



National Transportation Safety Board

Washington, DC 20594

Office of the Chairman

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Docket Management Facility
US Department of Transportation
1200 New Jersey Avenue SE
West Building, Ground Level
Room W12-140
Washington, DC 20590-0001

Attention: Docket No. DOT-NHTSA-2020-0070

Dear Sir or Madam:

The National Transportation Safety Board (NTSB) has reviewed the National Highway Traffic Safety Administration (NHTSA) and Department of Transportation (DOT) notice and request for comments (RFC) regarding approval for the information collection request titled “Automated Vehicle Transparency and Engagement for Safe Testing (AV TEST) Initiative,” published at 85 *Federal Register* 39975 on July 2, 2020. In this request, NHTSA and DOT describe the type of information the agencies want to collect from (1) developers of automated driving systems (ADS) and their operators, and (2) local authorities, such as states and municipalities, regulating testing of ADS-equipped vehicles. The agencies state that the purpose of collecting the information is to create a digital platform that would inform the public about ADS testing operations across the country and about applicable regulations and state laws. The NTSB recognizes NHTSA’s and DOT’s efforts, and based on our investigation of the first fatal crash involving testing of an ADS-equipped vehicle and several other investigations involving vehicles with lower levels of automation, we offer the following comments to help improve the quality of information to be collected.

Recent NTSB Crash Investigations and Recommendations

The first fatal crash that the NTSB investigated involving a vehicle operating in partial automation mode occurred in Williston, Florida, in May 2016.¹ Since then, the NTSB has investigated three other crashes—two of which were fatal—of production-level vehicles operating in partial automation mode.² As a result of these investigations, the NTSB made recommendations in several areas, including identifying a safety-critical role that NHTSA should play in ensuring the safety of lower-level automation in vehicles available to the public.

¹ See the [report about the Williston, Florida crash](#); Highway Accident Report NTSB/HAR-17/02.

² See our recent reports on crashes in [Culver City, California](#) (Highway Accident Brief NTSB/HAB-19/07); [Delray Beach, Florida](#) (Highway Accident Brief NTSB/HAB-20/01); and [Mountain View, California](#) (NTSB/HAR-20/01).

In November 2019, the NTSB completed its investigation of the first fatal crash involving a test vehicle controlled by a developmental ADS.³ This crash, which occurred in Tempe, Arizona, in March 2018, demonstrated the complexity of ADS testing and highlighted that ADS developers, operators, and state and federal agencies, specifically NHTSA, need to play comprehensive and cooperative roles.

As a result of the investigation, the NTSB identified several factors that directly caused or contributed to the Tempe crash. In the report, we examined deficiencies in the ADS developer's management of safety risk, as well as the state's ineffective oversight of ADS testing. Additionally, we identified the critical role that NHTSA should play in ensuring the safe testing of ADS-equipped vehicles on public roads. We also argued that NHTSA should make more effective and broader use of an already established basic framework for safe ADS testing—NHTSA's automated vehicles (AV) policy.

In the second iteration of its AV policy issued in September 2017, NHTSA provided guidance in the form of 12 safety-relevant elements and encouraged ADS developers and operators to submit voluntary safety self-assessment reports describing the safety approach in developing their ADS. Although these components of the AV policy are promising, challenges remain with this approach—specifically, the lack of a mandatory submission requirement for the safety self-assessment reports and the absence of a NHTSA process for evaluating their adequacy.

As a result, the NTSB recommended in the Tempe report that NHTSA require the submission of these safety self-assessment reports and establish an ongoing process to evaluate them, determining whether appropriate safeguards—including adequate monitoring of vehicle operator engagement, if applicable—are included for testing a developmental ADS on public roads.⁴ We view such evaluation as establishing a minimum level of safety for testing that developers can achieve and states can use when determining whether to allow such testing in their state.

Improving the Quality of Collected Information

In this RFC, NHTSA and DOT propose creating and maintaining a digital platform for sharing information with the public about ADS testing across the country. Although such a platform could serve as a valuable educational and safety tool for the public, the NTSB is skeptical whether the platform, as outlined in this RFC, could reach that promise. The limiting aspects of the AV policy mentioned earlier are repeated in the AV TEST Initiative and are, in some areas, even greater.

The proposed RFC states that “Participation is completely voluntary, and each participant will choose its respective degree of involvement and the frequency of its submissions.” Furthermore, the RFC provides examples of information that ADS developers and operators *may* submit, including the number of test vehicles, the streets and areas in which testing is being conducted, non-confidential and high-level description of technology, and photos of vehicles. State and local authorities *may* provide links pertaining to various ADS-related topics.

³ See the [report about the Tempe, Arizona crash](#); Highway Accident Report NTSB/HAR-19/03.

⁴ Safety Recommendations H-19-47 and -48 are currently classified “Open—Unacceptable Response.”

In addition to the participation being voluntary, NHTSA and DOT do not propose requiring any specific information from ADS developers and operators who do decide to contribute to the digital platform. This lack of a requirement for specificity will likely lead to a patchwork of incompatible information from states and developers. Additionally, the RFC does not include any indication that the submitted material will be evaluated for accuracy or the extent to which that material is safety-relevant. Such an evaluation would be pertinent not only to the material submitted by ADS developers, but also to the material submitted by the states.

If the goal of this digital platform were to provide ADS developers a centralized space to showcase their technology and present a marketing-driven description of the testing, the lack of requirements or evaluation by NHTSA and DOT might be understandable. However, such a goal is not consistent with NHTSA's stated mission to, "save lives, prevent injuries and reduce economic costs due to road traffic crashes, through education, research, safety standards, and enforcement activity." NHTSA's core values statement also includes a commitment to, "providing the most accurate and complete information available to the traveling public." As such, the goal of the digital platform should be to provide the public with safety-critical information about ADS testing in their communities, and the collected material (even if limited) should match that goal.

Although the voluntary approach to the AV TEST Initiative will likely give the public only a partial perspective into ADS testing across the country, the NTSB believes that the complete lack of requirements pertaining to the submitted material is even more detrimental to the safety intent of this platform. As part of the AV policy, NHTSA developed a template for ADS developers to use when submitting a voluntary safety self-assessment report. Because this report is currently voluntary and not evaluated by NHTSA, the template is largely ignored by ADS developers—as evidenced by reports that are currently available and generally devoid of technical and safety-relevant information.⁵ For the AV TEST Initiative to be successful, a minimum set of reported information is critical.

Further, NTSB believes that the safety focus of the digital platform would be enhanced through NHTSA's evaluation of the material submitted by the states and by ADS developers and operators. However, even without such evaluation, the digital platform could offer a significant public benefit. But such benefit is dependent on ADS developers and operators providing safety-relevant information, such as descriptive collision reports and the speeds at which testing is being conducted.

The NTSB appreciates the opportunity to provide these comments and recognizes the crucial role that NHTSA and DOT play in ensuring safe ADS testing on public roads.

Sincerely,

Robert L. Sumwalt, III
Chairman

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⁵ <https://www.nhtsa.gov/automated-driving-systems/voluntary-safety-self-assessment>, accessed on July 27, 2020.