- Update of Highway Capacity Manual: Merge, Diverge, and Weaving Methodologies
- Integrating Effective Transportation Performance, Risk, and Asset Management Practices
- Guidebook for Data and Information Systems for Transportation Asset Management
- Framework for Managing Data from Emerging Transportation Technologies to Support Decision-Making
- Risk Assessment Techniques for Transportation Asset Management
- Accessibility Measures in Practice: Guidance for Transportation Agencies
- Quantifying the Impacts of Corridor Management
- A Guidebook for Risk-Based Construction Inspection
- Determining the Impact of Connected and Automated Vehicle Technology on State DOT Maintenance Programs
- Effective Low-Noise Rumble Strips
- Guidebook for Urban and Suburban Roadway Cross-Sectional Reallocation
- Proposed Guidance for Fixed Objects in the Roadside Design Guide
- Estimating Effectiveness of Safety Treatments in the Absence of Crash Data
- Roadside Encroachment Database Development and Analysis
- Safety Performance of Part-Time Shoulder Use on Freeways
- Assessing the Impacts of Automated Driving Systems (ADS) on the Future of Transportation Safety
- Developing Safety Performance Functions for Rural Two-Lane Highways that Incorporate Speed Measures
- Crash Modification Factors (CMFs) for Intelligent Transportation System (ITS) Applications
- AASHTO Guidelines for the Operation of Movable Bridges from Remote Locations
- State-of-the-Art Review of Cooperative Automated Transportation (CAT) Systems
- Implementation of the AASHTO Guide for Enterprise Risk Management
- Quantitative and Qualitative Methods for Capturing the Impacts and Value of NCHRP Research
- Enhancements of Climatic Inputs and Related Models for Pavement ME Using LTPP Climate Tool (MERRA-2)
- Best Practices in Rural Service Assessment
- Cybersecurity Implications of CV/AV Technologies on State and Local Transportation Agencies
- How to Measure and Communicate the Value of Access Management
- Pollinator Habitat Conservation Along Roadways
- Development of a Novel Aerodynamic Solution to Mitigate Large Vibrations in Traffic Signal Structures
- From Location Tracking to Continuous Interpretation: Rule-Based Automated Safety Work Zone Safety
- The Portable Single Lane Traffic Counting Device
- A Real-Time Proactive Intersection Safety Monitoring and Visualization System Based on Radar Sensor Data
- Utility Pole Safety and Hazard Evaluation Approaches
- Emerging Challenges to Tolling on Managed Lanes
- Lighting Practices for Isolated Rural Intersections
- Use of Smart Work Zone Technologies for Improving the Safety of Workers and Drivers Affected by Work Zone Activity
- Measuring and Managing Fare Evasion
- Characteristics and Elements of Non-Punitive Employee Safety Reporting Systems for Public Transportation
- Fix It, Sign It, or Close It: State of Good Repair in an Era of Budget Constraints
- Transit and Micro-Mobility (Bikeshare, Scooter-share, etc.)
- The Use of Intelligent Transportation Systems in Real-Time Bus Operations
- Augmented Reality Transit Dispatcher Interface

