



MEMORANDUM

TO: Systems Performance, Operations and Technology Subcommittee (SPOTS)
FROM: Andrew J. Meese, TPB Systems Performance Planning Program Director
SUBJECT: Update on Connected and Automated Vehicles and Draft CAV Principles
DATE: July 1, 2021

This memorandum provides an update on Connected and Automated Vehicles (CAVs) activities, including outcomes of the most recent webinar, and the next step, development of regional CAV principles.

WHITE PAPER, WEBINAR, AND DRAFTING OF CAV PRINCIPLES

On May 25, 2021, staff hosted the fourth regional Connected and Automated Vehicles (CAVs) webinar, focusing on a consultant-developed CAV “planning considerations” white paper. At the July 9 TPB Technical Committee meeting, staff will briefly review the white paper and webinar outcomes, then turn to the current effort to draft regional CAV principles, advised by the SPOTS July 8 discussions.

WHITE PAPER AS BACKGROUND TO CAV PRINCIPLES DEVELOPMENT

The white paper¹ was developed to assist the TPB in planning for CAVs on the region’s transportation system. Specifically, it looked to inform regional conversations on CAVs and TPB’s role related to this topic by examining:

- Areas where TPB goals, policies, and activities may substantially interact with CAVs.
- Potential CAV deployment impacts (issues, challenges, opportunities) as they relate to corresponding jurisdictional authorities and roles (primary, secondary, collaborative).
- Opportunities to enhance CAV considerations within TPB’s planning products/activities including processes for developing regional CAV principles.

This paper also supported development of the region’s planning, policy, and programming priorities related to CAVs and identifies actions TPB may take to further achievement of its goals and minimize the potential for adverse impacts as CAVs are deployed.

¹ [“Connected and Autonomous Vehicles \(CAVs\): Planning Considerations for the National Capital Region Transportation Planning Board.”](#) Prepared by ICF on behalf of the Metropolitan Washington Council of Governments Department of Transportation Planning, June 2020.

PROCESS TO DEVELOP TPB CAV PRINCIPLES

Fall 2021 is the target time frame to complete development of text content of TPB's next Visualize 2045 long-range transportation plan update; the goal is to have CAV principles ready and approved by that deadline. Staff has been working to develop a draft set of such principles for review, based on findings and recommendations of the white paper, discussions during the four CAV webinars TPB has hosted in 2020 and 2021, and a review of the context of Visualize 2045 and other existing TPB policy documents.

Staff used the framework matrix (Attachment 1), adapted from the white paper, as a starting point for principle development, through staff brainstorming exercises. The goal was to develop a first draft of principles for subcommittee review, avoiding a subcommittee "blank slate" exercise. The matrix is broken into three sections reflecting areas of CAV deployment impact: Travel, Social, and Organizational. Each of these sections contain columns discussing:

- CAV Impact Area
- Example Linkage to Metropolitan Washington Region Goals/Objectives
- Opportunities
- Risks
- Issues for Consideration in Draft Principle Language
- Applicable Draft TPB CAV Principles.

Potentially impacted areas in the Travel section include Access, Active Transportation, Public Transportation, Goods Movement, Safety, and Travel Behavior. In the Social section impacted areas looked at include Equity, Employment/Economic Development, Environment, and Land Use/Urban Form. The Organizational section includes Data Coordination, Emergency Preparedness, Funding, Infrastructure, and Operations. As can be seen in the last column of the matrix the impacted areas can fall under multiple principles.

Attachment 2 is a short list of draft CAV principles. Staff developed this list in internal brainstorming exercises, with the objectives of brevity, wide applicability, and consistency with previous TPB policy statements on other topic areas (both in terms of phrasing and approximate number of statements). Given that the advent of CAVs brings risks (in addition to opportunities), care has been taken to avoid wording that could be interpreted to endorse or promote CAVs, remaining neutral. Staff welcomes discussion at the July 8 meeting on phrasing, additions, subtractions or consolidations, or other issues.

On July 9, staff will brief the TPB Technical Committee on highlights coming out of the July 8 SPOTS discussion, with presentation of an actual draft CAV principles document (revised as per SPOTS input) anticipated for the September 3, 2021 TPB Technical Committee meeting, agenda time permitting. After TPB Technical Committee review, draft CAV principles are anticipated to move forward to the TPB for review and approval sometime in the fall, again agenda time permitting.

Attachments (2):

- Framework Matrix, DRAFT of July 1, 2021
- TPB CAV Principles Short List, DRAFT of July 1, 2021