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March 2, 2018

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

Re: FTA-2017-0025

Dear Docket Clerk:

On behalf of the more than 1,500 member organizations of the American Public Transportation Association (APTA), I write to provide comments on Removing Barriers to Transit Bus Automation posted January 16, 2018; FR Number 2018-00617.

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 appreciates the opportunity to offer these views on the implementation of automated bus transit services. New automation technologies are opening doors to innovation, leading to new and better ways to service the public with improved mobility options. An automated transit shuttle is currently in service, with more lined up to follow in the coming months.

The notice makes several references to the use of automated vehicles (AV) in circulator services, or for first-mile/last-mile services. While these are viable models for AV service, additional service models already are emerging, such as the use of AV shuttle operations to serve (on-demand) transit deserts where demand is not sufficient to support conventional bus service. In such communities, AV shuttles will connect riders with main transit routes. As AV technology advances, federal policies and priorities governing public transit should adapt to allow service to remain competitive, cost-efficient and delivery quality service for riders. Transit agencies are also considering ways to more broadly deploy driver assistance technologies and autonomous vehicles in closed environments (such as storage/maintenance yards) in the short-term, to both enhance operating efficiencies and reduce avoidable collisions.

APTA requests the FTA to examine its current statutes, regulations, or policies that may present a challenge or barrier to the development, demonstration, deployment, or evaluation of automated transit buses:

Adjustments to Peak-Fleet Requirements and Spare Ratios:

Automated bus shuttle operations will initially employ a unique type of vehicle and will provide a unique type of service. AV buses will likely be smaller than conventional buses, and lend themselves to more frequent service (in-step with broader societal trends which put a premium on time and minimized waiting).

Because AV buses can neither replace nor substitute for conventional transit buses in the short term, it is suggested that their numbers be part of a separate calculation of the peak fleet requirement and the allowable spare ratio.

Posting of Routes:

FTA requirements that all transit service be posted in a transit guide prevents agencies from being flexible and could hamper their ability to make necessary changes while testing AVs and other technology. FTA should adjust its guidelines accordingly.

Definitions under the Americans with Disabilities Act:

AV shuttles seem to fall into grey-areas in regard to the Americans with Disabilities Act (ADA), and clarifications will be needed. For example, will such vehicles be treated as other vehicles in rapid transit (horizontal and vertical gap parameters at platforms, no securements for wheelchairs, etc.) or as buses (ramps, onboard wheelchair securements, etc.)? How automated vehicles will be treated in this context will be a major consideration to further development. FTA should consider alternative options to meet ADA requirements during the initial launch of these technologies, as well as support additional research into how technologies and best practices can be further developed to meet such rider needs. FTA should also support research into how technologies and best practices can be further developed to meet such rider needs in the absence of an operator.

Special Considerations for Persons without Cell Phones or Without Credit Accounts:

Many on-demand mobility services rely upon the use of cell phones and credit accounts, factors that are not universally available to all. Transit agencies are considering methods such as call centers to accommodate such needs. Transit agencies should be expected to have long-term plans in place to make sure that on-demand services are available to all persons. However, near-term service enhancements such as AV buses should be allowed to proceed as broader issues are addressed holistically through long-term plans. Significant progress is being reported in this area, and ongoing pilot programs can be expected to add still further to the state of the art.

Treatment of AV Systems as Fixed-Guideway Projects:

Clarity will need to be provided as the status of AV systems as Fixed-Guideway projects:

- Is FTA inclined to treat these operations as fixed-guideway in the allocation of federal formula funding?
- Will they be required to have a specific fixed-guideway element?
- Under what conditions would they be eligible for federal Capital Investment Grant funding?
- Should Small-Starts and other projects get credit for incorporating AV technologies?

Alternative or Phased uses for Automation Technology

There is an incremental “semi-autonomous” set of technologies, such as guided buses, that have the potential for better level boarding in Bus Rapid Transit (BRT), enabling operation in narrower lanes, collision avoidance and improving ride quality that blur the lines between fully autonomous and manual. FTA should ensure that new regulations do not create new obstacles for technology development.

