DEPARTMENT OF TRANSPORTATION

National Highway Traffic Safety Administration

[DOT Docket No. NHTSA –2016-0036]

Guidelines for the Safe Deployment and Operation of Automated Vehicle Safety Technologies

AGENCY: National Highway Traffic Safety Administration (NHTSA), DOT.

ACTION: Extension of comment period for proposed Guidelines for the Safe Deployment and Operation of Automated Vehicle Safety Technologies

SUMMARY: This document extends the comment period on planned guidelines for the safe deployment and operation of automated vehicles. The intent of the operational guidance is to encourage innovative and safe deployment of automated vehicle technologies. Written statements and supporting information submitted during the comment period will be considered with the same weight as oral comments and supporting information presented at the public meetings. The comment due date was May 9, 2016.

Comments continue to come in and requests have been made to extend the period to provide comments on this important topic. This document grants that request and extends the comment due date for the planned Guidelines to May 31, 2016.

DATES: The due date for comments on DOT Docket No. NHTSA-2016-0036 is extended to May 31, 2016

ADDRESS: Please submit all written comments no later than May 31, 2016, by any of the following methods:

- Federal Rulemaking Portal: Go to http://www.regulations.gov. Follow the online instructions for submitting comments.

- Mail: Docket Management Facility: U.S. Department of Transportation, 1200 New Jersey Avenue, SE, West Building Ground Floor, Room W12-140, Washington, DC 20590-0001.
- Hand Delivery or Courier: 1200 New Jersey Avenue, SE, West Building Ground Floor, Room W12-140, Washington, DC 20590-0001, between 9 a.m. and 5 p.m. ET, Monday through Friday, except Federal Holidays.
- Fax: 202-366-1767.

Instructions: All submissions must include the agency name and docket number. Note that all comments received will be posted without change to http://www.regulations.gov, including any personal information provided. Please see the Privacy Act discussion below.

Docket: For access to the docket go to http:///www.regulations.gov at any time or to 1200 New Jersey Avenue, SE, West Building, Ground Floor, Room W12-140, Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal Holidays. Telephone: 202-366-9826.

Privacy Act: Anyone is able to search the electronic form of all comments received into any of our dockets by the name of the individual submitting the comment (or signing the comment, if submitted on behalf of an association, business, labor union, etc.). You may review DOT's complete Privacy Act Statement in the **Federal Register** published on April 11, 2000 (Volume 65, Number 70; Pages 19477-78), or you may visit http://www.regulations.gov/privacy.html.

Confidential Business Information: If you wish to submit any information under a claim of confidentiality, you should submit three copies of your complete submission,

including the information you claim to be confidential business information to the Chief Counsel, NHTSA, at the address given under FOR FURTHER INFORMATION CONTACT. In addition, you should submit two copies, from which you have deleted the claimed confidential business information, to Docket Management at the address given above. When you send a comment containing information claimed to be confidential business information, you should submit a cover letter setting forth the information specified in our confidential business information regulation (49 CFR Part 512).

SUPPLEMENTARY INFORMATION:

Background.

DOT recently announced a series of actions to remove potential roadblocks to the integration of innovative automotive technology. As part of this effort, the Department announced several milestones for 2016, including development of guidance on the safe deployment and operation of automated vehicles.

NHTSA held two public meetings where participants could address a panel on the topic of guidance on the safe deployment and operation of automated vehicles. The meetings were held in Washington, DC on April 8, 2016, and in Stanford, CA on April 27, 2016.-

Public Meeting Topics.

During the public meetings NHTSA sought input on the following topics:

1. Evaluation and testing of scenarios the AV system should detect and correctly operate in: Within the AV system's operating envelope, consider how to identify the scenarios that could be encountered by the AV system (e.g., behavioral competencies/normal driving, pre-crash scenarios, etc.) and what design and evaluation (testing) processes and methods are needed to ensure that the vehicle

can detect and appropriately react to these scenarios. Consider whether third party testing is appropriate for validating test results.

2. Detection and communication of operational boundaries: If there are limitations on where AV technology will operate – what methods should the AV technology use to sense when it is reaching the operational domain limit and how should that be communicated to the driver?
3. Environmental operation and sensing: Consider what environmental conditions AV systems will likely operate in. For environmental conditions in which AV systems are not designed to operate, discuss methods used to detect these conditions.
4. Driver transitioning to/from AV operating mode: For AV systems that rely on transferring vehicle operation back to the driver, discuss approaches to (a) ensuring safe transitioning back to a fully capable non-impaired driver (e.g., geo-fencing, adverse weather) and (b) how non-optimal driver behavior (e.g., decision errors, erratic behavior, driver impairment) will be addressed by the AV system
5. AV for persons with disabilities: Consider the unique needs of people with different types of disabilities in the design, development, and policy setting for self –driving cars and related automation.
6. Data: Consider data recording capabilities of system(s) necessary to monitor the correct operation of the AV system, and what are appropriate triggers (crash, near crash, etc.) to determine system operational status or possible malfunction of the system. Also consider how recorded data could be accessed and by whom.

During the testing phase, consider what data should be made public for further analysis and understanding.

7. Crash avoidance capability: Consider the capabilities of AV systems with respect to detecting roadway hazards (other vehicles, pedestrians, animals, etc.) such that common crash scenarios involving these hazards (control loss, crossing paths head-on, etc.) can be detected and either avoided or mitigated.
8. Electronics systems safety: Consider methods and potential documentation that could be produced with respect to functional safety and cybersecurity.
9. Non-passenger AVs: Consider differences between AVs designed for delivery of goods and products that are not intended to have a human operator or potentially even human passengers.
10. Aspects of AV technology that may not be suitable or ready for guidelines: For these areas, information would be useful on alternative approaches to assure safety.
11. Identification of industry voluntary standards, best practices, etc., related to automated vehicle operation.
12. Information AVs may need to communicate to pedestrians and other vehicles (manual or automated) just as a driver would. Consider situations such as pedestrians crossing a travel lane in a parking lot and how this communication should be accomplished.
13. Conditions in which AVs may need to be able to identify and communicate to a central location or authority that a problem has occurred. Consider situations where passengers may be delivered to their destination but a medical problem or

potential incapacitation enroute may potentially suggest considerations for vehicle capabilities that could handle such cases.

14. Operation of an AV with open safety recall: Consider if automated vehicles should be allowed to operate in automated mode in cases when there is an open safety recall on that vehicle or if automated functions should be restrained until recall repairs are completed (perhaps reversion to manual driving when possible). Consider if AVs with open recalls should be allowed to operate on public roads at all, and if so, under what conditions.
15. Other topics needed for operational guidance: Other topics that would be beneficial to address in an operational guidance document to facilitate innovation and safe deployment of these systems on public roadways.

Issued in Washington D.C. under authority delegated by 49 CFR 1.95.

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