



TRANSPORTATION RESEARCH BOARD

TRB Snap Search: Materials

TRB's involvement in research on Materials from 2018-2019

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

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](#)

Recent Reports & Publications

- [National Cooperative Highway Research Program \(NCHRP\)](#)
 - [Report 890](#) - Using Recycled Asphalt Shingles with Warm Mix Asphalt Technologies
 - [Report 878](#) - Validation of the Louisiana Interlayer Shear Strength Test for Tack Coat
 - [Report 877](#) - Performance-Based Mix Design for Porous Friction Courses
 - [Report 872](#) - Contribution of Steel Casing to Single Shaft Foundation Structural Resistance
 - [Report 871](#) - Long-Term Aging of Asphalt Mixtures for Performance Testing and Prediction
 - [Report 870](#) - Performance of Corrugated Pipe Manufactured with Recycled Content
 - [Report 858](#) - Quantifying the Effects of Preservation Treatments on Pavement Performance
 - [Synthesis 524](#) - Aggregate Quality Requirements for Pavements
 - [Synthesis 517](#) - Corrosion Prevention for Extending the Service Life of Steel Bridges
 - [Synthesis 516](#) - Tack Coat Specifications, Materials, and Construction Practices
 - [Web-Only Document 254](#) - Underwater Installation of Filter Systems for Scour and Erosion Countermeasures, Volume 1: Research Report
 - [Web-Only Document 254](#) - Underwater Installation of Filter Systems for Scour and Erosion Countermeasures, Volume 2: Training Manual
 - [Web-Only Document 251](#) - Spot Painting to Extend Highway Bridge Coating Life: Volume 1: Guidance
 - [Web-Only Document 251](#) - Spot Painting to Extend Highway Bridge Coating Life: Volume 2: Research Overview
- [Transportation Research Circulars](#)
 - [E-Circular 237](#) - Innovations in Asphalt Mixture Design Procedures
 - [E-Circular 234](#) - Relationships of Laboratory Mixture Aging to Asphalt Mixture Performance
 - [E-Circular 230](#) - Culverts and Soil-Structure Interaction: Fifty Years of Change and a Twenty-Year Projection

Current & Upcoming Projects

- [Current Projects](#)
 - [ACRP Synthesis 11-03/Topic S09-08](#) - Practices to Mitigate Alkali Silica Reaction (ASR) Effected Pavement at Airports
 - [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 18-17](#) - Entrained Air Void System for Durable Highway Concrete
 - [NCHRP 18-18](#) - Design and Construction of Deck Bulb Tee Girder Bridges with UHPC
 - [NCHRP 20-07/Task 374](#) - Guidelines for Selecting Sign Sheeting Materials for AASHTO M268

- [NCHRP 20-07/Task 412](#) - Adjustments to the Superpave Volumetric Mixture Design Procedure for Selecting Optimum Asphalt Content
- [NCHRP IDEA 20-30/IDEA 207](#) - MILDGLASS: GFRP Strand for Resilient Mild Pre-Stressed Concrete
- [NCHRP IDEA 20-30/IDEA 204](#) - Biomimetic Antifreeze Polymers: A Novel Biodegradable Deicing Salt Alternative
- [NCHRP IDEA 20-30/IDEA 199](#) - Using Medical X-Ray Machines to Determine the Service Life of Concrete
- [NCHRP IDEA 20-30/IDEA 197](#) - Hexagonal Boron Nitride Reinforced Multifunctional Concrete for Transportation Infrastructure
- [NCHRP IDEA 20-30/IDEA 194](#) - Producing Bio-Modified Rubber (BMT) Asphalt; A Sustainable and Bio-Based Alternative for Petroleum-Based Asphalt
- [NCHRP Synthesis 20-05/Topic 50-14](#) - Practices for Fabrication Asphalt Specimens for Testing in Laboratories
- [NCHRP Synthesis 20-05/Topic 49-09](#) - Concrete Technology for Transportation Applications
- [NCHRP Synthesis 20-05/Topic 49-05](#) - Impact of Asphalt Materials Lift Thickness on Pavement Quality
- [Safety IDEA Project 33](#) - Adaptive Prestressing System for Concrete Crossties
- [Upcoming Projects](#)
 - [NCHRP 09-63](#) - A Calibrated and Validated National Performance-Related Specification for Emulsified Asphalt Binder
 - [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 12-117](#) - Guidelines for Corrosion Protection of Steel Bridges Using Duplex Coating Systems
 - [NCHRP 18-19](#) - Rating Concrete Water Permeability Based on Resistivity Measurements
 - [NCHRP 22-40](#) - Update to AASHTO M 180-18 and Associated Highway Guardrail Specifications
 - [NCHRP 25-57](#) - Breaking Barriers: Alternative Approaches to Avoiding and Reducing Highway Traffic Noise Impacts