Partnerships with Existing Ride Sharing Programs:

It appears likely that automated vehicles will be broadly deployed in the ride sharing industry prior to being widely used in public transit. Transit agencies across the country are coordinating with local ride sharing services and understand the potential efficiencies offered to transit systems and riders by better developing stronger partnerships. In some cases, regulatory requirements prohibit or limit the feasibility of integrated networks. Such barriers may increase as autonomous technology is deployed. FTA should consider policies or practices that would allow for additional public-private partnerships with ride sharing services to support evolving transportation needs within our communities.

APTA encourages examining other Federal statutes, regulations, or policies that may present a challenge or barrier to the development, demonstration, deployment, or evaluation of automated transit buses:

NHTSA Safety Guidance:

During APTA's deliberations, attention was brought to National Highway Traffic Safety Administration (NHTSA) Enforcement Guidance Bulletin 2016-02: Safety-Related Defects and Automated Safety Technologies (https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/documents/12507-av_site_fedreg_final-defects-authority-enforcement-bulletin_2016.0.2.31.43_pm.pdf) to determine the effect the guidance has on public transit industry and identify gaps.

This bulletin emphasizes "To avoid violating Safety Act requirements and standards, manufacturers of current and emerging automated safety technologies are strongly encouraged to take steps to proactively identify and resolve safety concerns before their products are available for use on U.S. roadways, and to discuss such actions with NHTSA. The Agency recognizes that most automated safety technologies heavily involve electronic systems (such as hardware, software, sensors, global positioning systems (GPS) and vehicle-to-vehicle (V2V) safety communications systems). The Agency acknowledges that the increased use of electronic systems in motor vehicles and motor vehicle equipment may raise new and different safety concerns."

APTA will meet with NHTSA, to learn Automated Safety Technology best practices learned from the auto industry, and help APTA ensure efficient, reliable and safe demonstrations and deployments.

Buy America:

The Fixing America's Surface Transportation (FAST) Act increased the Buy America domestic content requirements for transit rolling stock from 60 percent to 65 percent, and ultimately to 70 percent in FY 2020. While we appreciate the transition to higher domestic content requirements as directed by the FAST Act and implemented by FTA, the equipment and technology needed to deploy AVs are not currently available through domestic manufacturers. A temporary waiver for the technology components of AVs may be required in order for transit agencies to procure the technologies needed for AV services.

Use of Data:

AV systems will generate huge amounts of data. Transit agencies should be assured that there are no restrictions on their use or monetization of data, regardless of whether or not there is a federal interest in the project.

APTA supports the expansion of federal programs that help facilitate small business participation in this emerging technology:

Capital Support for Automated Shuttle Projects:

The initial prototype AV operations are providing invaluable experience to all AV systems that follow, as well as providing operating practices and lessons learned to the broader transit community. Federally supported pilot programs can help provide the spark and the incentive to get such prototype programs started (such as with the Mobility-on-Demand Pilot Program).

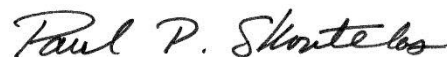
Beyond the pilot programs, ongoing capital support will be required to help transit agencies prepare for the introduction of new fleets of vehicles and to train a workforce with a new range of technical skills.

Preparing Transit's Workforce with New Skills:

APTA and the transit industry are undertaking a major workforce development initiative to ensure that a highly-skilled workforce will be prepared to address transformations from traditional modal systems to an overall mobility approach for the future. The transit industry will face a high-turnover rate due to retirements. As the industry evolves, transit's workforce must be prepared to adapt to these changes, particularly advanced technologies. This shift will require new skills and jobs for the future workforce, including operators and technicians.

We appreciate the opportunity to assist the FTA in this important endeavor. For additional information, please contact Linda Ford, APTA's General Counsel, at (202) 496-4808 or lford@apta.com.

Sincerely,



Paul P. Skoutelas
President and CEO