



**CONSORTIUM FOR CITIZENS
WITH DISABILITIES**

August 23, 2019
Via electronic mail

The Honorable Roger Wicker
United States Senate
555 Dirksen Senate Office Building
Washington, DC 20510

The Honorable Frank Pallone, Jr.
United States House of Representatives
2107 Rayburn House Office Building
Washington, DC 20515

The Honorable Maria Cantwell
United States Senate
511 Hart Senate Office Building
Washington, DC 20510

The Honorable Greg Walden
United States House of Representatives
2185 Rayburn House Office Building
Washington, DC 20515

Dear Chairmen Pallone and Wicker, Ranking Members Cantwell and Walden,

The Consortium for Citizens with Disabilities (CCD) Transportation Task Force Co-Chairs thank you for the opportunity to provide feedback on issues addressed in a bicameral, bipartisan self-driving car bill. CCD is the largest coalition of national organizations working together to advocate for Federal public policy that ensures the self-determination, independence, empowerment, integration and inclusion of children and adults with disabilities in all aspects of society.

The CCD Transportation Task Force developed Autonomous Vehicle principles in December 2018,ⁱ and Legislative Priorities for reference in May 2019. Signatories to the Principles included 22 national organizations. The Principles were submitted to US Department of Transportation (USDOT) in response to its request for comment on its AV 3.0 guidance. In response to your request to identify priorities and issues for a self-driving car bill we refer to these documents, as well as the National Council on Disability Self-Driving Cars report.ⁱⁱ First and foremost, legislation should require full accessibility for all types of common and public use AVs. Full accessibility, or inclusive design of a vehicle, ensures usability by people with sensory, physical, cognitive and neurological disabilities, including wheelchair users. Licensing discrimination on the basis of disability must also be prohibited.

Background

Nearly 1 in 5 people in the U.S. has a disability (more than 57 million). In 1990, Congress passed the bipartisan Americans with Disabilities Act (ADA). In enacting the ADA, Congress sought to “provide a clear and comprehensive national mandate for the elimination of discrimination against individuals with disabilities.” As a result, 99% of public buses are equipped with ramps, far more curb ramps benefit the public, and there is improved provision of accessible transit to people with sensory disabilities. Yet, significant barriers to accessible, affordable transportation remain across modes.

Many people with disabilities are currently unable to obtain a driver’s license, and cannot afford to purchase an accessible vehicle. It’s critical that ride-share and on-demand services provide disability access, but many do not. A recent Bureau of Transportation Statistics (BTS) study of adults with disabilities found that roughly half of respondents 18 to 64 reported living in a household with income under \$25,000.ⁱⁱⁱ An earlier BTS study found half a million homebound people with disabilities citing transportation difficulties.^{iv}

Without affordable, accessible transportation people with disabilities are unable to travel to work, to school, to contribute to and participate in their communities, to support and spend time with family and friends, and live their lives to the fullest. According to a National Conference on State Legislatures report, in 2012, people with disabilities who were not working reported lack of transportation as one of their biggest barriers to employment. A National Organization on Disability survey found that Income remains a barrier to transportation.^v

Manufacturers and transportation providers are racing to develop, test and deploy autonomous shuttles and passenger vehicles. The present and future of mobility is changing. AVs have the potential to drastically improve access for people with disabilities, including members of the blind and low vision, deaf and hard of hearing, intellectual, developmental and cognitive disability communities, people with physical disabilities, including wheelchair users, and people with neurological conditions including epilepsy and seizure disorders. However, **the promise and safety of AVs will only be realized if the vehicles and the surrounding infrastructure are fully accessible, and the safety elements consider the needs of all people with disabilities.**

Responses by Category

1. Disability Access

The ADA, Title VI of the Civil Rights Act, and Executive Order 12898 provide essential protections against discrimination, and provide a roadmap for ensuring access to public transit for passengers with disabilities. In addition, on-demand AV service must be accessible or those

most in need will be left without transportation during emergencies, when traditional fixed route or rail breaks down or needs repair, or in times of inclement weather and disasters.

According to a 2019 National Council on Disability report, lack of accessible transportation is one factor that leads to costly and unnecessary institutionalization of people with disabilities during and after disasters. For example, during Hurricane Harvey, people who had been evacuated to a nursing home several hundred miles from their Texas residence were not provided any accessible transportation back to their undamaged homes. They were unable to leave the nursing home until funding for their transportation was secured.^{vi} Accessible vehicle design must be required, incentivized and standards set for public use AVs to ensure adequate accessible transportation is available in the future.

Legislation should prohibit discrimination on the basis of disability by states, and any other governmental authorities, in licensing and insurance. We support the provision in the AV START Act's Section 3, Relationships to Other Laws, that prohibits discriminatory licensing laws nationwide.

