

TRB TRANSPORTATION RESEARCH BOARD

TRB Snap Search: Materials

TRB's involvement in research on Materials 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 Materials within the past year.

Subject Webpage

- [Materials Research at TRB](#)

Specialty Reports

- [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 \(NCHRP\)](#)
 - [NCHRP 20-44\(04\)](#) - Implementing Products from NCHRP Research on Adhesive Anchor Systems
 - [IDEA Report 220](#) - Bridge Deck Sealer Monitor: Thermal Sealcheck
 - [Report 982](#) - Relationships Between the Fatigue Properties of Asphalt Binders and the Fatigue Performance of Asphalt Mixtures
 - [Report 973](#) - Long-Term Aging of Asphalt Mixtures for Performance Testing and Prediction: Phase III Results
 - [Report 967](#) - Asphalt Binder Aging Methods to Accurately Reflect Mixture Aging
 - [Report 965](#) - Mitigation of Weldment Cracking in Steel Highway Structures Due to the Galvanizing Process
 - [Report 961](#) - Entrained Air-Void Systems for Durable Highway Concrete
 - [Report 960](#) - Proposed AASHTO Practice and Tests for Process Control and Product Acceptance of Asphalt-Treated Cold Recycled Pavements
 - [Report 958](#) - Improved Test Methods and Practices for Characterizing Steel Corrosion Potential of Earthen Materials
 - [Synthesis 574](#) - Temporary Pavement Markings Placement and Removal Practices in Work Zones
 - [Synthesis 569](#) - Practice and Performance of Cold In-Place Recycling and Cold Central Plant Recycling
 - [Synthesis 568](#) - Portland Cement Concrete Pavement Joint Sealant Practices and Performance
 - [Synthesis 565](#) - Maintenance and Surface Preparation Activities Prior to Pavement Preservation Treatments
 - [Web-Only Document 305](#) - Validation of a Performance-Based Mix Design Method for Porous Friction Courses
- [Transportation Research E-Circulars](#)
 - [E-Circular 274](#) - Quality Assurance: Past, Present, and Future

Current & Upcoming Projects

- [Current Projects](#)

