Climate Change Resilience
CRITICAL TRANSPORTATION ISSUE

PLUS
Short History of TRB
Insights from #TRBAM Twitter Hashtag
Transportation and Health in a Changing Climate
The National Academy of Sciences was established in 1863 by an Act of Congress, signed by President Lincoln, as a private, nongovernmental institution to advise the nation on issues related to science and technology. Members are elected by their peers for outstanding contributions to research. Dr. Marcia McNutt is president.

The National Academy of Engineering was established in 1964 under the charter of the National Academy of Sciences to bring the practices of engineering to advising the nation. Members are elected by their peers for extraordinary contributions to engineering. Dr. John L. Anderson is president.

The National Academy of Medicine (formerly the Institute of Medicine) was established in 1970 under the charter of the National Academy of Sciences to advise the nation on medical and health issues. Members are elected by their peers for distinguished contributions to medicine and health. Dr. Victor J. Dzau is president.

The three Academies work together as the National Academies of Sciences, Engineering, and Medicine to provide independent, objective analysis and advice to the nation and conduct other activities to solve complex problems and inform public policy decisions. The National Academies also encourage education and research, recognize outstanding contributions to knowledge, and increase public understanding in matters of science, engineering, and medicine.

Learn more about the National Academies of Sciences, Engineering, and Medicine at www.nationalacademies.org.

The Transportation Research Board is one of seven major programs of the National Academies of Sciences, Engineering, and Medicine. The mission of the Transportation Research Board is to increase the benefits that transportation contributes to society by providing leadership in transportation innovation and progress through research and information exchange, conducted within a setting that is objective, interdisciplinary, and multimodal. The Board’s varied activities annually engage about 7,000 engineers, scientists, and other transportation researchers and practitioners from the public and private sectors and academia, all of whom contribute their expertise in the public interest. The program is supported by state transportation departments, federal agencies including the component administrations of the U.S. Department of Transportation, and other organizations and individuals interested in the development of transportation.

Learn more about the Transportation Research Board at www.TRB.org.

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* Membership as of November 2019.
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4 NATIONAL ACADEMIES REPORT
Critical Issues in Transportation 2019: Climate Change Resilience
Vicki Arroyo
In this article, second in a series on the Critical Issues in Transportation 2019 document developed by the TRB Executive Committee, the work of state and local transportation agencies on building resilience to climate change impacts and reducing greenhouse gas emissions—and the research needs to support these efforts—are examined. Climate change resilience is a critical issue facing transportation, which not only is vulnerable to climate impacts but also is the largest source of greenhouse gas emissions.

9 Everyone Interested Is Invited: A Short History of TRB
Sarah Jo Peterson
Adapted from an upcoming book honoring TRB’s centennial, this article traces the history of the organization, from its first Annual Meeting in November 1920—addressing highways connecting rural areas, new horse-free travel technology, and freight practices informed by experiences overseas during World War I—to the multimodal focus of TRB in the twenty-first century. TRB’s founders intentionally created an organization that convenes experts from academia with those from industry, associations, organizations, and government—a cooperative vision that has continued to the present day.

18 #TRBAM: Social Media Interactions from Transportation’s Largest Conference
Subasish Das
Knowledge from the TRB Annual Meeting is shared not only within the convention center walls—it also is disseminated outside the event via communications methods—social media in particular. Analyzing the Twitter hashtag #TRBAM as a case study, this article examines how the social media platform has been used to sort social interactions among transportation professionals and offers insights on Twitter use trends.

24 NATIONAL ACADEMIES WORKSHOP
Protecting the Health and Well-Being of Communities in a Changing Climate
Alina B. Baciu, Leslie A. Pray, and Kathleen R. Stratton
Presented in this article are the transportation-related discussions at a 2017 workshop on the health implications of climate change; mitigation, prevention, adaptation, and resilience-building strategies; and collaboration activities on climate and population health issues. These include improving health via transportation, addressing health through infrastructure, and mitigating heat in urban areas.