Existing law, including Section 504 of the Rehabilitation Act and the ADA, should be recognized as requiring accessible AVs, including the development of any additional needed standards by the US Access Board and regulation by the US Department of Justice without repeal of additional guidance.

Legislation should require full accessibility for all types of common and public use AVs. All human machine interface (HMI) systems on AVs must be fully accessible to people with disabilities. Lifts, ramps and wheelchair securement must be available on common use and public transit AVs. Fully accessible HMI and vehicle design will ensure access to people with sensory, cognitive, and physical disabilities, including wheelchair users.

Exemptions should not be granted for development and testing of any AVs meant for transit, paratransit, microtransit, first mile/last mile or circulator service that are not safe for passengers and pedestrians, equitable, and fully accessible.

2. Advisory Committees

Self-driving car legislation must include disability representation on any US DOT autonomous vehicle advisory council. There is no substitute for the lived-experience and authentic voices of people with disabilities. A working group or sub-committee focused on the establishment of accessibility standards, disability community education, and technical issues should also be established. The sub-committee should report back to the larger advisory council on the multitude of accessibility issues and standards that must be identified, addressed and established going forward. The sub-committee must include cross-disability representation, representatives of standard setting organizations, industry stakeholders and interested agencies.

In addition, an interagency coordinating council should be established to identify and eliminate barriers to access to AVs, including, but not limited to, use of federal funds for transit and AV-ready wheelchairs, and accessible AV trips. The work group could work together to ensure accessible AVs meet fundamental needs of people with disabilities going forward. The council could be modeled on, or further the work of, the Interagency Coordinating Council on Access and Mobility (CCAM). CCAM was established by Executive Order 13330 by President Bush in 2004, and released a report with action plans and recommendations.

3. Rulemakings, including updating existing standards and setting new standards

AV standards should ensure adequate safety and crashworthiness for all passengers and pedestrians. Updated standards and testing requirements should ensure safety of wheelchair users who remain in their wheelchairs in a high-level AV, and all pedestrians and mobility device users outside the vehicle. Standard setting for crashworthiness of the vehicle could incorporate the work of the University of Michigan Transportation Research Institute on wheelchair-seated occupant safety.^{vii}

In addition, vehicles should be physically accessible whenever possible, and must provide multiple modes of communication in the human machine interface including audible and visual communications to report emergencies, and ensure timely response and safe extraction from the vehicle.

4. Exemptions

If additional NHTSA exemptions are granted, they should be used for testing and deployment of fully accessible AVs that are inclusively designed. Any exemptions must also require the safety of pedestrians and passengers before deployment.

5. Privacy

Passenger privacy should be protected by ensuring passengers' health and disability status and locations visited is not shared, or used for commercial or tracking purposes, without permission of the individual.

6. Safety Evaluation Reports

Safety evaluation reports should include the accessibility features of the vehicle, and whether people with disabilities were consulted as part of the design and testing in order to ensure the safety, accessibility and usability. Consumers and public transportation users will benefit greatly from knowledge of accessibility features ahead of time and could make the difference between being left at the curb because the vehicle is inaccessible to a wheelchair user, or unidentifiable to a low-vision, blind, or cognitively disabled passenger; or limited usability in case of an emergency.

Accessibility features provided could include, but are not limited to:

- Human Machine Interface Features
 - Usability of accessible apps to hail a car. The apps must be Section 508 compliant.
 - Use of multiple forms of communication (eg, print, audio, plain English and symbols) with the vehicle, when requesting a ride, identifying the correct vehicle, and inside the vehicle to change the route, unlock doors, etc.
 - Accessible controls inside the vehicle to change the route, unlock doors, etc.
 - Accessible output to provide directions and other pertinent data; such information should be provided in a myriad of channels (eg, large print, auditory output, and pictures)
 - Minimally complex directions and control identifiers for all levels of understanding
 - Compatibility with portable devices (phones, tablets, 'smart-glasses') with customized assistive technology
 - Accessible operating surfaces that are within reach and have tactile cues
 - Software to ensure accessible drop off points for access (eg, near curb ramps)
 - Information provided about the environment surrounding the vehicle to assist blind or visually impaired passengers to orient themselves once they have vacated the vehicle
 - Features to assist passengers with disabilities for when requesting a ride so that they can identify the correct vehicle and not mistake another car as their ride
 - Identifying how the car will communicate in an emergency, which should include multiple channels of communication (EG. Lights, auditory output, tactile vibrations)

- Vehicle Hardware Features
 - Space to stow wheelchairs for those transferring to a seat
 - Lower floors to accommodate manual and power wheelchairs
 - Lifts or ramp and a securement system, or support for aftermarket modification
 - Accessible door handles, storage spaces, seat-belts (opening and closing the trunk or hood)
 - Door height and available turning radius

Please note, any specific requirements provided in legislation should be identified in consultation with disability representatives.

