Preservation, Maintenance, and Renewal
A Strategic Approach to Prepare for the Future

Safe Navigation for Pedestrians and Bicyclists at Intersections
How We Move Matters
Serving Passengers with Hearing Loss

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3 NCHRP RESEARCH REPORT 948
Getting to the Other Side: Safe Navigation for Pedestrians and Bicyclists at Alternative and Other Intersections and Interchanges
Bastian Schroeder, Shannon Warchol, and Mike Alston

Until recently, the needs and safety concerns of pedestrians and bicyclists have not been the highest priority in the design of alternative intersections. The authors address how such prioritization is measured and how improvements can be evaluated.

8 NCHRP REPORT 750, VOL. 7
Preservation, Maintenance, and Renewal: A Strategic Approach to Prepare for the Future
Jagannath Mallela, Hal Kassoff, and Amir N. Hanna

A large share of highway agency budgets are devoted to preservation, maintenance, and renewal (PMR) of highway assets. Agencies must balance immediate needs with longer-term strategies to embrace innovative PMR practices. This article presents NCHRP research on the application of emerging and innovative materials and technologies to deal with highway infrastructure PMR needs.

14 NCHRP SYNTHESIS 560
Digital Terrain Models: Use Cases, Benefits, and Barriers
Makram Bou Hatoum, Hala Nassereddine, and Gabriel Dadi

Analyzing highway design data via 3-D models—digital terrain models, or DTMs—can be combined with surveying technology and automated machine guidance to improve production and efficiency. The authors build on the findings of NCHRP research to investigate significant use cases of DTMs during the construction phase of a highway project, as well as the benefits of and barriers to implementing DTMs.

18 How We Move Matters: Connections Between New Transportation and Mobility Options and Environmental Health
Anne Johnson and Katherine Kortum

Marked changes in how people and goods circulate around our communities have taken place in recent years, resulting in ramifications for human health, equity, pollution, and climate. The authors summarize a virtual workshop in which participants discussed these developments, their risks and benefits, and opportunities for a healthier and more equitable mobility future.

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Green Bonds and the Transit Industry
Damon Fordham

By their very nature, many transit projects—which include technology that helps reduce greenhouse gas emissions—are obvious candidates for green bond funding, a compelling means of leveraging finance to advance sustainability goals. But determining which transit projects qualify for green bonds is not always clear. The author offers insights and tips on the effective application of green bond funding.

COVER The road—and work day—stretch ahead for an Arizona Department of Transportation (DOT) crew conducting pavement preservation operations on SR-88. The results of efficient, effective preservation include reduced life-cycle costs, shorter down time, and better system performance. (Photo: Arizona DOT)
25 Serving Passengers with Hearing Loss

Stephen O. Frazier

For travelers with hearing loss, moving through a transportation terminal can be very challenging. Background noise and spotty quality of public address systems can stymie speech comprehension, leading to confusion and even missed travel connections. “Hearing loops” allow people who are hard of hearing to understand public announcements and are increasingly being adopted by airports, rail terminals, and other transportation centers.

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30 Profiles
Liyang Gu, Airports Council International, and Mark L. Reno, Murraysmith and Quincy Engineering

32 Transportation Influencers
Suzie Boxman, Environmental Research and Education Foundation; Brittnie Gick, Texas A&M Transportation Institute; and Stephen Wong, University of Alberta

TR COVID-19 Resources
Agencies and organizations can use TRB publications and online resources for useful and timely information to help address issues related to the COVID-19 pandemic. To read about TRB’s current research and activities, and for a list of relevant publications, visit www.nationalacademies.org/trb/blog/transportation-in-the-face-of-communicable-disease.

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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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