28 NCHRP PROJECT 14-29
Workshops for Assessing, Coding, and Marking of Highway Structures in Emergency Situations
Gene V. Roe, Michael J. Olsen, Andre Barbosa, and Marc Veletzos
After an emergency event, state DOTs must ensure that highway structures are safe for the public by assessing, coding, and marking each highway structure to communicate the status of the structure. As the impacts of emergency events increasingly reach beyond state boundaries, uniform assessment processes and national coding and marking guidelines are needed. Completed in 2016, NCHRP Project 14-29 addressed these issues. In this article, authors describe the project as well as national- and state-level training workshops disseminating the research.

COVER Alaska DOT digs trenches to alleviate flooding along Dalton Highway north of Fairbanks. Climate change and its effects are critical challenges facing transportation and are addressed in this issue of TR News. (Photo: Alaska DOT)
LookingBus: Looking Out for Every Rider

Nirit Glazer

Developed under TRB’s Transit IDEA Program, LookingBus is a smart city system that helps people with disabilities use public transportation. Internet of Things technology connects bus stops, a rider’s smartphone app, and driver alert units to help riders with disabilities use the public bus system, from finding the correct bus stop to boarding the correct bus to getting off the bus at the right stop. Drivers also are able to serve these riders more effectively. This article outlines the research and development of the LookingBus system.

Also in This Issue:

40 Profiles
David Ballard, GRA, Incorporated, and William Eisele, Texas A&M Transportation Institute

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Communicating the Challenge of Transportation Resiliency and Sustainability: 12th Annual Competition Identifies Best Practices, by Terri H. Parker, page 44
Transportation Is Changing, and So Is TRR, by Patti Lockhart Ouellette, page 45

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TR NEWS
features articles on innovative and timely research and development activities in all modes of transportation. Brief news items of interest to the transportation community are also included, along with profiles of transportation professionals, meeting announcements, summaries of new publications, and news of Transportation Research Board activities.

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Black Rock City airport, the temporary airport used for the annual Burning Man festival in the Nevada desert, in 2018.

Photo: Duncan Rawlinson
Dear TR News Reader,

On paper, 100 years seems like a big number. Just thinking of the achievements in the transportation industry over the past 100 years inspires awe. Even considering how far we have come, however, we still have far to go. In the 1920s, some of the first appointed state and local transportation professionals had to figure out how to accommodate new mobility technologies—primarily automobiles—in their communities. One hundred years later, we are still doing the same thing with even newer technologies—and we are still figuring things out, with the help of transportation experts like you participating in the Transportation Research Board.

This issue includes a summary of a book that will be circulated to Annual Meeting attendees in January, which includes details and insights into TRB’s 100 years of contributions to the transportation industry. We also are launching a new series that will run throughout our year-long centennial celebration, highlighting stories from the volunteers who make TRB what it is and will become.

TR News began publishing in 1963 as a digest of recent TRB publications and industry issues. We still do this today, but we will continue to make it more interesting and accessible. We changed our look in the past year and now offer you the opportunity to receive this magazine electronically, through www.MyTRB.org.

Additionally, we will launch new sections of the magazine in the coming year to celebrate you—TRB’s committee and panel members. We will introduce you to key “Transportation Influencers” involved with TRB’s Young Members Council and will share recent career moves through a new section titled “Members on the Move.” To learn more about or to contribute to these new sections, send us an email at TRNews@nas.edu.

Without you and your willingness to volunteer your time, knowledge, and resources, TRB would not be what it is today. We hope you will stay connected with TRB to see what the future brings and find ways to successfully transport us all forward.

Sincerely,
The TR News Editorial Board

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We’d like to share your stories of what TRB has meant to you and your particular industry. If you would like to participate, please email a short write-up (approximately 250 words) and any supporting pictures to TRNews@nas.edu. With your permission, we will also share your stories through our Centennial website (www.TRB.org/Centennial), which contains additional information regarding TRB’s history.