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

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

Recent Reports & Publications

- Airport Cooperative Research Program (ACRP)
  - Impacts on Practice - Redesigning the Communications Center at Phoenix–Mesa Gateway Airport
  - 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 99 - Emergency Working Groups at Airports

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

- National Cooperative Freight Research Program (NCFRP)
  - Report 39 - Freight Transportation Resilience in Response to Supply Chain Disruptions

- National Cooperative Highway Research Program (NCHRP)
  - NCHRP 25-25/Task 105 - A Guidebook for Communications between Transportation and Public Health Communities
  - NCHRP 20-111J - Successful Practices for State Transportation Research Office's Complying with 2 CFR 200
  - IDEA Report 193 - Turning Movement Counts on Shared Lanes: Prototype Development and Analysis Procedures
  - Report 904 - Leveraging Big Data to Improve Traffic Incident Management
  - Report 894 - Performance of Longitudinal Barriers on Curved, Superelvated Roadway Sections
  - Synthesis 541 - Practices on Acquiring Proprietary Data for Transportation Applications
  - Synthesis 533 - Very Short Duration Work Zone Safety for Maintenance and Other Activities

- Transit Cooperative Research Program (TCRP)
  - Synthesis 139 - Transit Service Evaluation Standards

- Transportation Research Circulars

Updated 12/13/2019
• **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 02-82** - Advancing Airport Transportation to Achieve Zero-Emissions Status

• **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 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 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 Synthesis 11-03/Topic S01-19** - Data Acquisition and Protocols for Risk Management

• **ACRP Synthesis 11-03/Topic S10-15** - Current Landscape of UAS Use at Airports

• **BTSCRBP BTS-01** - Guidance for Employer-Based Behavioral Traffic Safety Programs for Drivers in the Workplace

• **BTSCRBP BTS-02** - Variable Message Signs

• **BTSCRBP BTS-06** - MPO and SHSO Coordination on Behavioral Traffic Safety

• **BTSCRBP 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

• **NCHRP 03-134** - Determination of Encroachment Conditions in Work Zones

• **NCHRP 03-135** - Wrong-Way Driving Solutions, Policy, and Guidance

• **NCHRP 03-136** - Evaluating the Performance of Right-Turn-On-Red Operation at Signalized Intersections (with single and dual right-turn lanes)

• **NCHRP 03-137** - Algorithms to Convert Basic Safety Messages into Traffic Measures

• **NCHRP 07-26** - Update of Highway Capacity Manual: Merge, Diverge, and Weaving Methodologies

• **NCHRP 08-113** - Integrating Effective Transportation Performance, Risk, and Asset Management Practices

• **NCHRP 08-115** - Guidebook for Data and Information Systems for Transportation Asset Management

• **NCHRP 08-116** - Framework for Managing Data from Emerging Transportation Technologies to Support Decision-Making

• **NCHRP 08-118** - Risk Assessment Techniques for Transportation Asset Management

• **NCHRP 08-121** - Accessibility Measures in Practice: Guidance for Transportation Agencies

• **NCHRP 10-102** - A Guidebook for Risk-Based Construction Inspection

• **NCHRP 14-42** - Determining the Impact of Connected and Automated Vehicle Technology on State DOT Maintenance Programs

• **NCHRP 15-68** - Effective Low-Noise Rumble Strips

• **NCHRP 17-82** - Proposed Guidance for Fixed Objects in the Roadside Design Guide

- NCHRP 17-86 - Estimating Effectiveness of Safety Treatments in the Absence of Crash Data
- NCHRP 17-88 - Roadside Encroachment Database Development and Analysis
- NCHRP 17-89 - Safety Performance of Part-Time Shoulder Use on Freeways
- NCHRP 17-92 - Developing Safety Performance Functions for Rural Two-Lane Highways that Incorporate Speed Measures
- NCHRP 20-07 /Task 424 - AASHTO Guidelines for the Operation of Movable Bridges from Remote Locations
- NCHRP 20-07 /Task 420 - Road User Understanding of Bicycle Signal Symbol Indications
- NCHRP 20-24(128) - State-of-the-Art Review of Cooperative Automated Transportation (CAT) Systems
- NCHRP 20-24(124) - Performance Management Reporting Peer Exchange
- NCHRP 20-44(02) - Implementation of the AASHTO Guide for Enterprise Risk Management
- NCHRP 20-44(05) - Dissemination of “NCHRP Domestic Scan 14-01: Leading Management Practices in Determining Funding Levels for Maintenance and Preservation”
- NCHRP 20-44(09) - Quantitative and Qualitative Methods for Capturing the Impacts and Value of NCHRP Research
- NCHRP 20-50(21) - Enhancements of Climatic Inputs and Related Models for Pavement ME Using LTPP Climate Tool (MERRA-2)
- NCHRP 20-65 /Task 81 - Best Practices in Rural Service Assessment
- 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
- NCHRP 20-102(10) - Cybersecurity Implications of CV/AV Technologies on State and Local Transportation Agencies
- NCHRP 25-47 - How to Measure and Communicate the Value of Access Management
- NCHRP 25-59 - Pollinator Habitat Conservation Along Roadways
- NCHRP IDEA 20-30 / IDEA 201 - Development of a Novel Aerodynamic Solution to Mitigate Large Vibrations in Traffic Signal Structures
- NCHRP IDEA 20-30 / IDEA 206 - From Location Tracking to Continuous Interpretation: Rule-Based Automated Safety Work Zone Safety
- NCHRP IDEA 20-30 / IDEA 216 - The Portable Single Lane Traffic Counting Device
- NCHRP IDEA 20-30 / IDEA 217 - A Real-Time Proactive Intersection Safety Monitoring and Visualization System Based on Radar Sensor Data
- NCHRP Synthesis 20-05 / Topic 50-04 - Utility Pole Safety and Hazard Evaluation Approaches
- NCHRP Synthesis 20-05 / Topic 50-05 - Incorporating Access Management into Local Ordinances
- NCHRP Synthesis 20-05 / Topic 50-08 - Emerging Challenges to Tolling on Managed Lanes
- NCHRP Synthesis 20-05 / Topic 50-11 - Alternative Intersection Design and Selection
- NCHRP Synthesis 20-05 / Topic 50-15 - Asset Management Approaches to Identifying and Evaluating Assets Damaged Due to Emergency Events
- NCHRP Synthesis 20-05 / Topic 51-11 - Lighting Practices for Isolated Rural Intersections
- TCRP A-45 - Measuring and Managing Fare Evasion
- TCRP F-27 - Characteristics and Elements of Non-Punitive Employee Safety Reporting Systems for Public Transportation
- TCRP I-05 / Topic 18-05 - Fix It, Sign It, or Close It: State of Good Repair in an Era of Budget Constraints
- TCRP Synthesis I-07 / Topic SG-17 - The Use of Intelligent Transportation Systems in Real-Time Bus Operations
- Transit IDEA I-04 / IDEA 90 - sUAS-Based GeoNTEL for Commuter Rail Parking in Rural and Suburban Areas
- Transit IDEA I-04 / IDEA 92 - Augmented Reality Transit Dispatcher Interface

