TRB Snap Search: Operations & Traffic Management

TRB’s involvement in research on Operations & Traffic Management from 2021-2022

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

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 - Investing in Self-Serve Fueling Stations at Eagle River Union Airport
  - 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 117 - Agricultural Operations on Airport Grounds

- National Cooperative Highway Research Program (NCHRP)
  - IDEA Report 209 - An Automated System for Pedestrian Facility Data Collection from Aerial Images
  - 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
  - Report 975 - Transportation System Resilience: Research Roadmap and White Papers
  - Report 969 - Traffic Signal Control Strategies for Pedestrians and Bicyclists
  - Report 952 - Guidebook for Managing Data from Emerging Technologies for Transportation
  - Report 948 - Guide for Pedestrian and Bicyclist Safety at Alternative and Other Intersections and Interchanges
  - Synthesis 575 - Lighting Practices for Isolated Rural Intersections
  - Synthesis 567 - Summary State DOT Practices for Developing and Implementing TSMO Plans
  - Synthesis 561 - Use of Vehicle Probe and Cellular GPS Data by State Departments of Transportation
  - Web-Only Document 318 - Safety Prediction Models for Six-Lane and One-Way Urban and Suburban Arterials
Current & Upcoming Projects

Transit Cooperative Research Program (TCRP)
- IDEA Report 95 - Connected and Automated Parking Feasibility – A Pilot Study
- IDEA Report 93 - An Open Platform for Transit Agencies to Improve the Quality of Their Real-Time Data
- IDEA Report 92 - Augmented Reality Dispatcher Interface
- Report 234 - Measuring and Managing Fare Evasion
- Report 230 - Transit and Micromobility
- Synthesis 159 - Assessing Equity and Identifying Impacts Associated with Bus Network Redesigns
- Synthesis 155 - Intelligent Transportation Systems in Headway-Based Bus Service

