

TRB TRANSPORTATION RESEARCH BOARD

TRB Snap Search: Construction

TRB's involvement in research on Construction from 2023-2025

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 Construction within the past year.

Specialty Report

- [Critical Issues in Transportation for 2024 and Beyond](#)
- [Lifecycle BIM for Infrastructure: A Business Case for Project Delivery and Asset Management](#)
- [COVID-19 Addendum to Critical Issues in Transportation](#)
- [Racial Equity Addendum to Critical Issues in Transportation](#)

Recent Reports & Publications

- [Airport Cooperative Research Program \(ACRP\)](#)
 - [Report 214](#) - BIM Beyond Design Guidebook
 - [Web-Resource 13](#) - Airside Planning, Design, Constructions, Operations, and Maintenance
 - [WebResource 11](#) - Construction Safety and Phasing Plans
- [National Cooperative Highway Research Program \(NCHRP\)](#)
 - [IDEA Report 206](#) - Rule-Based Automated Safety Monitoring System for Work Zone Safety
 - [Legal Research Digest 92](#) - Resolving Construction Disputes: Review of State DOT Processes
 - [Legal Research Digest 90](#) - Best Value Procurement for Highway Construction: Legal Issues and Strategies
 - [Legal Research Digest 88](#) - Consequential Damages Provisions in Construction Contracts: Legal Issues
 - [Legal Research Digest 86](#) - Managing Enhanced Risk in the Mega Project Era
 - [Report 1110](#) - Minimizing Utility Issues During Construction: A Guide
 - [Report 1082](#) - Incorporating Nondestructive Testing in Quality Assurance of Highway Pavement Construction: Manual
 - [Report 1067](#) - Postwar Commercial Properties and Section 106: A Methodology for Evaluating Historic Significance
 - [Report 1063](#) - Applications of RFID and Wireless Technologies in Highway Construction and Asset Management: A Guide
 - [Report 1039](#) - Risk-Based Construction Inspection: A Guide
 - [Report 1037](#) - Reducing Risks to Worker Safety in Work Zones Due to Distracted Drivers
 - [Report 1027](#) - Guide to Recruiting, Developing, and Retaining Transportation Infrastructure Construction Inspectors
 - [Report 1026](#) - Guidelines for Adjacent Precast Concrete Box Beam Bridge Systems
 - [Report 1025](#) - Contingency Factors to Account for Risk in Early Construction Cost Estimates for Transportation Infrastructure Projects
 - [Report 1011](#) - Watershed Approach to Mitigating Hydrologic Impacts of Transportation Projects: Guide

- [Report 1008](#) - Attracting, Retaining, and Developing the 2030 Transportation Workforce: Design, Construction, and Maintenance
- [Synthesis 635](#) - Mobile Devices as a Tool for Digitized Project Documentation and Inspection
- [Synthesis 630](#) - Practices to Identify and Mitigate PFAS Impacts on Highway Construction Projects and Maintenance Operations
- [Synthesis 622](#) - Post-Construction Evaluation Practices for Highway Projects Delivered Using Alternative Contracting Methods
- [Synthesis 619](#) - Design and Construction of Temporary Facilities in Streams and Rivers: Hydraulic and Hydrologic Engineering Considerations and Practices
- [Synthesis 602](#) - Resilient Design with Distributed Rainfall-Runoff Modeling
- [Synthesis 600](#) - Practices for the Collection, Use, and Management of Utility As-Built Information
- [Synthesis 594](#) - Technological Capabilities of Departments of Transportation for Digital Project Management and Delivery
- [Synthesis 593](#) - 3D Digital Models as Highway Construction Contract Documents
- [Synthesis 590](#) - Agency Use of Quality Control Plans for Administering Quality Assurance Specifications
- [Web-Only Document 396](#) - Strategies to Address Utility Issues During Highway Construction
- [Web-Only Documents 388](#) - Framework for Implementing Constructability Throughout Project Development from NEPA to Final Design
- [Web-Only Document 363](#) - Construction Guidelines for Cold Central Plant Recycling and Cold In-Place Recycling
- [Web-Only Document 354](#) - Safe and Effective Temporary Traffic Control for Mobile Operations on Two-Lane Roadways
- [Web-Only Document 344](#) - Risk-Based Construction Inspection: Conduct of Research Report
- [Web-Only Document 337](#) - Training and Certification of Construction Inspectors for Transportation Infrastructure
- [Transit Cooperative Highway Research Program \(TCRP\)](#)
 - [Legal Research Digest 60](#) - Transit Mega Projects: Legal Issues
- [Transportation Research Circulars](#)
 - [E-Circular 296](#) - Foundation Design and Construction for 100-Year Pavement Systems
 - [E-Circular 290](#) - Implementing Dielectric Profiling Systems for Real-Time Quality Control