- **Upcoming Projects**
  - ACRP 01-41 - Blockchain Technology and Airports - A Primer
  - ACRP 03-52 - Airport Common Use Program Development Guidebook
  - ACRP 03-57 - Understanding Coming Improvements and Transformations in Wireless Connectivity: Concepts for Smarter Airports
  - 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 ACRP Report 40: Airport Curbside and Terminal Area Roadway Operations
  - ACRP 08-03 - Construction Safety and Phasing Plans
  - ACRP 11-02 / Task 37 - Periodic Report on Transformative Technology at Airports
  - ACRP 11-08 - Task Order Support for ACRP Insight Events
  - ACRP 11-08 (19-01) - A Forum on Blockchain Technology and Airports
  - ACRP 11-08 (20-01) - ACRP Insight Event – Future of Aviation
  - ACRP 11-08 (20-02) - ACRP Insight Event – On-Demand Aviation Services for Passengers and Goods
- Managing an Emergency or Incident Associated with Flight Diversion at Airports
- Analysis of Oversaturated Traffic Flow Conditions on Freeway Facilities
- Experimental Implementation of Big Data Analytics for Traffic Incident Management
- Next Generation of the USLIMITS2 Speed Limit Setting Expert System
- Guide for Snow and Ice Control Operations
- Design Options to Reduce Turning Motor Vehicle–Bicycle Conflicts at Intersections
- Designing for Target Speed
- Trade-offs for Cross-sectional Reallocation on Urban and Suburban Roads
- National Automation Readiness Framework: Coast-to-Coast Automated Mobility by 2025
- Best Practices in Work Zones for AVs and CVs
- Impact Performance Assessment of Barrier Performance at High Speeds
- Developing Testing Protocol for a Family of Devices - Signs, Breakaway Poles, and Work Zone Devices
- Transit and Micro-Mobility (Bikeshare, Scooter-share, etc.)

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

- Geometric Design
- Operations and Preservation Group
- Operations
- Regional Transportation Systems Management and Operations
- Intelligent Transportation Systems
- Freeway Operations
- Traffic Signal Systems
- Vehicle-Highway Automation
- Managed Lanes
- Highway Capacity and Quality of Service
- Traffic Flow Theory and Characteristics
- Traffic Control Devices
- Work Zone Traffic Control
- Highway/Rail Grade Crossings
- Operational Effects of Geometrics
- Access Management
- Maintenance and Operations Management
- Maintenance and Operations Personnel
- Signing and Marking Materials
- Roundabouts

Task Forces - Search for task force under committee here

Policy Study

- Research and Technology Coordinating Committee (FHWA)

CRP Panels

- Project Panels Related to Operations & Traffic Management

Councils

- Young Member Council

Recent and Upcoming Events
Upcoming Conferences - Left hand menu “upcoming conferences by topic”

(Conferences cosponsored by TRB are denoted with an asterisk.)

- **6th International Conference on Roundabouts**
  May 18, 2020
  Monterey, California

- **8th International Conference on Innovations in Travel Modeling (ITM)**
  June 14, 2020
  Seattle, Washington

- **Third International Traffic Signal Control Forum**
  July 1, 2020
  Chongqing, China

- **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
  Los Angeles, California

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](https://library.trb.org) and the [TRIS Databases](https://database.trb.org) (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](https://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](https://pubsindex.trb.org)

**Research in Progress (RiP) Database** – Current or recently completed transportation research projects - [rip.trb.org](https://rip.trb.org)

**Research Needs Statements (RNS)** – Research needs as identified by TRB Technical Activities standing committees - [rns.trb.org](https://rns.trb.org)

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