Current Projects
- ACRP 01-36 - Advancing the Practice of State Aviation System Planning
- ACRP 01-41 - Airport Blockchain Implementation Guidebook
- ACRP 02-95 - Understanding Airport Air Quality and Public Health Studies Related to Airports: An Update to ACRP Report 135
- ACRP 03-49 - Effective Collaboration to Plan and Respond to Communicable Disease Threats
- ACRP 03-52 - Guidelines for Adapting and Managing Airport Common Use Programs
- 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 03-63 - Modernizing Air Cargo Operations and Infrastructure at U.S. 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 09-19 - Airfield Pavement Markings - Effective Techniques for Removal and Temporary Applications
- 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(20-011) - ACRP Insight Event – Future of Aviation
- ACRP Synthesis 11-03/Topic S01-25 - Airport Parking Pricing Strategies
- 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
- BTSCLP BTS-01 - Guidance for Employer-Based Behavioral Traffic Safety Programs for Drivers in the Workplace
- BTSCLP 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 02-27 - Making Targets Matter: Managing Performance to Enhance Decision-Making
- NCHRP 03-114(01) - Planning and Evaluating Active Traffic Management Strategies
- 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 03-134 - 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 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 - Guidance on Midblock Pedestrian Signals (MPS)
- NCHRP 05-22A - Gaps and Emerging Technologies in the Application of Solid-State Roadway Lighting
- NCHRP 06-18 - Guide for Snow and Ice Control Operations
- NCHRP 07-26 - Update of Highway Capacity Manual: Merge, Diverge, and Weaving Methodologies
- NCHRP 07-30 - Methods for Assigning Short-Duration Traffic Volume Counts to Adjustment Factor Groups for Estimating AADT
- NCHRP 08-115 - Guidebook for Data and Information Systems for Transportation Asset Management
- NCHRP 08-118 - Risk Assessment Techniques for Transportation Asset Management
- NCHRP 08-121 - Accessibility Measures in Practice: Guidance for Transportation Agencies
- NCHRP 08-124 - Quantifying the Impacts of Corridor Management
- NCHRP 08-132 - Accessing America's Great Outdoors: Forecasting Recreational Travel Demand
- NCHRP 08-135 - Reliability and Quality of Service Evaluation Methods for Rural Highways
- NCHRP 08-145 - Utilizing Cooperative Automated Transportation (CAT) Data to Enhance the Use of Freeway Operational Strategies
- NCHRP 08-147 - Improving Public Transportation in Rural Areas and Tribal Communities
- NCHRP 10-109 - Modern Solutions to Safe and Efficient Work Zone Travel
- 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 15-66 - Operational Performance and Safety Effects of Arterial Weaving Sections
- NCHRP 15-73 - Design Options to Reduce Turning Motor Vehicle-Bicycle Conflicts at Intersections
- NCHRP 15-78 - Guidebook for Urban and Suburban Roadway Cross-Sectional Reallocation
- 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 17-92 - Developing Safety Performance Functions for Rural Two-Lane Highways that Incorporate Speed Measures
- NCHRP 17-95 - Crash Modification Factors (CMFs) for Intelligent Transportation System (ITS) Applications
- NCHRP 17-98 - Guide for Intersection Control Evaluation
- NCHRP 20-24(128) - State-of-the-Art Review of Cooperative Automated Transportation (CAT) Systems
- NCHRP 20-24(138) - Collective and Individual Actions for State Departments of Transportation Envisioning and Realizing the Next Era of America's Transportation Infrastructure – Phase I
- 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 20-102(16) - Impacts of Connected, Automated Vehicle Technologies on Traffic Incident Management Response
- NCHRP 20-102(26) - Dynamic Curbside Management: Keeping Pace with New and Emerging Mobility and Technology in the Public Right of Way
- NCHRP 20-102(28) - Preparing Transportation Agencies for Connected and Automated Vehicles in Work Zones
- NCHRP 20-123(101) - AASHTO Committee on Bridges and Structures Strategic Plan, Operating Guidelines, and Research Roadmap Development
- NCHRP 20-123(12) - System Mobility and Emerging Technologies (SMET): Strategic Planning Session and Research Roadmap Development
- NCHRP 20-123(18) - Development of a New Transportation System Operations Strategic Plan
- NCHRP 22-43 - Proposed AASHTO Guidelines for Implementation of MASH for Sign Supports, Breakaway Poles, and Work Zone Traffic Control Devices
- 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 206 - From Location Tracking to Continuous Interpretation: Rule-Based Automated Safety Work Zone Safety
- NCHRP IDEA 20-30/IDEA 217 - A Real-Time Proactive Intersection Safety Monitoring and Visualization System Based on Radar Sensor Data
- NCHRP IDEA 20-30/IDEA 225 - An Automated System for Large-Scale Intersection Marking Data Collection and Condition Assessment
- NCHRP Synthesis 20-05/Topic 53-10 - Identifying the Current Practice of Contrast Pavement Markings by Departments of Transportation
- NCHRP Synthesis 20-05/Topic 52-11 - Use of Smart Work Zone Technologies for Improving Work Zone Safety
- NCHRP Synthesis 20-05/Topic 53-12 - Practices for Adding Bicycle and Pedestrians Access on Existing Vehicle Bridges
- NCHRP Synthesis 20-05/Topic 53-14 - Use of Probe Data for Freight Planning and Operations
- NCHRP Synthesis 20-05/Topic 53-16 - Critical Findings for Tunnel Functional Systems
- TCRP A-46 - Quantitative Procedures for Designing and Operating Ferry Transit Services
- TCRP B-49 - Improving Public Transportation in Rural Areas and Tribal Communities
- TCRP J-11/Task 39 - Evaluation Framework for Fare-free Public Transportation
- TCRP Synthesis J-07/Topic SB-36 - Dynamic Optimization on ADA Paratransit Service
- TCRP Synthesis J-07/Topic SH-19 - Considering the Unbanked in Cashless Fare Payment at Point of Service for Bus/Demand Response Services
- Transit IDEA J-04/IDEA 99 – Bike Love