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

- [Globalization of Defense Materials and Manufacturing](#)
- [Combat Vehicle Weight Reduction by Materials Substitution](#)

Committees & Panels

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

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

- [AF000](#) – Design and Construction Group
- [AFF80](#) – Structural Fiber Reinforced Polymers
- [AFK00](#) – Asphalt Materials
- [AFK10](#) – Critical Issues and Emerging Technologies in Asphalt
- [AFK20](#) – Asphalt Binders
- [AFK30](#) – Non-Binder Components of Asphalt Mixtures
- [AFK40](#) – Surface Requirements of Asphalt Mixtures
- [AFK50](#) – Structural Requirements of Asphalt Mixtures
- [AFN00](#) – Concrete Materials
- [AFN10](#) – Basic Research and Emerging Technologies Related to Concrete
- [AFN20](#) – Properties of Concrete
- [AFN30](#) – Durability of Concrete
- [AFN40](#) – Concrete Materials and Placement Techniques
- [AFP00](#) – Geological and Geoenvironmental Engineering
- [AFP20](#) – Geotechnical Site Characterization
- [AFP30](#) – Soil and Rock Properties
- [AFP40](#) – Geo-Environmental Processes
- [AFP60](#) – Engineering Behavior of Unsaturated Geomaterials
- [AFP70](#) – Aggregates
- [AFS10](#) – Transportation Earthworks
- [AFS40](#) – Subsurface Soil-Structure Interaction
- [AFS70](#) – Geosynthetics
- [AFS80](#) – Stabilization of Geomaterials and Recycled Materials
- [AHD25](#) – Sealants and Fillers for Joints and Cracks
- [AHD40](#) – Polymer Concretes, Adhesives, and Sealers
- [AHD55](#) – Signing and Marking Materials

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

CRP Panels

- [Project Panels Related to Materials](#)

Councils

- [A0040T](#) – Young Member Council

Recent and Upcoming Events

[Upcoming Conferences](#)- Left hand menu “upcoming conferences by topic”

(Conferences cosponsored by TRB are denoted with an asterisk.)

[Sixth International Symposium on Nanotechnology in Construction \(NICOM6\)*](#)

December 2-5, 2018

Hong-Kong, China

[7th International Conference on Bituminous Mixtures and Pavements*](#)

June 12-14, 2019

Thessaloniki, Greece

[First International Conference on 3D Printing and Transportation](#)

November 20, 2019

Washington, DC

[Webinars](#) – View upcoming webinars, suggest a webinar or add registration information

[Past Webinars](#)

- [Materials](#)

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:

TRID – The world's largest and most comprehensive bibliographic source on all modes and disciplines of transportation - trid.trb.org

Practice Ready Papers (PRP) Database - Papers with information that is ready for immediate implementation or requires minimal additional research or implementation effort - prp.trb.org

Publications Index (PubsIndex) Database – The papers, articles and reports published by the Transportation Research Board, Highway Research Board, Strategic Highway Research Programs or the Marine Board - pubsindex.trb.org

Research in Progress (RiP) Database – Current or recently completed transportation research projects - rip.trb.org

Research Needs Statements (RNS) – Research needs as identified by TRB Technical Activities standing committees - rns.trb.org

Contact the Library at TRBLibrary@nas.edu or 1 (202) 334-2989