- Upcoming Projects
ACRP 01-41 - Blockchain Technology and Airports - A Primer
ACRP 03-57 - A Guidebook to Prepare Airports for Transformations in Wireless Connectivity
ACRP 03-58 - Measuring the Effect of Changes in Air Service Connectivity on Regional Economic Development
ACRP 06-08 - Human Factors in Airport Operations
ACRP 07-17 - Update to ACRP Report 40: Airport Roadway Analysis and Curbside Congestion Management Strategies
ACRP 10-31 - Remote Airport Ramp Control Facilities -- Guidelines for U.S. Airports
ACRP 11-02/Task 37 - Periodic Report on Transformative Technology at Airports
ACRP 11-08(19-01) - A Forum on Blockchain Technology and Airports
ACRP 11-08(20-02) - ACRP Insight Event--On-Demand Aviation Services for Passengers and Goods
ACRP Synthesis 11-03/Topic S04-26 - Managing an Emergency or Incident Associated with Flight Diversion at Airports
NCHRP 03-96A - Analysis of Oversaturated Traffic Flow Conditions on Freeway Facilities
NCHRP 03-138 - Application of Big Data Approaches for Traffic Incident Management (TIM)
NCHRP 03-139 - Next Generation of the USLIMITS2 Speed Limit Setting Expert System
NCHRP 03-141 - Midblock Pedestrian Signal (MPS) Warrants and Operation
NCHRP 07-30 - Assignment of Short-Duration Traffic Volume Counts to Adjustment Factor Groups
NCHRP 08-138 - Connecting Transportation Asset Management (TAM) and Transportation System and Management Operations (TSMO)
NCHRP 08-140 - National Design and Interoperability Standards for Truck Parking Information Management Systems
NCHRP 08-141 - Guidance for Local Truck Parking Regulations
NCHRP 08-143 - Impact of Spatial Segmentation on Travel Time Reliability Performance Measures
NCHRP 08-145 - Utilizing Cooperative Automated Transportation (CAT) Data to Enhance the Use of Freeway Operational Strategies
NCHRP 08-147 - Design Guide for Rural Deviated Fixed Route Transit Systems
NCHRP 10-109 - Modern Solutions to Safe and Efficient Work Zone Travel
NCHRP 15-66 - Operational Performance and Safety Effects of Arterial Weaving Sections
NCHRP 15-73 - Design Options to Reduce Turning Motor Vehicle–Bicycle Conflicts at Intersections
NCHRP 15-76 - Designing for Target Speed
NCHRP 15-79 - Development of Guidance for Non-Standard Roadside Hardware Installations
NCHRP 17-98 - Intersection Control Evaluation (ICE) Guide
NCHRP 17-99 - Safety Effectiveness Assessment of Advanced Highway-Rail Grade Crossing Improvements
NCHRP 20-24(126) - National Automation Readiness Framework: Coast-to-Coast Automated Mobility
NCHRP 20-102(28) - Preparing Transportation Agencies for Connected and Automated Vehicles in Work Zones
NCHRP 22-42 - Impact Performance Assessment of Barrier Performance at High Speeds
NCHRP 22-43 - Developing Testing Protocol for a Family of Devices - Signs, Breakaway Poles, and Work Zone Devices

Reports from the National Academies Press on Operations & Traffic Management

- Management Models for Future Seismological and Geodetic Facilities and Capabilities
- Report 3 on Tracking and Assessing Governance and Management Reform in the Nuclear Security Enterprise
- Review of the Bureau of Ocean Energy Management "Air Quality Modeling in the Gulf of Mexico Region" Study

Committees & Panels

Sign-up to be a committee "Friend"

TRB Standing Committees – Search by transportation mode and committee topic

- 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
- AKD10 – Performance Effects of Geometric Design
- AKD80 – Roundabouts and other Intersection Design and Control Strategies
- AKR10 – Maintenance and Operations Management
Task Forces - Search for task force under committee here

Policy Study
- B0024 - Research and Technology Coordinating Committee (FHWA)
- B0165 - Role of Public Transportation and Mobility Management in an Era of New and Expanding Shared Mobility Options

CRP Panels
- Project Panels Related to Operations & Traffic Management

Councils
- A001C – Young Members Coordinating Council

Recent and Upcoming Events

Upcoming Conferences - Left hand menu “upcoming conferences by topic”
(Conferences cosponsored by TRB are denoted with an asterisk.)

- Bridging Transportation Researchers Online Conference*
  
  August 12, 2020  
  Online

- 2020 International Conference on Winter Maintenance and Surface Transportation Weather and Winter Maintenance National Peer Exchange  
  September 21, 2020  
  Atlanta, Georgia

- ITS World Congress 2020*
  
  October 4, 2020  
  Online

Webinars – View upcoming webinars, suggest a webinar or add registration information

Past Webinars
- Operations and Traffic Management

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:

TRID – The world’s largest and most comprehensive bibliographic source on all modes and disciplines of transportation - trid.trb.org

Publications Index (PubsIndex) Database – The papers, articles and reports published by the Transportation Research Board, Highway Research Board, Strategic Highway Research Programs or the Marine Board - pubsindex.trb.org

Research in Progress (RiP) Database – Current or recently completed transportation research projects - rip.trb.org

Research Needs Statements (RNS) – Research needs as identified by TRB Technical Activities standing committees - rns.trb.org

Contact the Library at TRBLibrary@nas.edu or l (202) 334-2989