

The Associate Administrator for Vehicle Safety Research, Nathaniel Beuse, signed the following notice on September 20, 2016 and we are submitting it for publication in the Federal Register. While we have taken steps to ensure the accuracy of this internet version of the notice, it is not the official version of the notice. Please refer to the official version in a forthcoming Federal Register publication, which will appear on the Government Printing Office's FDSys website ([www.gpo.gov/fdsys/search/home.action](http://www.gpo.gov/fdsys/search/home.action)) and on Regulations.gov (<http://www.regulations.gov>) in Docket No. NHTSA-2016-0091. Once the official version of this document is published in the Federal Register, this version will be removed from the internet and replaced with a link to the official version.

**DEPARTMENT OF TRANSPORTATION**

**National Highway Traffic Safety Administration**

**[Docket No. NHTSA-2016-0091]**

**Reports, Forms, and Record Keeping Requirements**

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

**ACTION:** Request for public comment on proposed collection of information.

**SUMMARY:** Before a Federal agency may collect certain information from the public, it must receive approval from the Office of Management and Budget (OMB). Under procedures established by the Paperwork Reduction Act of 1995, before seeking OMB approval, Federal agencies must solicit public comment on proposed collections of information, including extensions and reinstatements of previously approved collections. This document describes a collection of information for which NHTSA intends to seek OMB approval.

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

**ADDRESSES:** You may submit comments using any of the following methods:

Electronic submissions: Go to <http://www.regulations.gov>. Follow the online instructions for submitting comments.

Mail: Docket Management Facility, M-30, U.S. Department of Transportation, West Building, Ground Floor, 1200 New Jersey Ave., SE, Room W12-140, Washington, DC, 20590.

Hand Delivery: West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE, Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

Fax: (202) 493-2251.

*Instructions:* Each submission must include the Agency name and the Docket number for this proposed collection of information. Note that all comments received will be posted without change to <http://www.regulations.gov>, including any personal information provided.

*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>.

**FOR FURTHER INFORMATION CONTACT:**

Ms. Yvonne Clarke, NHTSA, 1200 New Jersey Avenue SE, Washington, DC 20590; Telephone (202) 366-1845; Facsimile: (202) 366-2106; e-mail address: [Yvonne.e.clarke@dot.gov](mailto:Yvonne.e.clarke@dot.gov).

**SUPPLEMENTARY INFORMATION:** Under the Paperwork Reduction Act of 1995, 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. 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 request 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:* Vehicle Performance Guidance

*Type of Request:* New collection.

*OMB Clearance Number:* None.

*Form Number:* NHTSA Form 1157.

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

*Summary of the collection of Information:* On [enter date of publication], the Department of Transportation published the policy<sup>1</sup> document titled *Federal Automated Vehicles Policy*. Recognizing the potential that highly automated vehicles (HAVs) have to enhance safety and mobility, this document sets out an approach to enable the safe deployment of L2 and HAV

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<sup>1</sup> Conformance to the guidance in *Federal Automated Vehicles Policy* is voluntary. See Fixing America's Surface Transportation Act, Pub. L. No. 114-94, § 24406 (2015) ("No guidelines issued by the Secretary with respect to motor vehicle safety shall confer any rights on any person, State, or locality, nor shall operate to bind the Secretary or any person to the approach recommended in such guidelines").

systems. An HAV system is defined as one that corresponds to Conditional (Level 3), High (Level 4), and Full (Level 5) Automation, as defined in SAE J3016.<sup>2</sup> HAV systems rely on the automation system (not on a human driver) to monitor the driving environment for at least certain aspects of the driving task. An L2 system, also described in SAE J3016, is different because the human driver is never relieved of the responsibility to monitor the driving environment.

Although there is a clear technical distinction between HAV systems and lower levels of automation (L2 and below) based on whether the automated system relies on the human driver when engaged and in operation, the Guidance suggests that L2 and HAV manufacturers apply elements of this Guidance during product development, testing, and deployment. With a few exceptions detailed in the tables below, *Federal Automated Vehicles Policy* applies equally to HAV and L2 systems. NHTSA seeks comment on its burden estimates regarding HAV and L2 systems and how those burdens might differ.

The speed with which increasingly complex L2 and HAV systems are evolving challenges DOT and NHTSA to take approaches that ensure these technologies are safely introduced, provide safety benefits today, and achieve their full safety potential in the future.

Consistent with its statutory purpose to reduce traffic accidents and deaths and injuries resulting from traffic accidents,<sup>3</sup> NHTSA seeks to collect from, and recommend the recordkeeping and disclosure of information by vehicle manufacturers and other entities as described in *Federal Automated Vehicles Policy*. Specifically, NHTSA's recommendations in the policy section titled "Vehicle Performance Guidance for Automated Vehicles" (hereafter referred to as "Guidance") are the subject of this voluntary information collection request. This

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<sup>2</sup> For more information about SAE J3016, see [http://www.sae.org/misc/pdfs/automated\\_driving.pdf](http://www.sae.org/misc/pdfs/automated_driving.pdf).

