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TRANSPORTATION RESEARCH BOARD

TRB/NCHRP Update

Ray Derr

2019 CTSO
Subcommittee on Technology

TRB's Critical Issues in Transportation

- Transformational Technologies and Services
- Serving a Growing and Shifting Population
- Energy and Sustainability
- Resilience and Security
- Safety and Public Health
- Equity: Serving the Disadvantaged
- Governance: Managing our Systems
- System Performance and Management
- Funding and Finance
- Goods Movement
- Institutional and Workforce Capacity
- Research and Innovation: Preparing for the Future

Renewing the National Commitment to the Interstate Highway System: A Foundation for the Future

- Appendix F: Connected and Automated Vehicle Technology Impacts on Future Interstate Highway System by Steven E. Shladover

 <http://bit.ly/2y8gEm4>

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July 2019

Impacts of Connected Vehicles and Automated Vehicles on State and Local Transportation Agencies NCHRP Project 20-102 and Other Efforts

The **National Cooperative Highway Research Program** (NCHRP) is funded by the state departments of transportation and managed by the Transportation Research Board, part of the National Academies of Sciences, Engineering and Medicine. **NCHRP Project 20-102** began in Dec. 2014 to tackle CV/AV issues and is being coordinated with the U.S. DOT, private sector, and other efforts. Contact Ray Derr (rderr@nas.edu) for more information.

Reports Available

[Updating Regional Transportation Planning and Modeling Tools to Address Impacts of Connected and Automated Vehicles](#) [NCHRP Report 896] addresses transportation supply, road capacity, and travel demand, with [Executive Summary](#) and [Presentation](#).

[Dedicating Lanes for Priority or Exclusive Use by Connected and Automated Vehicles](#) [NCHRP Report 891] evaluates opportunities, constraints and guiding principles for implementing dedicated lanes.

Implications of Connected and Automated Driving Systems [NCHRP Web-Only Document 253] helps states identify laws and regulations that may need to be changed. It includes six volumes: [Legal Landscape](#), [State Legal and Regulatory Audit](#), [Legal Modification Prioritization and Harmonization Analysis](#), [Autonomous Vehicle Action Plan](#), [Developing the Autonomous Vehicle Action Plan](#), and [Implementation Plan](#).

[Advancing Automated and Connected Vehicles: Policy and Planning Actions for State and Local Transportation Agencies](#) [NCHRP Report 845] presents potential societal outcomes of these technologies and 18 policy and planning strategies that could advance public interests. The [briefing document](#) provides a good introduction.

[Impacts of Connected and Automated Vehicles on State and Local Transportation Agencies](#)



Business Models to Facilitate Deployment of CV Infrastructure to Support AV Operations [NCHRP 20-102(12)]

- Guidance for DOT decision makers on
 - Issues regarding investment in V2I infrastructure
 - Business cases for those investments
 - Ways to effectively present those business cases
- Project scheduled for completion in November 2019
- Staff: Andy Lemer

Cybersecurity of Traffic Management Systems [NCHRP 03-127]

- Guidance on mitigating risks from cyber-attacks on the field side of traffic management systems, including V2I
- Guidance expected to be available on NOCoE website in September 2019
- Staff: Ray Derr

Connected Road Classification System (CRCS) Development [NCHRP 20- 24(112)]

- Consensus CRCS that can be used by State and Local DOTs and MPOs in planning and implementing CV- and HAV-compatible infrastructure
- Project complete, publication in late 2019
- Staff: Camille Crichton-Summers

Impacts of Connected and Automated Vehicle Technologies on the Highway Infrastructure [NCHRP 20-102(15)]

- Guidance for state and local transportation agencies in evaluating and adapting current standards and practices
- Stakeholder engagement underway
- Project expected to be complete in early 2020
- Staff: Ray Derr

NCHRP IMPLEMENTATION

- NCHRP Implementation Funds (\$2M) are available to promote implementation of NCHRP research results [Project 20-44]
- Information on applying is at the URL below or search for NCHRP 20-44

<https://apps.trb.org/cmsfeed/TRBNetProjectDisplay.asp?ProjectID=588>

NEW NCHRP 20-102 PROJECTS

- Research Roadmap for NCHRP 20-102 [NCHRP 20-102(19)B]
- Readiness and Effectiveness of Freeway-Based Corridor V2X Applications for Improving Congestion and Safety [NCHRP 20-102(25)]
- Dynamic Curbside Management in the Era of CAVs, SAVs, Scooters, TNCs, and Traditional Vehicles [NCHRP 20-102(26)]
- Realistic Estimates of CAV Implementation Timing [NCHRP 20-102(27)]
- Best Practices in Work Zones for AVs and CVs [NCHRP 20-102(28)]
- Incorporating New Mobility Options into Transportation Demand Modeling [NCHRP 20-102(29)]