U.S. Department of Transportation
Docket Operations
1200 New Jersey Avenue SE
Washington, DC 20590

Re: Comments Concerning Preparing for the Future of Transportation: Automated Vehicles 3.0
Docket No.: DOT-OST-2018-0149

I write to express Access Living's concerns regarding the impact of autonomous vehicles on the accessibility of transportation and our transit systems. Access Living is Chicago's Center for Independent Living for people with disabilities established pursuant to the Rehabilitation Act, 29 U.S.C. § 796f. Access Living's statutorily mandated mission includes assisting individuals with disabilities in obtaining equal access to and participation in services, programs, activities, resources, and facilities, whether public or private. *See id*. § 796f-4(b)(1)(D). We serve individuals on a cross-disability basis, meaning that we serve individuals with all different types of significant disabilities. *See id.* § 796f-4(b)(2).

When Congress passed the Americans with Disabilities Act in 1990, current automobile technology was already well established. At that time, our efforts to secure accessible transportation options were curtailed by design choices that had been made decades earlier. It was obvious that retrofitting old designs was expensive, and the community of people with disabilities would have to compromise its objective of full transportation accessibility.

The introduction of autonomous vehicles could present the opportunity for a do over. If universal accessibility could be designed into the affected systems at the beginning, people with disabilities would no longer be limited by the excessive cost of retrofitting. On the other hand, if proper direction is not given now, we risk damage to our existing public transportation options and accompanying loss of accessibility.

For those reasons, we believe that the paramount objective at the Department of Transportation is to move stakeholders from industry, government and transportation authorities to immediately confront the design challenges necessary to make the next phase of transportation universally accessible. We propose that such accessibility requires focus on three distinct but interconnected areas of concern, (1) the design of autonomous vehicles themselves, (2) the designs of municipal transit systems that will interact with these vehicles, and (3) the design and use of rights of way.

Although forecasts of the actual impact of autonomous vehicles are conflicting, we recognize a substantial likelihood that the following elements are necessary for creating universal access. We offer these elements in bullet point, recognizing that there may be different routes to achieving any particular element.

Autonomous Vehicle Design Elements

- Vehicle identification and location tools must be available across disability types: such as
    - Systems for people who are blind to identify vehicle that arrived to pick them up; and
    - Sufficient vehicle variety to allow visual identification of appropriate vehicle
- Vehicle hailing technology (i.e. directing a vehicle to pick-up the passenger up after an appointment) must be simple to operate, use plain language and clear iconography, not require significant dexterity, and be accessible to individuals who are Deaf, blind, or DeafBlind.
- Vehicle boarding and chair securement systems must allow:
    - Installation of ramp extension accessories on the side of a vehicle,
    - Automatic lock down accessory for wheelchair users,
    - Passenger restraint accessory for wheelchair users,
    - Sufficient space for oversized, irregular sized wheelchairs and passengers,
    - Minimal barrier for large package stowing (i.e. foldable wheelchair, oxygen tanks), and
    - Multiple door opening mechanism options (i.e. push button, remote control)
- Vehicle control systems must respond to:
    - Simple direction guidance, accommodating visual, hearing, and tactile needs,
    - Third party direction control upon passenger authorization (for example, for passengers with developmental disabilities), and
    - Sharing of vehicle location information with third parties upon passenger authorization.
- Vehicles must assist passengers with their surroundings by:
    - Communicating regarding trip or destination options regardless of a passenger's visual acuity or auditory processing ability, and
    - Communicating information about area weather hazards and directions from drop off points to final destinations regardless of a passenger's visual acuity or auditory processing ability.
- Privacy interests must be protected by:
    - Prohibiting vehicles from sharing information descriptive of an individual's disability without express and informed consent of the passenger.
    - Prohibiting sharing of pick-up and drop-off locations, unless the passenger provides the necessary authorization to a third party.
- Vehicles must be programed to respond to emergencies:
    - Without reference to a passenger's age or disability status, and
    - Vehicle must be equipped with communication access to 911 and other assistive support mechanisms, including for people who are nonverbal.
- Vehicles must be uniformly designed for cost efficient installation of accessibility accessories (i.e. ramps or specific communication accommodations).
    - Designs must include a sufficient interior turn radius to allow a wheelchair to enter a car and park.

Transit System Design Elements

- All transit hubs and service main lines must be fully accessible, including:
    - Both physically accessible and communication accessible,
    - Provision of way finding systems for people who are blind, and
    - Providing service notices accessible for people who are Deaf and people who are blind and people who are DeafBlind (tactile).
- Transit system adaptation to autonomous vehicle technology must not reduce paratransit service areas or service hours.
    - To the extent transit authorities rely on other services to provide transportation that would have been covered by a bus line, paratransit service areas should be expanded as if the service was from a bus line.
- Systems must prioritize funding projects that make main line public transit more accessible.
- Transit systems must not cooperate with private transportation services if those private services do not provide at least equivalent service, as defined by 49 C.F.R. § 37.105, or the level of accessibility required by the Americans with Disabilities Act, whichever is greater.
    - No cooperation includes coordinated or compatible routing tools or fare payment tools.
    - No cooperation includes access to drop-off or pick-up facilities connecting to public transportation.
    - Any autonomous vehicles employed by services must meet **AV Design Elements** listed above.
- Transit systems must offer fully accessible communication, which would include:
    - Websites to comply with WCAG 2.1 as well as with the Section 508 Standards,
    - Riders must have the option of speaking to a human to accomplish transit related tasks, and
    - Universal access to all passenger planning and vehicle location information, provided by every cooperating entity.
- Transit systems must provide data sharing in real time sufficient to:
    - Route people with disabilities around impediments (like elevators under repair), and
    - Diagnose systemic accessibility problems.
- Designation of an individual with accessibility oversight power across a regional service area (i.e. a Disability Services Coordinator for the area transit system).

Right of Way Design Elements

- Curbside controls to allow individuals requiring mobility assistance priority access closest to entrances.
- Accessible routes between drop off locations and facility entrances.
- Storage systems for other shared use transportation options (such as bike share or scooter share) so that those vehicles do not block pedestrian and accessible routes.
- Right of way design so that the various forms of transportation, like bikes and scooters, do not interfere with pedestrian and accessible paths of travel.

- Maintenance of, or extension where absent, of accessible sidewalks.
- Priority curbside parking spots for accessible vehicles

We recognize that forecasting the future impact of autonomous vehicles presents significant challenges. Because of the degree of that challenge, we encourage the Department of Transportation to supplement our suggestions by affirmatively seeking input from a broad spectrum of disability organizations. We also direct your attention to Comments submitted by the Disability Rights Education and Defense Fund (DREDF), which we also support.

Although other interested parties may not share our understanding about the necessity for prioritizing universal accessibility concerns in providing guidance for autonomous vehicle development, we think it will work to the benefit of all transit system users. Once a transportation system has solved the challenges of moving the hardest to transport individuals, the rest will fall into place.

Thank you for your consideration of our concerns.

Sincerely,

Marca Bristo
President, Access Living of Metropolitan Chicago