

July 29, 2019

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

RE: U.S Department of Transportation National Highway Traffic Safety Administration (NHTSA) Response to Request for Comment on Docket NHTSA-2019-0036: Removing Regulatory Barriers for Vehicles with Automated Driving Systems.

Dear Docket Clerk:

The Maryland Department of Transportation (MDOT) is pleased to provide comments on the United State Department of Transportation (U.S. DOT) National Highway Traffic Safety Administration's (NHTSA) Advance Notice of Proposed Rulemaking (ANPRM) on "Removing Regulatory Barriers for Vehicles With Automated Driving Systems," (Docket NHTSA-2019-0036) in support of the U.S. DOT's advancement of a safe, efficient, and equitable transportation future. Maryland is open for business and eager to support the advancement of automated driving systems to realize the potential life-saving and economic benefits, while ensuring safety for all.

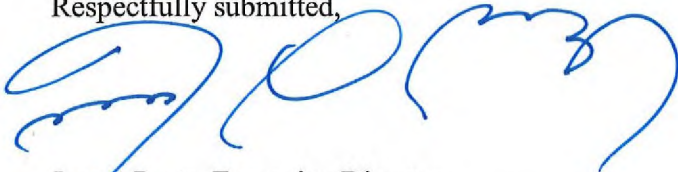
The MDOT is a multimodal agency with responsibility for and expertise in roadway and bridge design and operation, motor vehicle safety, transit, bicycle / pedestrian issues, aviation and ports. For more than three years the MDOT has led a public-private working group to address Connected and Automated Vehicle (CAV) issues in Maryland and to position the state to encourage the test and deployment of CAV technologies. Our vision is to uphold and enhance a safe, efficient, and equitable transportation future by delivering collaborative and leading-edge CAV solutions.

The NHTSA has requested comments on six possible approaches to revising the crash avoidance test procedures and whether any additional approaches are possible to test potential CAV applications in a safe and efficient manner: (1) Normal Automated Driving System-Dedicated Vehicles (ADS-DV) operation; (2) Test Mode with Pre-Programmed Execution (TMPE); (3) Test Mode with External Control (TMEC); (4) Simulation; (5) Technical Documentation for System Design and/or Performance Approach; and (6) Use of Surrogate Vehicle with Human Controls. Generally, the proposed approaches discussed in the ANPRM are consistent with industry-wide scientific methods and conform with recommendations from engineers within MDOT. However, each of NHTSA's approaches will possibly require a better understanding of the goals meant to be achieved in an autonomous vehicle ecosystem, rather than a human driven ecosystem. In and of themselves, the six possible approaches may not capture Federal Motor Vehicle Safety Standard (FMVSS) safety performance goals in a fully autonomous vehicle ecosystem.

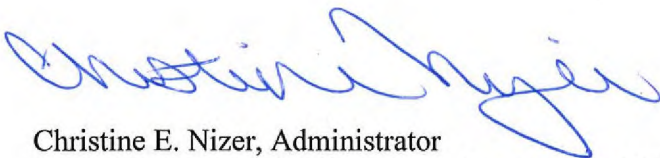
An autonomous vehicle tested in a predefined environment, for example, may not successfully operate in varying and unknown conditions. The autonomous vehicle's driving task is no longer controlled by human cognitive critical thinking; thus, the proposed approaches may need to be adjusted so an autonomous vehicle does not pass the test simply because it knew all the parameters of that specific test. A possible approach to verifying the safety characteristics of this new ecosystem for this category of vehicles is to establish new definitions that only apply to automated vehicles that lack human driving controls.

Separate to the above NHTSA proposed approaches, MDOT suggests that physical components of ADS-DVs may be addressed partly by the existing regulations to accomplish the desired activity of the driving maneuver or task, with adding new references to the ADS-DV equipment. In other words, physical components of ADS-DVs, such as directional control (steering wheel), brake application (brake pedal), speed control (accelerator pedal), rear view (mirrors), and road view driving (glazing) can be addressed by using the existing FMVSS regulations as a starting point – without the need to develop a whole new set of regulations and test standards. If the dynamic driving task can be performed by the ADS-DV, then the FMVSS regulations for that task should be satisfied. Above all, the accelerated pace of CAV technologies is introducing serious concerns relating to cybersecurity. Any advancement made in rulemaking to address new technologies should encourage industry practice to proactively protect the public using these new technologies rather than reactively providing patchwork solutions to increasing cybersecurity threats within our cities and country as a whole.

Respectfully submitted,



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Co-Chair, Maryland Connected & Automated Vehicles Working Group  
Maryland Transportation Authority



Christine E. Nizer, Administrator  
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MDOT Motor Vehicle Administration