Current & Upcoming Projects

- [Current Projects](#)
 - [ACRP 02-90](#) - Development of Airport Construction Emission Inventory Tool (ACEIT) Version 2.0
 - [ACRP 03-56](#) - Airside Planning, Design, Construction, Operations, and Maintenance: WebResource
 - [ACRP 11-02/Task 30](#) - Research Roadmap in the Area of Design and Construction of Airport Facilities and Infrastructure
 - [NCHRP 03-140](#) - Guidelines for Applications of RFID and Wireless Technologies in Highway Construction and Asset Management
 - [NCHRP 05-24](#) - Guidelines for Vehicle and Equipment Color, Marking, and Lighting
 - [NCHRP 08-148](#) - A Guide for Management of Out-of-Service Facilities
 - [NCHRP 08-155](#) - Handbook for Addressing Racial Disparities in the Project Delivery Process
 - [NCHRP 09-64](#) - Developing Laboratory Methods and Specifications to Test Tack Coat Materials
 - [NCHRP 10-108](#) - Manual for Incorporating Nondestructive Testing (NDT) in Quality Assurance of Highway Pavement Construction
 - [NCHRP 10-109](#) - Modern Solutions to Safe and Efficient Work Zone Travel
 - [NCHRP 10-110](#) - 3D Modeling Guide for Construction Inspection
 - [NCHRP 10-111](#) - Guide for 3D Model Viewers for Construction Inspection
 - [NCHRP 10-112](#) - Guidelines for Digital Technologies and Systems for Remote Construction Inspection for Highway Infrastructure Projects
 - [NCHRP 10-113](#) - Quality Management for 3D Model-Based Project Development and Delivery
 - [NCHRP 11-08](#) - Guide to Acquire Utility Property Interests and Reimburse Utility Relocation Costs
 - [NCHRP 12-124](#) - Design of Stud Shear Connectors in Composite Steel Bridges
 - [NCHRP 12-120](#) - Stainless Steel Strands for Prestressed Concrete Bridge Elements
 - [NCHRP 12-124](#) - Design of Stud Shear Connectors in Composite Steel Bridges
 - [NCHRP 14-46](#) - Guidelines for the Maintenance and Construction of Rumble Strips

