



## **MEMORANDUM**

**TO:** TPB Technical Committee  
**FROM:** Andrew J. Meese, TPB Systems Performance Planning Program Director  
**SUBJECT:** Updated Draft Regional Connected and Automated Vehicle Principles  
**DATE:** October 29, 2021 (**Attachment Revised November 2, 2021**)

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This memorandum provides an update on the set of draft Connected and Automated Vehicle (CAV) Principles being developed for TPB review and approval, toward inclusion in the 2022 update of Visualize 2045.

### **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. Recently, staff and partners have been working to strengthen our understanding of CAVs in preparation for the 2022 update of Visualize 2045, as well as developing a draft set of regional CAV principles for inclusion in the plan. During September and October, a draft set of principles was reviewed by and input received from several TPB committees, including the TPB Technical Committee (September 10), the Access for All Advisory Committee (September 24), the Community Advisory Committee (October 14), and the Systems Performance, Operations, and Technology Subcommittee (SPOTS – September 9 and October 28). The TPB is slated to review the draft principles at its November 17, 2021 meeting, for later approval (currently anticipated for January 19, 2022).

### **APPROACH TO THE DRAFT CAV PRINCIPLES**

As noted in the September 2, 2021 memorandum to the Committee, staff's approach to the development of draft CAV principles was based on the following:

- Similarity in structure, phrasing, number, and length number to documents previously approved by TPB, such as Regional Freight Policies in the 2016 Regional Freight Plan
- Brevity and inclusiveness of topics
- Positive phrasing was favored where possible (what should happen rather than what should not happen)
- Emphasis on topic areas generally in the purview of the TPB and its member jurisdictions
- Avoidance of endorsement, promotion, or prohibition phrasing
- Emphasis on evergreen principles that will not depend on (or go out of date because of) quickly-changing technologies or market forces
- Emphasis on policy/principle viewpoints, and outcomes, rather than strategies or tactics.

## UPDATES TO THE DRAFT CAV PRINCIPLES SINCE SEPTEMBER

Attached is a revised set of 18 draft CAV principles, with a number of updates since the earlier set of 17 draft principles was presented to the Committee on September 10. Changes aimed to reflect comments received at the several committee meetings noted above, as well as continued internal TPB staff review. Notable changes include:

- The list of principles was re-ordered for clarity, generally with community-related topics toward the front, technical topics toward the end, and related topics placed near each other on the list.
- A new principle was added to the list, on the topic of legal liability; there are now 18 total. In the re-ordering, this new principle is currently #13.
- Staff made a limited number of other wording changes, mostly in the explanatory notes rather than in the principles themselves. Overall, several of the draft principles generated lively discussions during committee reviews, but there were very few suggestions of actual wording changes to the principles themselves. There were a handful of changes to the explanatory notes on the slides devoted to each principle.

The structure of the principles list still uses the same single preamble: *The deployment, use, or operation of Connected and Automated Vehicles (CAVs) in the National Capital Region should...* followed by each of the 18 statements.

## OUTLOOK

The draft principles are slated for their first presentation at the November 17, 2021 TPB Meeting, as an Information Item. (This presentation also will include the type of background information that was presented at the September 10 TPB Technical Committee meeting.) The TPB will be invited to provide comment and direction. Staff will revise the principles if needed, and return to the TPB at a later meeting for TPB to approve the principles (anticipated to be the January 19, 2022 meeting, due to agenda time constraints in December). Once TPB has approved the principles, they can be incorporated into the Visualize 2045 update in early 2022.

Staff welcomes committee participants' comments at the November 5 meeting, or prior to November 5 by email to me at [ameese@mwkog.org](mailto:ameese@mwkog.org).

**Attachment:** Revised 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.