

**DEPARTMENT OF TRANSPORTATION**

**National Highway Traffic Safety Administration**

**[Docket No. NHTSA-2019-xxxx]**

**Agency Information Collection Activities; Notice and Request for Comment; Driver Interactions with Advanced Driver Assistance Technologies**

**AGENCY:** National Highway Traffic Safety Administration (NHTSA), Department of Transportation (DOT).

**ACTION:** Notice and request for comments on a proposed collection of information.

**SUMMARY:** The National Highway Traffic Safety Administration (NHTSA) announces our intention to request the Office of Management and Budget's (OMB) approval of a proposed collection of certain information by the Agency. Before a Federal agency can collect certain information from the public, it must receive approval from OMB. Procedures established under the Paperwork Reduction Act of 1995 (the PRA) require Federal agencies to publish a notice in the Federal Register concerning each proposed collection of information and to allow 60 days for public comment in response to the notice. The proposed collection of information supports research addressing safety-related aspects of driver interactions with certain advanced driver assistance technologies.

**DATES:** Comments must be received on or before (insert 60 days from date of publication).

**ADDRESSES:** You may submit comments identified by the docket number in the heading of this document or by any of the following methods:

- *Federal eRulemaking Portal:* Go to <http://www.regulations.gov>. Follow the instructions for submitting comments on the electronic docket site by clicking on "Help" or "FAQ".

- *Mail:* Docket Management Facility. M-30, U.S Department of Transportation. 1200 New Jersey Avenue SE., West Building, Ground Floor, Room W12-140, Washington, DC 20590.
- *Hand Delivery:* U.S Department of Transportation, 1200 New Jersey Avenue SE., West Building, Ground Floor, Room W12-140, Washington, DC 20590 between 9 a.m. and 5 p.m. Eastern Time, Monday through Friday, except Federal Holidays.
- *Fax:* 202-493-2251.

Instructions: Each submission must include the Agency name and the Docket number for this Notice. Note that all comments received will be posted without change to [www.regulations.gov](http://www.regulations.gov), including any personal information provided. Please see the Privacy heading below.

*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 (65 FR 19477–78) or you may visit <http://www.dot.gov/privacy.html> .

*Docket:* For access to the docket to read comments received, go to <http://www.regulations.gov>, or the street address listed above. Follow the online instructions for accessing the dockets.

**FOR FURTHER INFORMATION CONTACT:** Elizabeth Mazzae, Applied Crash Avoidance Research Division, Vehicle Research and Test Center, NHTSA, 10820 State Route 347—Bldg. 60, East Liberty, Ohio 43319; Telephone (937) 666-4511; Facsimile: (937) 666-3590; e-mail addr

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**SUPPLEMENTARY INFORMATION:** Under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501–3520), before an agency submits a proposed collection of information to OMB for approval, it must first publish a document in the Federal Register providing a 60-day comment period and otherwise consult with members of the public and affected agencies concerning each proposed collection of information. The OMB has promulgated regulations describing what must be included in such a document. Under OMB’s regulation (at 5 CFR 1320.8(d)), an agency must ask for public comment on the following:

(i) Whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility;

(ii) the accuracy of the agency’s estimate of the burden of the proposed collection of information, including the validity of the methodology and assumptions used;

(iii) how to enhance the quality, utility, and clarity of the information to be collected;

(iv) how to minimize the burden of the collection of information on those who are to respond, including the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, e.g. permitting electronic submission of responses.

In compliance with these requirements, NHTSA asks for public comments on the following proposed collection of information:

*Title:* Driver Interactions with Advanced Driver Assistance Technologies

*Type of Request:* New collection.

*Type of Review Requested:* Regular

*OMB Clearance Number:* New Collection

*Form Number:* None.

*Requested Expiration Date of Approval:* Three years from date of approval.

*Summary of the Collection of Information:*

NHTSA proposes to perform research involving the collection of information from the public as part of a multi-year effort to learn about drivers' use of and behavior in interacting with certain advanced driver assistance technologies. The research will involve on-road, semi-naturalistic driving experimentation in which participants who are members of the general public will drive government-owned instrumented production vehicles equipped with driver assistance technologies. Participants will include both drivers with and drivers without experience with advanced cruise control and lane keeping assistance technologies. Experienced drivers will be ones who own one of the two vehicle models equipped with advanced cruise control and lane keeping assistance features being used in this research. Participants will engage driver assistance technologies, including advanced cruise control and lane keeping assistance, while driving a specified route traversing public highways. Participants' actions to engage the assistance features and responses to unrequested disengagements will be observed and recorded.

Questions will be asked during the course of the research to assess individuals' suitability for study participation, to obtain feedback regarding participants' use of the driver assistance technologies, and to gauge individuals' level of comfort with and confidence in the technologies' performance and safety.

