

TRB TRANSPORTATION RESEARCH BOARD

TRB Snap Search: Highway Geometric Design: Intersections and Roundabouts

TRB's involvement in research on Highway Geometric Design/Intersections and Roundabouts from 2022-2024

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 Highway Geometric Design/Intersections and Roundabouts within the past three years.

Milestone Report

- [NCHRP Report 672](#) - Roundabouts: An Informational Guide – Second Edition

Specialty Report

- [Critical Issues in Transportation for 2024 and Beyond](#)
- [Critical Issues in Transportation 2019](#)
- [COVID-19 Addendum to Critical Issues in Transportation](#)
- [Racial Equity Addendum to Critical Issues in Transportation](#)

Recent Reports & Publications

- [National Cooperative Highway Research Program \(NCHRP\)](#)
 - [IDEA Report 225](#) - An Automated System for Large-Scale Intersection Marking Data Collection and Condition Assessment
 - [IDEA Report 217](#) - A Real-Time Proactive Intersection Safety Monitoring and Visualization System Based on Radar Sensor Data
 - [IDEA Report 190](#) - Self-de-icing LED Signals for Railroads and Highway Intersections
 - [Report 1120](#) - Active Traffic Management Strategies: A Planning and Evaluation Guide
 - [Report 1097](#) - Development of Clear Recovery Area Guidelines
 - [Report 1094](#) - Operational Performance and Safety Effects of Arterial Weaving Sections
 - [Report 1087](#) - Guide for Intersection Control Evaluation
 - [Report 1081](#) - Acceleration, Deceleration, and Stopping Sight Distance Criteria for Geometric Design of Highways and Streets
 - [Report 1062](#) - Assessing the Impacts of Right-Turn Lanes on Rural and Suburban Highways
 - [Report 1061](#) - Highway and Street Design Vehicles: An Update
 - [Report 1059](#) - Crash Modification Factors in the Highway Safety Manual: A Review
 - [Report 1050](#) - Wrong-Way Driving Solutions Handbook
 - [Report 1043](#) - Guide for Roundabout
 - [Report 1033](#) - Long-Term Roadside Crash Data Collection Program
 - [Report 1029](#) - Crash Modification Factors in the Highway Safety Manual: A Review
 - [Report 948](#) - Guide for Pedestrian and Bicyclist Safety at Alternative and Other Intersections and Interchanges

- [Synthesis 625](#) - Programmatic Implementation of Alternative Contracting Methods
- [Synthesis 602](#) - Resilient Design with Distributed Rainfall-Runoff Modeling
- [Web-Only Document 387](#) - Safety Prediction Model for Freeway Facilities with High Occupancy Lanes
- [Web-Only Document 377](#) - Background and Development of a Guide for Intersection Control Evaluation
- [Web-Only Document 368](#) - Right-Turn-on-Red Operation at Signalized Intersections with Single and Dual Right-Turn Lanes: Evaluating Performance
- [Web-Only Document 357](#) - Wrong-Way Driving Solutions, Policy, and Guidelines
- [Web-Only Document 352](#) - Crash Modification Factors in the Highway Safety Manual: Resources for Evaluation
- [Web-Only Document 347](#) - Background and Summary of a Guide for Roundabouts
- [Web-Only Document 342](#) - Roadway Cross-Section Reallocation: Conduct of Research Report
- [Web-Only Document 341](#) - Roadside Database Coding Manual