<sup>3</sup> 49 U.S.C. § 30101.

Guidance outlines recommended best practices, many of which should be commonplace in the industry, for the safe pre-deployment design, development, and testing of HAV and L2 systems prior to commercial sale or operation on public roads. Further, the Guidance identifies key areas to be addressed by manufacturers and other entities prior to testing or deploying HAV or L2 systems on public roadways.

To assist NHTSA and the public in evaluating how safety is being addressed by manufacturers and other entities developing and testing HAV and L2 systems, NHTSA is recommending the following documentation, recordkeeping, and disclosures that aid in that mission. The burden estimates contained in this notice are based on the Agency's present understanding of the HAV and L2 systems market. NHTSA seeks comment on the burden estimates in this notice in whole or in part.

**(1) HAV and L2 Safety Assessments:**

NHTSA will request that HAV and L2 manufacturers and other entities voluntarily submit "Safety Assessments" to NHTSA's Office of the Chief Counsel for each HAV system and each SAE J3016 L2 system deployed on a vehicle. NHTSA anticipates that the majority of manufacturers and other entities will submit these Assessments digitally, but seeks comment on whether some manufacturers would prefer to mail in hard copies. These Assessments are the only collections in this notice that NHTSA anticipates manufacturers will submit to the Agency regularly.<sup>4</sup> As explained in more detail below, NHTSA has calculated this burden to be about 760 hours per Assessment based on existing industry practices and similar information collection requests.

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<sup>4</sup> The other collections of information discussed in this notice are recordkeeping and/or disclosure recommendations that NHTSA might request, however, NHTSA plans on requesting information pertaining to those collections on a case-by-case basis. Examples include when information in the Safety Assessment is not clear, when testing by the Agency or other suggests conflicting information than what is contained in the Safety Assessment, etc.

The Safety Assessment would summarize how the manufacturer or other entity has addressed the provisions of this Guidance at the time they intend their product to be ready for operational testing and prior to deployment. The Safety Assessment would assist NHTSA, and the public, in evaluating how safety is being addressed by manufacturers and other entities developing and testing L2 and HAV systems. The Safety Assessment would cover the following areas:

- Data Recording and Sharing
- Privacy
- System Safety
- Vehicle Cybersecurity
- Human Machine Interface
- Crashworthiness
- Consumer Education and Training
- Registration and Certification
- Post-Crash Behavior
- Federal, State and Local Laws
- Ethical Considerations
- Operational Design Domain
- Object and Event Detection and Response
- Fall Back (Minimal Risk Condition)
- Validation Methods

These areas are fully described in the Guidance section (section I) of *Federal Automated Vehicles Policy*. For each area, the Safety Assessment should include an acknowledgement that indicates one of three options:

- Meets this guidance area \_\_\_\_\_
- Does not meet this guidance area \_\_\_\_\_
- This guidance area is not applicable \_\_\_\_\_

Next to the checked line item, respondents would include the name, title, and signature of an authorized company official and the date the acknowledgement was made. Respondents would repeat this for each area covered in the Safety Assessment.

Once this collection is approved, for L2 and HAV systems already being tested and deployed, NHTSA would expect that manufacturers and other entities will provide a Safety Assessment, understanding that manufacturers and entities may wish to supplement their submissions over time. For future L2 or HAV systems, NHTSA would expect manufacturers and other entities to provide the relevant Assessment(s) to NHTSA at least four months before active public road testing begins on a new L2 or HAV system. As explained in greater detail in *Federal Automated Vehicles Policy*, “a new L2 or HAV system” is intended to include the introduction of a new capability or function, but not an incremental software and/or hardware update. For example, a vehicle might have the capability to function with no driver input in congested traffic conditions below 30 mph. If the manufacturer updates the software (or hardware) in the vehicle expanding that automated functionality to higher speed highways, the Guidance would consider that upgrade to constitute a new L2 or HAV system.

**(2) Data Recording:**

As part of the Guidance, NHTSA suggests that manufacturers and other entities will have a documented process for testing, validation, and collection of event, incident, and crash data, for the purposes of recording the occurrence of malfunctions, degradations, or failures in a way that can be used to establish the cause of any such issues. NHTSA recommends in its Guidance that manufacturers collect data both for testing and for operational (including for event reconstruction) purposes. The Agency suggests that manufacturers and other entities retain this information for a period of five years.