*Description of the Need for the Information and Proposed Use of the Information:*

The National Highway Traffic Safety Administration's (NHTSA) mission is to save lives, prevent injuries, and reduce healthcare and other economic costs associated with motor vehicle crashes. As driver assistance technologies advance, they have the potential to dramatically reduce the number of motor vehicle crashes, injuries, and associated economic costs. The safety and effectiveness of the technologies depends on drivers understanding the capabilities, constraints, and visual and auditory alerts provided. Drivers' understanding of when assistance features are available to use and when they are not or are disengaging is important for safety. In particular, drivers must understand and respond quickly when a feature indicates that it is disengaging and the driver must retake full manual control of driving. This work seeks to gather information regarding how drivers who are inexperienced compare to drivers with experience using driver assistance features including advanced cruise control and lane keeping assistance. The research will compare the two groups' use of these features in interactions, response to disengagement notifications, and proper use.

The collection of information will consist of: (1) Question Set 1, Driving Research Study Interest Response Form, (2) Question Set 2, Screening Questions, (3) passive observation of driving behavior, and (4) Question Set 3, Post-Drive Questionnaire.

The information to be collected will be used for the following purposes:

- *Question Set 1, Driving Research Study Interest Response Form* will be used to determine individuals' willingness to participate in the study and whether an individual qualifies for participation in this study based on certain information, such as primary vehicle make/model. For example, participants must:
  - Be at least 21 years of age

- o Hold a valid U.S. or Canadian driver's license
- o Drive at least 14,000 miles annually

Participants must also be willing to provide their contact information for the purposes of coordinating participation.

- *Question Set 2, Screening Questions* will be primarily used to ensure that participants meet certain minimum health qualifications, are free of recent criminal convictions, and have reasonable availability to participate in the study. The objective of health screening questions is to identify candidate participants whose physical and health conditions may be deemed “average” and are compatible with being able to drive continuously for approximately 3 hours a vehicle equipped with only original equipment components.
- *Question Set 3, Post-Drive Questionnaire* will be used to get information about the participants' experiences during the experimental drive, including the difficulty of using the automated system, trust in the automated system, incidences of mode confusion, and any safety considerations related to the system. There will be two versions of the questionnaire: one for participants who do not have experience with one of two study vehicle models equipped with advanced cruise control and lane keeping assistance prior to the study, and one for participants do have experience with these features in one of the two study vehicle models. The experienced participant questionnaire will include additional questions addressing individuals' personal experience with the driver assistance feature technologies in their personal vehicle and, for participants who drive a study vehicle model that is different from their personal vehicle, their opinions regarding

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differences between the two vehicles' driver assistance feature driver interface implementations and any difficulties using those features in the vehicle with which they were not experienced prior to the study.

*Affected Public (Respondents):* Research participants will be licensed drivers aged 25-54 years who drive at least 14,000 miles annually, are in good health, and do not require assistive devices to safely operate a vehicle and drive continuously for a period of 3 hours.

*Estimated Number of Respondents:* Information will be collected in an incremental fashion to permit the determination of which individuals have the necessary characteristics for study participation. All interested candidates will complete Question Set 1, Driving Research Study Interest Response Form. A subset of individuals meeting the criteria for Question Set 1 will be asked to complete Question Set 2, Screening Questions. From the individuals found to meet the criteria for both Questions sets 1 and 2, a subset will be chosen with the goal of achieving a sample providing a balance of age and sex to be scheduled for study participation. A summary of the estimated numbers of individuals that will complete the noted question sets is provided in the following table.

**Estimated Number of Respondents**

<b>Questions</b>	<b>Total N</b>
Question Set 1, Driving Research Study Interest Response Form	1000
Question Set 2, Screening Questions	600
Question Set 3, Post-Drive Questionnaire	300

*Estimated Time per Response:* Completion of Question Set 1, Driving Research Study Interest Response Form is estimated to take approximately 5 minutes and completion is estimated to take approximately 7 minutes for Question Set 2, Screening Questions. Completion of Question Set 3, Post-Drive Questionnaire is estimated to take 15 minutes per inexperienced participant and 20 minutes per experienced participant. The estimated annual time and cost burdens are summarized in the table below. The number of respondents and time to complete each question set are estimated as shown in the table. The time per question set is calculated by multiplying the number of respondents by the time per respondent and then converting from minutes to hours. The hour value for each question set is multiplied by the latest average hour earning estimate from the Bureau of Labor Statistics to obtain an estimated burden cost per question set.

**Estimated Time per Response and Total Time**

<b>Questions</b>	<b>Participants</b>	<b>Time per Response (Minutes)</b>	<b>Total Time (Minutes)</b>	<b>Total Time (Hours)</b>	<b>Total Cost</b>
Question Set 1, Driving Research Study Interest Response Form	1000	5	5000	83.33	\$ 2,305.00
Question Set 2, Screening Questions	600	7	4200	37.5	\$ 1,936.20
Question Set 3, Post-Drive Questionnaire, Inexperienced	150	15	2250	50	\$ 1037.25
Question Set 3, Post-Drive Questionnaire, Experienced	150	20	3000	75	\$ 1,383.00
<b>TOTAL Estimated Burden:</b>			14,450	240.83	\$ 6,661.36

*Total Estimated Annual Burden:* 240.83 hours



*Frequency of Collection:* The data collection described will be performed once to obtain the target number of valid test participants.

Authority: The Paperwork Reduction Act of 1995; 44 U.S.C. Chapter 35, as amended; and 49 CFR 1.95.

Issued in Washington D.C. on April 30, 2019.

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Vehicle Safety Research.

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