TRB Snap Search: Construction

TRB’s involvement in research on Construction from 2022-2023

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 Construction within the past year.

Specialty Report

- Critical Issues in Transportation 2019
- 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
  - 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 88 - Consequential Damages Provisions in Construction Contracts: Legal Issues
  - Legal Research Digest 86 - Managing Enhanced Risk in the Mega Project Era
  - Report 1067 - Postwar Commercial Properties and Section 106: A Methodology for Evaluating Historic Significance
  - 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 1008 - Attracting, Retaining, and Developing the 2030 Transportation Workforce: Design, Construction, and Maintenance
  - Report 999 - Design and Construction of Deck Bulb Tee Girder Bridges with UHPC Connections
  - 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
Synthesis 587 - Use of Smart Work Zone Technologies for Improving Work Zone Safety
Synthesis 583 - Implementation of Subsurface Utility Engineering for Highway Design and Construction
Synthesis 582 - Highway Infrastructure Inspection Practices for the Digital Age
Synthesis 580 - Practices for Ensuring the Smoothness of Concrete Bridge Decks
Synthesis 578 - Use of Unmanned Aerial Systems for Highway Construction
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
Web-Only Document 311 - Improving the Efficiency and Consistency of Section 106 Compliance for State DOTs: Strategies for Project-Level Programmatic Agreements
Web-Only Document 298 - Developing a Systematic Approach for Determining Construction Contract Time

Transit Cooperative Highway Research Program (TCRP)
Legal Research Digest 60 - Transit Mega Projects: Legal Issues

Transportation Research Circulars
E-Circular 282 - Building Information Modeling for Bridges and Structures: From Design to Construction Workshop

Current & Upcoming Projects

Current Projects

ACRP 02-90 - Development of Airport Construction Emission Inventory Tool (ACEIT) Version 2.0
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 08-155 - Handbook for Addressing Racial Disparities in the Project Delivery Process
NCHRP 09-64 - Developing Laboratory Methods and Specifications to Test Tack Coat Materials
NCHRP 10-109 - 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
The Legal Issues Associated with Consequential Damages Provisions in Construction Contracts

Legal Issues and Strategies for Best-Value Procurement for Highway Construction

Analysis of Arbitration and Holdings in Construction Disputes

Implementing Guide Specifications for the Construction of Chip Seals, Micro Surfacing, and Fog Seals

Preparing Transportation Agencies for Connected and Automated Vehicles in Work Zones

Development of Non-proprietary Prefabricated Solutions for Concrete Barrier Systems for Accelerated Bridge Construction

Alternative Project Delivery Methods: Assessing and Allocating Risk to Increase Competition

Handbook on Deterring and Excluding Bats from Transportation Structures

Considering Greenhouse Gas Emissions and Climate Change in Environmental Reviews: Resources for State DOTs

Augmenting the Hearing of Safety-Critical Sounds for Highway Workers using Artificial Intelligence

A Smart IoT Proximity Alert System for Highway Work Zone Safety

Developing a Method for Selecting Low-Energy Mixing and Compaction Temperatures for Asphalt Mixtures Considering Asphalt Lubrication and Aggregate Characteristics

Practices to Motivate Safe Behaviors with Highway Construction and Maintenance Crews

Curing Practices for Concrete Pavement

Use of Unmanned Aerial Systems for Inspection of Stormwater Best Management Practices

Practices to Identify and Mitigate PFAS Impacts on Highway Construction Projects and Maintenance Operations

Hydraulic Engineering Practices for Construction and Temporary Facilities in Streams and Rivers

Programmatic Implementation of Alternative Delivery Methods by State Transportation Agencies

Post-Construction Evaluation Practices for Highway Projects Delivered Using Alternative

Upcoming Projects

Framework for Assessing Induced Demand Effects of Various Roadway Investments

Incorporating Quality Assurance into Green Public Procurement Practices

Guide on Progressive Design-Build for Transportation Projects

Quantifying Variability in Quality Characteristics of Pavements

Effective Timelines and Contractual Strategies for Accelerated Bridge Construction Projects

Guidance for Implementing Utility Investigations in Alignment with Project Delivery

Guidance for Including Right-Of-Way and Utilities in Value Engineering Studies

Cost Estimating Practices for Highway Projects

Development of a Field Test to Determine Chip Seal Aggregate Embedment

Update Bridge Construction Requirements

Guide for Work Zone Intrusion Prediction and Prevention

Using Advanced Technologies to Reduce Commercial Motor Vehicle Crashes in Work Zones

Open-books Pricing Practices for Construction Manager/General Contractor and Progressive Design-Build Projects

Construction Strategies and Techniques for Bridge Replacements in Complex Scenarios

Bridge Construction Inspection Training Resources


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
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**
- D0025 - 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
- 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
- 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
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

TRB International Conference on Low Volume Roads
July 23-26, 2023
Cedar Rapids, IA

Recent TRB Conferences

National Conference on Transportation Asset Management
July 8-11, 2023
Boston, MA

Upcoming Webinars

TRB Webinar: Accelerated Bridge Construction Programmatic Implementation
August 30, 2023

Recent Webinars

TRB Webinar: Guide Specifications—Constructing Slurry Seals, Scrub Seals, and Tack Coats
April 19, 2023

TRB Webinar: Using Smart Work Zone Technologies to Improve Safety
February 7, 2023

Other 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](http://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](http://trt.trb.org) – A tool to improve the indexing and retrieval of transportation information.

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

• **Publications Index (PubsIndex) Database** – [pubsindex.trb.org](http://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