Current & Upcoming Projects

- [Current Projects](#)
 - [NCHRP 05-27](#) - Guide for Lighting at Innovative Intersections/Interchanges, including Roundabouts
 - [NCHRP 07-33](#) - Evaluate the Benefits of Increasing Clear Zone at Higher Speed/Traffic Volume/Crash Locations
 - [NCHRP 15-79](#) - Development of Guidance for Non-Standard Roadside Hardware Installations
 - [NCHRP 15-82](#) - Relationship of Speed, Roadway Geometrics, and Crashes on High-Speed Rural Highways
 - [NCHRP 15-85](#) - Improved Superelevation Design Based on Advancing Technologies
 - [NCHRP 17-104](#) - Enhancement of Roadside Design Safety Prediction Models for the Highway Safety Manual
 - [NCHRP 17-101](#) - Applying the Safe System Approach to Transportation Planning, Design, and Operations in the United States
 - [NCHRP 17-106](#) - Motorist Behavior and Safety Impacts on Bicyclists from Centerline and Shoulder Rumble Strips on High-Speed Two-Lane Highways
 - [NCHRP 17-108](#) - Developing Crash Modification Factors for Alternative Intersections
 - [NCHRP 17-116](#) - Practical Approaches to Quantifying Safe System Concepts
 - [NCHRP 17-119](#) - Conflict-Based Crash Prediction Method for Intersections
 - [NCHRP 20-06/Topic 27-05](#) - Addressing Liability Issues of Proactive Safety Improvements
 - [NCHRP 20-44\(51\)](#) - Developing Training Materials to Implement Context Classifications
 - [NCHRP 20-102\(24\)](#) - Infrastructure Modifications to Improve the Operational Conditions of Automated Vehicles
 - [NCHRP 22-50](#) - Crashworthiness of Roadside Hardware on Curbed Roadways
 - [NCHRP 22-56](#) - Development of Non-proprietary Prefabricated Solutions for Concrete Barrier Systems for Accelerated Bridge Construction
 - [NCHRP 22-61](#) - Crashworthiness of Roadside Hardware Impacted by Battery Electric Vehicles
 - [NCHRP Synthesis 20-05/Topic 54-13](#) - Truck Emergency Escape Ramp Design and Operation
 - [TCRP J-11/Task 44](#) - Improving Access to Public Transportation Services and Facilities with Transit-Oriented Complete Streets
- [Upcoming Projects](#)
 - [NCHRP 07-28\(02\)](#) - Assessing the Multimodal Safety Performance of Turn Lanes
 - [NCHRP 07-36](#) - Guide for Self-Explaining Roads in the Context of the Safe System Approach
 - [NCHRP 08-163](#) - Defining Appropriate Design and Accommodation Thresholds for Active Transportation in a Context-Driven Approach
 - [NCHRP 08-176](#) - Balancing Freight and Goods Delivery Needs in Designing Complete Streets
 - [NCHRP 15-83](#) - Develop a Next-Decade Strategic Research Agenda for Geometric Design of Highways and Streets
 - [NCHRP 15-84](#) - Balanced Roadside Design Guidance for All Road Users
 - [NCHRP 17-126](#) - Crash Prediction Models for Alternative and Unconventional Intersections
 - [NCHRP 17-129](#) - Assessing Safety Performance of Atypical Service Interchanges
 - [NCHRP 17-131](#) - Updated Guidance on Reduced Left-Turn Conflict Intersections
 - [NCHRP 17-133](#) - Validity of the 85th-Percentile Speed for Freeways, Expressways, and Rural Highways
 - [NCHRP 17-134](#) - Centerline Buffer Area Safety Benefit Trade Offs
 - [NCHRP 17-137](#) - Crash Prediction Methods for Long-Term Work Zones
 - [NCHRP 20-44\(52\)](#) - Implementing a Guide for Urban and Suburban Roadway Cross-Section Reallocation
 - [NCHRP 20-44\(56\)](#) - Implementation Project to Measure and Communicate the Value of Access Management
 - [NCHRP 20-44\(59\)](#) - Implementing the research results of NCHRP Research Report 1080, Using Cooperative Automated Transportation Data for Freeway Operational Strategies
 - [NCHRP 20-130](#) - Incorporating Human Factors Guidelines into Transportation Projects, Programs, and Practices
 -

Publications from the [National Academies Press](#) on Highway Geometric Design

- [Transportation and Infrastructure » Design](#)
- [Transportation and Infrastructure » Highways](#)

Committees & Panels

[Sign-up to be a committee "Friend"](#)

TRB Standing Committees – Select *Standing Committee* and search by transportation mode and committee topic

- [AKD10](#) - Performance Effects of Geometric Design
- [AKD80](#) - Roundabouts and other Intersection Design and Control Strategies

Panels – Select *CRP Panel and Synthesis Panel* and search by transportation mode and committee topic

- [D0527](#) - Best Practices for Roundabout and Alternative Intersection/Interchange Lighting
- [D0729](#) - Development of the 8th Edition of AASHTO's A Policy on the Geometric Design of Highways and Streets (Green Book)
- [D1573](#) - Design Options to Reduce Turning Motor Vehicle Bicycle Conflicts at Intersections
- [D1582](#) - Effects of Operating Speed and Posted Speed Limit in Conjunction with Roadway Geometric Design on Safety Performance for High-Speed Rural Highways and Freeways
- [D1583](#) - Develop a Next-Decade Strategic Research Agenda for Geometric Design of Highways and Streets
- [D17108](#) - Developing Crash Modification Factors for Alternative Intersections
- [D17119](#) - Conflict-Based Crash Prediction Method for Intersections
- [D17126](#) - Intersection Crash Prediction Models for Future Editions of the Highway Safety Manual
- [D17168](#) - Intersection Crash Prediction Methods for the Highway Safety Manual
- [D17198](#) - Guide for Intersection Control Evaluation

Councils

- [A001C](#) – Young Members Coordinating Council

Recent and Upcoming Events

[Upcoming TRB Conferences/Events](#) – Use left hand menu to filter events, 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 Symposium on Managed Lanes](#)

August 12-14, 2024

Irvine, CA

[TRB's Annual Automated Road Transportation Symposium](#)

July 29-August 1, 2024

San Diego, CA

[TRB's 4th International Conference on Access Management](#)

June 24-26, 2024

Boston, MA

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
- **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