



MEMORANDUM

TO: TPB Technical Committee
FROM: Andrew J. Meese, TPB Program Director, Systems Performance Planning
SUBJECT: Connected and Automated Vehicle Draft Regional Principles
DATE: December 30, 2021

This memorandum provides an update on Connected and Automated Vehicle (CAV) draft regional principles, slated for TPB approval at the TPB's January 19, 2022 meeting.

BACKGROUND ON PRINCIPLES DEVELOPMENT

The TPB's most recent long-range transportation plan, Visualize 2045 (approved in 2018), included only limited information on the potential impacts of future CAVs. Although CAVs are expected to be impactful between now and 2045, many uncertainties surround them from a planning perspective, including the global pace of technological development, and market forces (e.g., will vehicle buyers be quick or slow to adopt CAVs?).

Following 2018, staff took action to strengthen our understanding of CAVs, through a series of regional webinars, and a subject matter expert consultant-developed white paper on CAV planning considerations.

REVIEW OF THE DRAFT PRINCIPLES

Following development of a strawman draft by staff in summer 2021, draft principles were reviewed and discussed by the following committees:

- **TPB Technical Committee – September 10 and November 5**
- Systems Performance, Operations, and Technology Subcommittee – July 8, September 9, and October 28
- Access for All Advisory Committee – September 24
- Community Advisory Committee – October 14
- Regional Public Transportation Subcommittee – November 23
- **Transportation Planning Board – November 17**

These reviews helped refine the draft principles toward the set of 18 now slated for TPB approval at its January 19, 2022 meeting. The draft principles remain unchanged from the set presented to the Technical Committee at the November 5 meeting.

THE CURRENT DRAFT CAV PRINCIPLES

Attached is the current draft, comprising 18 (eighteen) principles based on the 2020 consultant white paper on the topic, staff analysis, and committee discussions. The structure of the principles list is a single preamble: *The deployment, use, or operation of Connected and Automated Vehicles in the National Capital Region should...* followed by each of the 18 statements.

A presentation slide deck is also being included in read-ahead materials for the January 7 meeting, with additional explanatory information. For brevity during the presentation, staff plans to focus on just an overview of the draft principles, but will be happy to discuss any of the principles or related information at the request of the committee. If you have any questions, please feel free to contact me by email at ameese@mwkog.org. Thank you.

Attachment: Draft TPB CAV Principles

National Capital Region Transportation Planning Board Principles for Connected and Automated Vehicles

The deployment, use, or operation of Connected and Automated Vehicles (CAVs) in the National Capital Region should:

1. ensure the safety of everyone on or near transportation facilities, in all situations.
2. ensure CAVs' benefits are available equitably to all people in the region, and avoid disproportionate negative impacts to any group or community.
3. increase mobility options for all.
4. increase opportunities for and quality of accessible transportation, including for persons with disabilities.
5. maintain and enhance opportunities for and the quality of bicycling and walking in the region.
6. support the priority of transit on the region's roadways.
7. enhance the provision of transit, including providing opportunities for microtransit access to the region's high-capacity transit (HCT) stations.
8. bolster regional environmental and land use objectives, including prioritizing shared vehicles and advancing decarbonization of the transportation system.
9. prioritize reduction of vehicle miles of travel and minimize zero occupant vehicle miles of travel.
10. ensure freight and goods movements that help minimize disruptions and facilitate livability of the region's communities.
11. ensure security (including cybersecurity) and privacy, and prevent risks to people and infrastructure.
12. interoperate safely with non-automated vehicles, vehicles with differing levels of automation, and all other transportation system users.
13. be accompanied by addressal of legal liability issues relating to crashes, failures, and safety, including ensuring that CAVs at varying levels of capability are operated within those vehicles' technological capabilities and limitations.
14. bolster effectiveness of emergency and incident response, systems management by traffic operations centers, and information sharing among agencies and the public.
15. bolster interjurisdictional coordination and technical interoperability among TPB member agencies, in conjunction with relevant national efforts and standards.
16. provide public revenues that are no less than the costs they impose on infrastructure, transportation systems management and operations, and communities.
17. make data freely available to TPB member agencies to enhance planning, operations, and emergency preparedness and response.
18. be accompanied by robust efforts by TPB and member agencies to keep abreast of evolving technology to enhance support of TPB's goals.