December 3, 2018

Docket Operations
U.S. Department of Transportation
1200 New Jersey Avenue, SE
West Building, Ground Floor
Room W12-140
Washington, DC 20590-0001

Re: DOT–OST–2018–0149

Dear Docket Clerk:

These comments and recommendations are submitted on behalf of the American Public Transportation Association (APTA) on the Department of Transportation (DOT) Office of the Secretary (OST) Notice of Request for Comments: for Preparing for the Future of Transportation: Automated Vehicles 3.0 (AV 3.0), published on October 9, 2018 at 83 FR 50746.

About APTA

APTA is a non-profit international trade association of more than 1,500 public and private member organizations, including public transit systems; high-speed intercity passenger rail agencies; planning, design, construction and finance firms; product and service providers; academic institutions; and state associations and departments of transportation.

General Comments

APTA applauds the DOT for issuing a multimodal framework for new automated technologies, and a regulatory environment supportive of innovation. The transit industry has witnessed many changes over the last several years and is poised to embrace technology-driven mobility solutions to continue to efficiently meet passengers' needs and expectations. Comments will highlight areas that require further consideration on the way to automation in the transit operations. APTA's comments are structured around the key areas of AV 3.0 (1) Advancing multi-modal safety, (2) reducing policy uncertainty, and (3) outlining a process for working with DOT.

Advancing multi-modal safety

While automated vehicles do not necessarily equate to unmanned vehicles, AV 3.0 makes mention of machine vision, artificial intelligence (AI), assistive robots, and facial recognition software as likely substitutes to operators. It is important to note that transit operators are trained to intervene in safety emergencies. For example, if a young child enters unaccompanied, drivers are trained to react to a potential human trafficking situation. As the industry transitions to level 4 and 5 of the SAE automation, it is important to consider new monitoring and law enforcement practices to address concerns in the absence of human driver.

AV 3.0 provides a framework for dealing with cybersecurity and customer privacy issues, allowing for innovation. However, DOT should also consider cybersecurity risks for infrastructure such as signals, traffic management centers, and vehicle-to-infrastructure communications and help fund necessary upgrades.

Reducing policy uncertainty and clarifying roles

AV 3.0 addresses the need for transit agencies to work with their counterparts at city departments of transportation and metropolitan planning organizations on implementing complete streets policies and curb space management to ensure that transit vehicles will both pick-up and drop-off passengers at accessible stops. The DOT should invest in infrastructure that improves access to transit and support research into how technology can be leveraged to meet rider needs in the absence of an operator.

Furthermore, the DOT should continue to seek the views of persons with disabilities on issues related to AV deployment as different abilities require different accommodations. If the operators must push a button to deploy a ramp on a bus, how would such an action occur in the absence of an operator? There may be opportunities for universal design where products are built to be used by the widest number of people possible and standard aides that are inclusive for passengers both inside and outside of the vehicle. Furthermore, since DOT accessibility regulations currently require transit systems to train their personnel to be proficient with accessibility features and aid disabled passengers, how will those requirements play out in an AV world?

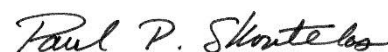*Outlining a process for working with DOT*

Transit agencies are optimistic about working with the DOT to address impediments to utilizing AV technology. Issues the DOT could address include:

- More flexibility and guidance on spending federal dollars would encourage the use of AVs by transit agencies. If agencies buy buses with capital money today but elect to buy AV buses "as a service" in the future (i.e., not acquiring the asset, but the service), it's not clear if that will be an operating or capital expense.

- Encouraging greater intergovernmental communication and data sharing to route AVs around a roadway issue. Transit drivers are often faced with sudden road-closures and with the onset of AVs without an operator, more issues may arise if there is a sudden need to detour from a fixed route. The DOT could facilitate the development of a data-aggregator to provide up-to-date information on traffic, construction sites and other information, which can be used by all government stakeholders.
- Clarifying and updating federal guidance on procurement policies and Buy America compliance would allow transit agencies to procure the technologies needed for AV services because the equipment and technology needed to deploy AVs are not currently available through domestic manufacturers.
- 49 U.S.C. §5333(b) (formerly section 13c) requires transit agencies to certify that labor is not "worsened" by innovations or changes to service, contract outsourcing, or technology should be reviewed as this may be an impediment to level 4 and 5 autonomous vehicles. This issue has been a barrier to the deployment of driverless trains. A fully driverless rail project currently in development in Hawaii.has been awarded a full-funding grant agreement.
- US DOT can nurture innovation through pilot programs that will enable transit agencies to learn from the testing and deployment of emerging AV technologies and practices. Such pilot programs could include various types of public-private partnerships; public-feedback mechanisms; safety management plans; architecture for data storage, management and analysis; and performance metrics. Such pilot programs provide important incentives for the learning that will benefit all transit operations that follow.
- Numerous policy issues, though critical, are best worked-out at the local level. This might include incident management aboard automated services; securement of wheelchairs; and fare collection and enforcement procedures.
- Finally, APTA notes that the focus of the AV 3.0 document is rightfully focused on safety. However, the ultimate policy vision must consider a broader set of outcomes that could come from vehicle automation. Some scenarios suggest a world with more traffic, more vehicle-miles traveled, more emissions, more congestion and more sprawl. A policy framework needs to be in place so the emerging transportation system will lay the foundations for communities and regions that not only safe, but also economically vibrant, energy efficient, and providing citizens opportunity and quality of life.

We appreciate the opportunity to assist the DOT in this important endeavor. These comments supplement APTA comments provided earlier this year (March 2, 2018) in response to FTA's notice on Removing Barriers to Transit Bus Automation, posted January 16, 2018. Those earlier comments are hereby incorporated by reference. For additional information, please contact Linda Ford, APTA's General Counsel, at (202) 496-4808 or lford@apta.com.

Sincerely,

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President and CEO