- [NCHRP 14-48](#) - Guidance for the Construction of Sand Seals and Ultra-thin Bonded Wearing Courses
 - [NCHRP 15-69](#) - Utility Conflict Impacts During Highway Construction
 - [NCHRP Synthesis 20-05/Topic 54-04](#) - Mobile Devices as a Tool for Digitalized Project Documentation and Inspection
 - [NCHRP 20-06/Topic 25-05](#) - The Legal Issues Associated with Consequential Damages Provisions in Construction Contracts
 - [NCHRP 20-06/Topic 25-06](#) - Legal Issues and Strategies for Best-Value Procurement for Highway Construction
 - [NCHRP 20-06/Topic 26-02](#) - Analysis of Arbitration and Holdings in Construction Disputes
 - [NCHRP 20-44\(26\)](#) - Implementing Guide Specifications for the Construction of Chip Seals, Micro Surfacing, and Fog Seals
 - [NCHRP 20-102\(28\)](#) - Preparing Transportation Agencies for Connected and Automated Vehicles in Work Zones
 - [NCHRP 22-56](#) - Development of Non-proprietary Prefabricated Solutions for Concrete Barrier Systems for Accelerated Bridge Construction
 - [NCHRP 23-22](#) - Alternative Project Delivery Methods: Assessing and Allocating Risk to Increase Competition
 - [NCHRP 25-63](#) - Handbook on Deterring and Excluding Bats from Transportation Structures
 - [NCHRP 25-64](#) - Considering Greenhouse Gas Emissions and Climate Change in Environmental Reviews: Resources for State DOTs
 - [NCHRP IDEA 10-30/IDEA 247](#) - Augmenting the Hearing of Safety-Critical Sounds for Highway Workers using Artificial Intelligence
 - [NCHRP IDEA 20-30/IDEA 226](#) - A Smart IoT Proximity Alert System for Highway Work Zone Safety
 - [NCHRP IDEA 20-30/IDEA 246](#) - Developing a Method for Selecting Low-Energy Mixing and Compaction Temperatures for Asphalt Mixtures Considering Asphalt Lubrication and Aggregate Characteristics
 - [NCHRP Synthesis 20-05/Topic 53-02](#) - Practices to Motivate Safe Behaviors with Highway Construction and Maintenance Crews
 - [NCHRP Synthesis 20-05/Topic 53-07](#) - Curing Practices for Concrete Pavement
- [Upcoming Projects](#)
 - [NCHRP 08-184](#) - Framework for Assessing Induced Demand Effects of Various Roadway Investments
 - [NCHRP 10-23](#) - Incorporating Quality Assurance into Green Public Procurement Practices
 - [NCHRP 10-115](#) - Guide on Progressive Design-Build for Transportation Projects
 - [NCHRP 10-116](#) - Quantifying Variability in Quality Characteristics of Pavements
 - [NCHRP 10-118](#) - Effective Timelines and Contractual Strategies for Accelerated Bridge Construction Projects
 - [NCHRP 10-119](#) - Guidance for Implementing Utility Investigations in Alignment with Project Delivery
 - [NCHRP 10-120](#) - Guidance for Including Right-Of-Way and Utilities in Value Engineering Studies
 - [NCHRP 10-122](#) - Cost Estimating Practices for Highway Projects
 - [NCHRP 10-124](#) - Development of a Field Test to Determine Chip Seal Aggregate Embedment
 - [NCHRP 10-125](#) - Update Bridge Construction Requirements
 - [NCHRP 17-107](#) - Guide for Work Zone Intrusion Prediction and Prevention
 - [NCHRP 17-121](#) - Using Advanced Technologies to Reduce Commercial Motor Vehicle Crashes in Work Zones
 - [NCHRP Synthesis 20-05/Topic 55-09](#) - Open-books Pricing Practices for Construction Manager/General Contractor and Progressive Design-Build Projects
 - [NCHRP Synthesis 20-05/Topic 55-12](#) - Construction Strategies and Techniques for Bridge Replacements in Complex Scenarios
 - [NCHRP 24-51](#) - Effects of Construction Installation Methods on the Design and Performance of Drilled Shaft Foundations
 - [TCRP J-05/Topic 19-04](#) - Transit Sponsor and Contractor Delay Damages and Remedies Due to Third Parties - Transit Facility Improvements-Common Legal Issues and Solutions

Reports from the [National Academies Press](#) on Construction

- [Transportation and Infrastructure » Construction](#)
- [Equitable and Resilient Infrastructure Investments](#)
- [Frameworks for Protecting Workers and the Public from Inhalation Hazards](#)
- [Investing in Resilient Infrastructure in the Gulf of Mexico: Proceedings of a Workshop](#)
- [Exploiting Advanced Manufacturing Capabilities: Topology Optimization in Design: Proceedings of a Workshop](#)

Committees & Panels

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

[TRB Standing Committees](#) – Search by transportation mode and committee topic

- [ACP55](#) – Traffic Control Devices
- [AJE60](#) – Contracting Equity
- [AKB60](#) – Tunnels and Underground Structures
- [AKB70](#) – Culverts, Buried Bridges and Soil Structure Interaction
- [AKC00](#) – Construction
- [AKC10](#) – Construction Management
- [AKC20](#) – Project Delivery Methods
- [AKC30](#) – Quality Assurance Management
- [AKC40](#) – Construction of Bridges and Structures
- [ACK50](#) – Concrete Pavement Construction and Rehabilitation
- [ACK60](#) – Asphalt Pavement Construction and Rehabilitation
- [ACK70](#) – Fabrication and Inspection of Metal Structures
- [AKD30](#) – Low-Volume Roads
- [AKD70](#) – Geospatial Data Acquisition Technologies
- [AKG50](#) – Transportation Earthworks
- [AKG70](#) – Foundations of Bridges and Other Structures
- [AKG90](#) – Stabilization of Geomaterials and Recycled Materials
- [AKM50](#) – Advanced Concrete Materials and Characterization
- [AKM60](#) – Properties of Concrete and Constituent Materials
- [AKM70](#) – Durability of Concrete