**Upcoming Projects**
- ACRP 02-98 - Airport Energy Resiliency Primer and Roadmap
- ACRP 03-66 - Guidebook for Digital Twin Programs at Airports
- ACRP 06-08 - Human Factors in Airport Operations
- ACRP 10-33 - Incorporating Emerging Transportation and Ground Access Technologies at Airports
- ACRP 11-08(20-02) - ACRP Insight Event—On-Demand Aviation Services for Passengers and Goods
- NCHRP 03-142 - Evaluating the Impacts of Real-Time Warnings and Variable Speed Limits on Safety and Travel Reliability during Weather Events
- NCHRP 03-143 - Warrants for a Pedestrian Traffic Control Signal and for Other Pedestrian Traffic Control Devices
- NCHRP 03-144 - Leveraging Existing Traffic Signal Assets to Obtain Quality Traffic Counts and Enhance Transportation Monitoring Programs
- NCHRP 07-32 - Future-Proofing Automatic Traffic Signal Performance Measurement Systems for Scalability, Transferability, and CAV Integration
- NCHRP 08-130 - Best Practices in Coordination of Public Transit and Ride Sharing
- NCHRP 08-138 - Guide to the Integration of Transportation Systems Management and Operations into Transportation Asset Management
- NCHRP 08-140 - Guidebook for Truck Parking Information Management Systems
- NCHRP 08-141 - A Guidebook for Local Truck Parking Regulations
- NCHRP 08-143 - Guide to the Application of Spatial Segmentation on Travel Time Reliability Measures
- NCHRP 08-144 - Best Practices in Determining Rural Transit Fleet Size – How to Provide Service for Changing Demographics of Rural Ridership (Right-sizing of Rural Transit Fleets)
- NCHRP 08-146 - Integrating Resiliency into Transportation System Operations
- NCHRP 08-149 - Estimating Benefits of Closing Gaps in Active Transportation Networks
- NCHRP 08-157 - Best Practices for Data Fusion of Probe and Point Detector Data
- NCHRP 15-79 - Development of Guidance for Non-Standard Roadside Hardware Installations
- NCHRP 17-99 - Safety Effectiveness Assessment of Advanced Highway-Rail Grade Crossing Improvements
- NCHRP 17-101 - Applying the Safe System Approach to Transportation Planning, Design, and Operations in the United States
- NCHRP 17-108 - Developing Crash Modification Factors for Alternative Intersections
- NCHRP 20-102(25) - Readiness and Effectiveness of Freeway-Based Corridor V2X Applications for Improving Congestion and Safety
- NCHRP 22-42 - Impact Performance Assessment of Barrier Performance at High Speeds
- NCHRP 23-13(01) - Telecommuting, Remote Work, and Hybrid Schedules: Managing the Shift to a Flexible Work Future
- NCHRP 23-13(04) - Scoping Supply Chain Challenges and Solutions amid COVID-19
- NCHRP 23-13(05) - Regulatory Relief of Commercial Vehicle Weight Requirements for Emergency Transportation of Critical Commodities
- NCHRP 23-19 - Practices for Transportation Agency Procurement and Management of Advanced Technologies
- NCHRP 23-20 - Guidebook for Implementation of UAS Operational Capabilities
Reports from the National Academies Press on Operations & Traffic Management

- Aviation After a Year of Pandemic
- Energizing Data-Driven Operations at the Tactical Edge
- Space Nuclear Propulsion for Human Mars Exploration
- Necessary DoD Range Capabilities to Ensure Operational Superiority of U.S. Defense Systems
- Airborne Platforms to Advance NASA Earth System Science Priorities

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
- 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
- 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.)

18th Biennial National Harbor Safety Committee Conference
June 13, 2022
Boston, MA

13th Access Management Conference
July 1, 2022
online

International Conference on Bridge Maintenance, Safety, and Management (IABMAS2022)*
July 11, 2022
Barcelona, Spain

Automated Road Transportation Symposium
July 18, 2022
Garden Grove, CA

International Symposium on Transportation and Traffic Theory*
July 24, 2022
Beijing, China

Geospatial Data Acquisition Technologies in Design and Construction Summer Committee Meeting
July 25, 2022
Washington, D.C.

Tools of the Trade Conference
August 29, 2022
Boise, ID

TRANSED: Mobility, Accessibility, and Demand Response Transportation Conference
September 12, 2022
Seattle, WA

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

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