



TRANSPORTATION RESEARCH BOARD

## TRB Snap Search: Materials

### TRB's involvement in research on Materials from 2017-2018

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 Freight Research Program \(NCFRP\)](#)
  - [Report 37](#) - Using Commodity Flow Survey Microdata and Other Establishment Data to Estimate the Generation of Freight, Freight Trips, and Service Trips: Guidebook
- [National Cooperative Highway Research Program \(NCHRP\)](#)
  - [IDEA 181](#) - Development of Small Specimen Geometry for Asphalt Mixture Performance Testing
  - [IDEA 175](#) - Rapid Detection of Fatigue Cracking in Steel Anchor Rods Using the Impulse Response Method
  - [IDEA 174](#) - Enhanced Performance Zinc Coating for Steel in Concrete
  - [Ready Results Document](#) - Optimizing Materials QA to Improve Construction, Save Costs
  - [Ready Results Document](#) - Self-Consolidating Concrete for Cast-in-Place Bridge Components
  - [Ready Results Document](#) - Measuring Modulus for Better-Performing Pavements
  - [Ready Results Document](#) - New Standards Improve Safety of Adhesive Anchor Systems
  - [Report 871](#) - Long-Term Aging of Asphalt Mixtures for Performance Testing and Prediction
  - [Report 870](#) - Performance of Corrugated Pipe Manufactured with Recycled Content
  - [Report 857](#) - Performance-Related Specifications for Pavement Preservation Treatments
  - [Report 843](#) - Long-Term Field Performance of Warm Mix Asphalt Technologies
  - [Report 838](#) - Guidelines for Optimizing the Risk and Cost of Materials QA Programs
  - [Report 837](#) - Performance-Related Specifications for Emulsified Asphaltic Binders Used in Preservation Surface Treatments
  - [Research Topic Highlight](#) - NCHRP Practice-Ready Solutions for Warm Mix Asphalt
  - [Synthesis 512](#) - Use of Fiber-Reinforced Polymers in Highway Infrastructure
  - [Synthesis 511](#) - Relationship Between Chemical Makeup of Binders and Engineering Performance
  - [Synthesis 503](#) - Leveraging Technology for Transportation Agency Workforce Development and Training
  - [Synthesis 500](#) - Control of Concrete Cracking in Bridges
- [Transportation Research Record: Journal of the Transportation Research Board](#)
  - [Volume 2657](#) - Geological, Geoenvironmental, and Geotechnical Engineering: Volume 3
  - [Volume 2656](#) - Geological, Geoenvironmental, and Geotechnical Engineering: Volume 2
  - [Volume 2655](#) - Geological, Geoenvironmental, and Geotechnical Engineering: Volume 1
  - [Volume 2633](#) - Asphalt Materials and Mixtures, Volume 3
  - [Volume 2632](#) - Asphalt Materials and Mixtures, Volume 2
  - [Volume 2631](#) - Asphalt Materials and Mixtures, Volume 1
  - [Volume 2630](#) - Construction

- [Volume 2629](#) - Concrete Materials

## Current & Upcoming Projects

- [Current Projects](#)
  - [ACRP Synthesis 11-03/Topic S09-08](#) - Practices to Mitigate Alkali Silica Reaction (ASR) Effected Pavement at Airports
  - [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 20-44\(01\)](#) - Increasing WMA Implementation by Leveraging the State-Of-The-Knowledge
  - [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 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 Crossies
- [Upcoming Projects](#)
  - [NCHRP 01-61](#) - Evaluation of Bonded Concrete Overlays on Asphalt Pavements
  - [NCHRP 20-07/Task 412](#) - Adjustments to the Superpave Volumetric Mixture Design Procedure for Selecting Optimum Asphalt Content

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

- [A New Vision for Center-Based Engineering Research](#)
- [Frontiers of Engineering: Reports on Leading-Edge Engineering from the 2016 Symposium](#)

## Committees & Panels

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

[Technical Activities Division 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

[Conferences \(co-sponsored by TRB\)](#) - Left hand menu “upcoming conferences by topic”

**[International Conference on Advances in Materials and Pavement Performance Prediction \(AM3P\)\\*](#)**

*April 16-18, 2018*

**Doha, Qatar**

**[Transport Research Arena 2018\\*](#)**

*April 16-19, 2018*

**Vienna, Austria**

**[8th Symposium on Pavement Surface Characteristics: SURF 2018\\*](#)**

*May 2-4, 2018*

**South Brisbane, Australia**

**[4th GeoShanghai International Conference \(GeoShanghai 2018\)\\*](#)**

*May 27-30, 2018*

**Shanghai, China**

**[3rd International Conference on Transportation Infrastructure and Materials\\* \(ICTIM2018\)](#)**

*June 1-4, 2018*

**Tianjin, China**

**[GeoChina 2018 International Conference\\*](#)**

*July 23-25, 2019*

**Hangzhou, Zhejiang, China**

**[TRB Workshop at the 69th Highway Geology Symposium 2018\\*](#)**

*September 10, 2018*

**Portland, Maine**

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

*December 2-5, 2018*

**Hong-Kong, China**

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

## TRB's Transportation Research Information Services (TRIS)

TRIS includes the [TRB Library](#) and the [TRIS Databases](#) (listed below) which are available for 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](http://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](http://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](http://pubsindex.trb.org)

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

**Research Needs Statements (RNS)** – Research needs as identified by TRB Technical Activities standing committees - [rns.trb.org](http://rns.trb.org)

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