7. Crash Data, including reporting requirements

Anonymized disabled passenger and disabled pedestrian AV crash data should be collected. Data could be analyzed by industry stakeholders and NHTSA to identify needed vehicle design

and pedestrian identification, as well as any necessary infrastructure improvements to ensure safety.

8. Resources for NHTSA

Funding should be increased and expert staff retained and hired to support the work of the USDOT's Accessible Transportation Technologies Research Initiative (ATTRI) program, NHTSA and the US Access Board. Research and development of accessible AVs and standards should be promoted, including vehicle safety and crashworthiness standards. In addition, resources should be provided for NHTSA to provide technical assistance to OEMs, transit agencies, or state and local governments working to ensure provision of fully accessible AVs and compliance with the ADA.

9. Consumer Education

Any consumer education efforts should include cross-disability representatives to ensure accessibility of messaging. Representatives from sensory and cognitive disability communities must be involved to ensure communication methods are accessible for all people. Cross-disability representatives must be consulted to ensure education materials are addressing issues of concern to the disability community.

Additional Categories

10. Studies Examining Potential Impacts

We encourage inclusion of studies examining AVs potential impacts on transportation and land-use patterns, congestion, pollution, road safety and public transit, members of low-income, indigenous, and disability communities, and communities of color.

11. Infrastructure

Infrastructure should be addressed in any self-driving car bill and accessibility must be a priority. The introduction of autonomous shuttles, buses and passenger vehicles requires improved accessibility of Public Rights-of-Way, including sidewalks, audible pedestrian signals, curb cuts, roadway configurations, drop-off/pickup points and cross walks. As roads and facilities are planned and developed, ADA accessibility requirements must be strictly adhered to in order for cities and states to work towards meeting goals of zero traffic deaths and serious injuries. The US Access Board's 2011 Public-Rights-of-Way Accessibility Guidelines should be adopted and requirements of Executive Order 13771 to repeal 2 regulations should be waived.

Additional Legislation

Any infrastructure-related direct communication mode, such as 5G network communication, should be developed and deployed to maximize the safety and accessibility of AV passengers,

including people with disabilities. 5G should greatly enhance safe and seamless transportation between different modes of transportation as well as wayfinding for door to door travel.

Finally, Congress should pass legislation requiring that, as a matter of civil rights, all new technology incorporate the needs of people with disabilities at the earliest possible point. Many new technologies are inaccessible to people with vision, hearing, and/or physical and other disabilities because accessibility was not considered during research and development.

The CCD Transportation Task Force thanks you for the opportunity to provide recommendations regarding priorities and issues addressed in a self-driving car bill. Please do not hesitate to contact Clare Stanley at cstanley@acb.org, Carol Tyson at ctyson@dredf.org or Lee Page at leep@pva.org with any questions. We look forward to continuing to work with the Committee as legislation is developed. Thank you for your commitment to ensuring people with disabilities benefit from, and are included in, the future of mobility.

Sincerely,

Consortium for Citizens with Disabilities Transportation Task Force Co-Chairs

Claire Stanley, America Council of the Blind

Carol Tyson, Disability Rights Education and Defense Fund

Lee Page, Paralyzed Veterans of America

ⁱ Consortium for Citizens with Disabilities Transportation Task Force Autonomous Vehicle Principles. December 3, 2018. Available at <http://www.c-c-d.org/fichiers/CCD-Transp-TF-AV-Principles-120318.pdf>

ⁱⁱ National Council on Disability (2015). Self-Driving Cars: Mapping Access to a Technology Revolution. Available at <https://ncd.gov/publications/2015/self-driving-cars-mapping-access-technology-revolution>

ⁱⁱⁱ *Travel Patterns of American Adults with Disabilities*. Bureau of Transportation Statistics, 2018. <https://www.bts.gov/travel-patterns-with-disabilities>

^{iv} *Transportation Difficulties Keep Over Half a Million at Home*. Bureau of Transportation Statistics, 2003. https://www.bts.gov/archive/publications/special_reports_and_issue_briefs/issue_briefs/number_03/entire

^v *Getting to Work: Effective State Solutions*, National Conference of State Legislatures. May 2015. <http://www.ncsl.org/research/transportation/getting-to-work-effective-solutions-to-help-people-with-transportation-challenges-access-jobs.aspx>

^{vi} *Preserving Our Freedom: Ending Institutionalization of People with Disabilities During and After Disasters*. National Council on Disability. May 24, 2019. <https://ncd.gov/publications/2019/preserving-our-freedom>

^{vii} University of Michigan Transportation Research Institute Wheelchair-Seated Occupant Safety. <http://www.umtri.umich.edu/our-focus/wheelchair-seated-occupants>