- [ACRP 02-91](#) - Development of PFAS Source Differentiation Guidelines for Airports
- [ACRP 02-93](#) - Guidebook for PFAS Management at Airports
- [ACRP 04-28](#) - Developing Alternative Aircraft Arresting Systems
- [NCHRP 01-61](#) - Evaluation of Bonded Concrete Overlays on Asphalt Pavements
- [NCHRP 09-57A](#) - Ruggedness of Laboratory Tests to Assess Cracking Resistance of Asphalt Mixtures
- [NCHRP 09-63](#) - A Calibrated and Validated National Performance-Related Specification for Emulsified Asphalt Binder
- [NCHRP 09-64](#) - Developing Laboratory Methods and Specifications to Test Tack Coat Materials
- [NCHRP 09-65](#) - Capturing Durability of High Recycled Binder Ratio (RBR) Asphalt Mixtures
- [NCHRP 09-66](#) - Performance Properties of Laboratory Produced Recycled Plastic Modified (RPM) Asphalt Binders and Mixtures
- [NCHRP 10-103](#) - Improving Guidance of AASHTO R 80/ASTM C 1778 for Alkali-Silica Reactivity (ASR) Potential and Mitigation
- [NCHRP 10-104](#) - Evaluating Use of Unconventional Fly Ash Sources in Highway Concrete
- [NCHRP 10-107](#) - Guide for Implementing Performance Specifications
- [NCHRP 10-108](#) - Manual for Incorporating Nondestructive Testing (NDT) in Quality Assurance of Highway Pavement Construction
- [NCHRP 12-117](#) - Guidelines for Corrosion Protection of Steel Bridges Using Duplex Coating Systems
- [NCHRP 12-120](#) - Stainless Steel Strands for Prestressed Concrete Bridge Elements
- [NCHRP 12-121](#) - Guidelines for the Design of Prestressed Concrete Bridge Girders Using FRP Auxiliary Reinforcement
- [NCHRP 18-18](#) - Design and Construction of Deck Bulb Tee Girder Bridges with UHPC
- [NCHRP 18-19](#) - Rating Concrete Water Permeability Based on Resistivity Measurements
- [NCHRP 18-20](#) - AASHTO LRFD Design, Installation, and Standard Practice of Testing for Cured In-Place Pipe Liners
- [NCHRP 20-07/Task 374](#) - Guidelines for Selecting Sign Sheeting Materials for AASHTO M268
- [NCHRP 20-07/Task 428](#) - Update of the 2012 AASHTO Guide Specification for Design of Bonded FRP Systems for Repair
- [NCHRP 22-40](#) - Update to AASHTO M 180-18 and Associated Highway Guardrail Specifications
- [NCHRP 20-44\(19\)](#) - Implementation of Proposed AASHTO Standards for Asphalt Binders and Mixtures
- [NCHRP 20-44\(24\)](#) - Pilot Test of Proposed Standard Practice for Recycling Agents in Asphalt Mixtures Incorporating RAP and RAS
- [NCHRP 20-44\(26\)](#) - Implementing Guide Specifications for the Construction of Chip Seals, Micro Surfacing, and Fog Seals
- [NCHRP 20-44\(27\)](#) - Facilitating Balanced Mix Design Implementation
- [NCHRP 25-57](#) - Breaking Barriers: Alternative Approaches to Avoiding and Reducing Highway Traffic Noise Impacts
- [NCHRP IDEA 20-30/IDEA 233](#) - Development of an Innovative Bio-Mediated Self-Healing Concrete Technology
- [NCHRP IDEA 20-30/IDEA 229](#) - Lab Dielectric Measurement System for Asphalt Mixture Bulk Specific Gravity Determination
- [NCHRP IDEA 20-30/IDEA 228](#) - A Retroreflective Road Lane Marking Tape 1,000X Brighter Than Existing Technology
- [NCHRP IDEA 20-30/IDEA 219](#) - A Novel Durable, Healable and Conveniently Removable Pavement Marking Material Suitable for Both Permanent and Temporary Marking Uses
- [NCHRP IDEA 20-30/IDEA 218](#) - Development of a Fast and Cost Effective Asphalt Mixture Fatigue Test System
- [NCHRP IDEA 20-30/IDEA 210](#) - Material Characteristics of Cu-Based Superelastic Alloys for Applications in Bridge Columns to Improve Seismic Performance
- [NCHRP Synthesis 20-05/Topic 52-17](#) - Use of Recycling Agents in Asphalt Concrete Mixtures
- [NCHRP Synthesis 20-05/Topic 53-07](#) - Curing Practices for Concrete Pavements
- [NCHRP Synthesis 20-05/Topic 53-13](#) - Practices for Steel Bridge Fabrication and Erection Tolerances
- [TFRS 01](#) - Quality Assurance (QA) Aspects of Performance Related Specifications (PRS)
- [Upcoming Projects](#)
 - [NCHRP 09-67](#) - New Materials & Technology Deployment in Asphalt Pavement Structural Design
 - [NCHRP 09-68](#) - Recycled Asphalt Materials: Binder Availability and Its Impact on Mix Performance
 - [NCHRP 09-69](#) - Verifying Quantities of Materials Used in Asphalt Mixtures at Production Facilities
 - [NCHRP 10-114](#) - Developing Performance and Safety Specifications for Rejuvenating Seals

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

- [Frontiers in Memristive Materials for Neuromorphic Processing Applications](#)
- [Data Analytics and What It Means to the Materials Community](#)
- [An Assessment of the Material Measurement Laboratory at the National Institute of Standards and Technology](#)

Committees & Panels

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

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

- [ACP55](#) – Traffic Control Devices
- [AKB10](#) – Innovative Highway Structures and Appurtenances
- [AKB70](#) – Culverts, Buried Bridges and Soil Structure Interaction
- [AKG20](#) – Soil and Rock Properties and Site Characterization
- [AKG30](#) – Geo-Environmental and Climatic Impacts on Geomaterials
- [AKG40](#) – Mechanics and Drainage of Saturated and Unsaturated Geomaterials
- [AKG50](#) – Transportation Earthworks
- [AKG80](#) – Geosynthetics
- [AKG90](#) – Stabilization of Geomaterials and Recycled Materials
- [AKM10](#) – Production and Use of Asphalt
- [AKM20](#) – Binders for Flexible Pavement
- [AKM30](#) – Asphalt Materials Selection and Mix Design
- [AKM40](#) – Asphalt Mixture Evaluation and Performance
- [AKM50](#) – Advanced Concrete Materials and Characterization
- [AKM60](#) – Properties of Concrete and Constituent Materials
- [AKM70](#) – Durability of Concrete
- [AKM80](#) – Aggregates
- [AKM90](#) – Polymer Concretes, Adhesives, and Sealers
- [AKT30](#) – Pavement Maintenance

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

CRP Panels

- [Project Panels Related to Materials](#)

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.*)

[TRB Virtual Careers in Motion Networking Fair](#)

December 8, 2021

Washington, DC

[American Society of Civil Engineers \(ASCE\) Geo-Congress 2022*](#)

March 20, 2022

Charlotte, NC

[International Data Science for Pavements Symposium*](#)

March 22, 2022

Mclean, VA

[International Conference on Nanotechnology of Cement and Concrete](#)

May 23, 2022

Irvine, CA

[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