[Task Forces](#) - Search for *task force* under committee here

CRP Panels

- [D0225](#) - Workforce 2030: Recruiting and Training the Next Generation Transportation Construction Workforce
- [D03140](#) - Application of RFID and Wireless Technologies for Highway Construction
- [D08155](#) - Researching and Responding to Racial Disparities in Construction
- [D10102](#) - A Guidebook for Risk-based Construction Inspection
- [D10110](#) - 3D Modeling Guide for Construction Inspection
- [D10111](#) - Evaluation and Selection of 3D Model Viewers for Construction Inspection
- [D10112](#) - Guidelines for Digital Technologies and Systems for Remote Construction Inspection for Highway Infrastructure Projects
- [D10116](#) - Variability in Pavement Materials and Construction
- [D10118](#) - Guidance for Efficient Timelines and Incentives/Disincentives for Accelerated Bridge Construction Projects
- [D10125](#) - Update to the AASHTO LRFD Bridge Construction Specifications
- [D12102](#) - Development of an Accelerated Bridge Construction Design and Construction Guide Specification
- [D1443](#) - Guide Construction Specifications for Cold In-place Recycling (CIR) and Cold Central Plant Recycling (CCPR)
- [D1446](#) - Guidelines for Maintenance and Construction of Rumble Strips
- [D1448](#) - Guidance for the Construction of Sand Seals and Ultra-thin Bonded Wearing Courses
- [D1569](#) - Utility Conflict Impacts during Highway Construction
- [D2005](#) - NCHRP Project Panel on Synthesis of Information Related to Highway Problems
- [D2007](#) - NCHRP Project Panel on Research for AASHTO Standing Committee on Highways
- [D2256](#) - Development of Non-proprietary Prefabricated Solutions for Concrete Barrier Systems for Accelerated Bridge Construction
- [D2451](#) - Effects of Construction Installation Methods on the Design and Performance of Drilled Shaft Foundations
- [DA0290](#) - Update the Airport Construction Emission Inventory Tool (ACEIT)
- [DA0803](#) - Construction Safety and Phasing Plans
- [DA0921](#) - Guidelines for the Effective Transition of Asset Data from Design/Construction to Operations and Maintenance
- [SN4816](#) - Construction and Rehabilitation of Concrete Pavements
- [SN4902](#) - Synthesis of Emerging Technologies for Construction Delivery
- [SN4903](#) - Synthesis of Bridge Demolition Construction Practices and Management
- [SN5204](#) - Use of Unmanned Aircraft Systems for Highway Construction
- [SN5205](#) - Implementation of Subsurface Utility Engineering for Highway Design and Construction
- [SN5210](#) - Subsurface Drainage Practices in Pavement Design, Construction, and Maintenance

- [SN5214](#) - 3D Digital Models as Highway Construction Contract Documents
- [SN5302](#) - Practices to Motivate Safe Behaviors with Highway Construction and Maintenance Crews
- [SN5401](#) - Practices to Identify and Mitigate PFAS Impacts on Highway Construction Projects and Maintenance Operations
- [SN5409](#) - Hydraulic Engineering Practices for Construction and Temporary Facilities in Streams and Rivers
- [SN5416](#) - Post-Construction Evaluation Practices for Highway Projects Delivered Using Alternative Contracting Methods
- [TD07](#) - TCRP Project Panel on Joint Track-Related Research with Assn of American Railroads -- Transportation Technology Center, Inc.
- [TI07](#) - TCRP Project Panel on Synthesis of Information Related to Transit Problems

Councils

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

Recent and Upcoming Events

[Upcoming TRB Conferences](#) – Use left hand menu to filter events

[Workshops at the Annual Meeting](#)

[Past Events](#) - In the Past Events tab under Types, choose what event you are interested in, search titles by keyword

[TRB Webinar: Staged Bridge Construction Goals and Challenges](#)

November 15, 2024

[TRB's Conference on Advancing Additive Manufacturing and Construction in Transportation](#)

November 7-8, 2024

[TRB Webinar: Construction Inspectors Training and Certification](#)

October 11, 2024

[TRB Webinar: Digital Construction Management in the Highway Industry](#)

August 29, 2024

[TRB's Technical Committee on Geospatial Acquisition Technologies in Design and Construction Summer Meeting](#)

July 29-31, 2024

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

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