For crash reconstruction purposes (including during testing), NHTSA recommends this data be stored, maintained, and readily available for retrieval by the entity itself and, if requested, by NHTSA. The Guidance recommends that manufacturers and other entities collect data

associated with events involving: (1) fatalities and personal injuries; or (2) damage to the extent that any motor vehicle involved cannot be driven under its own power in the customary manner, without further damage or hazard to itself, other traffic elements, or the roadway, and therefore requires towing. Vehicles should record, at a minimum, all information relevant to the event and the performance of the system, so that the circumstances of the event can be reconstructed. This data should also contain information relating to the status of the L2 or HAV system and whether the HAV system or the human driver was in control of the vehicle at the time. Manufacturers or other entities should have the technical and legal capability to share the relevant recorded information.

In addition, to assist industry and NHTSA to develop new safety metrics, the Guidance recommends that manufacturers and other entities should collect, store, and analyze data regarding positive outcomes, in addition to the type of reporting conditions listed above (event, incident, and crash data). Positive outcomes are events in which the L2 or HAV system correctly detects a safety-relevant situation, and the system successfully avoids an incident (e.g., “near misses” and edge cases). Such data includes safety-related events such as near-misses between HAVs and other vehicles or road users (e.g., pedestrians and bicyclists). There is value in collecting data (and making it available during full operational use) that captures events in which the automated function correctly detects and identifies an unsafe maneuver initiated by another road user (e.g., another motor vehicle or pedestrian), and executes an appropriate response that successfully avoids an event, incident, or crash.

### **(3) Data Sharing:**

L2 and HAV systems have the potential to use data sharing to increase safety benefits. Thus, the Guidance recommends that each manufacturer or other entity should develop a plan for



sharing its event reconstruction and other relevant data with other manufacturers and other entities. Sharing such data could help to accelerate knowledge and understanding of L2 and HAV system performance, and could be used to enhance the safety of L2 or HAV systems and to establish consumer confidence in L2 and HAV technologies. Generally, data shared with third parties should be de-identified (i.e., stripped of elements that make the data directly or reasonably linkable to a specific L2 or HAV system owner or user). Manufacturers and other entities should take steps to ensure that any data shared is done in accordance with privacy and security agreements and notices applicable to the vehicle (which typically permit sharing of de-identified data) or with owner/user consent.

#### **(4) Consumer Education and Training:**

To ensure that drivers of vehicles equipped with L2 or HAV systems can safely use them as part of the day-to-day driving experience, proper education and training is imperative to ensure safe deployment and operation of automated vehicles. Therefore, the Guidance recommends that manufacturers and other entities develop, document, and maintain employee, dealer, distributor, and consumer education and training programs to address the anticipated differences in the use and operation of L2-equipped vehicles and HAVs from those of the conventional vehicles. Such programs should be designed to provide the target users with the necessary level of understanding to use these complex technologies properly, efficiently, and in the safest manner possible.

Consumer education should describe and explain topics such as an L2 or HAV system's intended use, operational parameters, system capabilities and limitations, and engagement/disengagement methods to transfer control between the driver and the L2 or HAV system. Further, consumer education should describe and explain what is meant by any displays

and messaging presented by the L2 or HAV system's human-machine interface (HMI), emergency fallback scenarios in cases where the HAV system unexpectedly disengages, operational boundary responsibilities of the human driver, and potential mechanisms that could change an L2 or HAV system's behavior in service.

As part of their education and training programs, the Guidance recommends that L2 or HAV manufacturers, dealers, and distributors should consider including an on-road or on-track hands-on experience demonstrating L2 or HAV system operations and HMI functions prior to release to consumers. Other innovative approaches (e.g., virtual reality) should be considered, tested, and employed as well. These programs should be continually evaluated for their effectiveness and updated on a routine basis, incorporating feedback from dealers, customers, and other data sources. NHTSA may request information on a manufacturer or other entities' consumer education to review training materials prepared by manufacturers and other entities for the purpose of evaluating effectiveness. NHTSA suggests that manufacturers and other entities retain this information for a period of five years.

**(5) Certification:**

NHTSA anticipates that the capabilities of L2 or HAV systems on a vehicle may change such that the corresponding level of automation may change over the vehicle's lifecycle as a result of software updates. As more L2-equipped vehicles and HAVs are tested and sold commercially to be used on public roadways, older vehicles also may be modified to provide similar functionality to new vehicles. As new L2 and HAV systems are introduced to the market, manufacturers may choose to modify a vehicle's current level of automation to more advanced levels, even if the hardware was produced years previously. The Guidance recommends that manufacturers provide on-vehicle means to readily communicate concise

information regarding the key capabilities of their L2 or HAV system(s) to vehicle occupants (e.g. semi-permanent labeling to the vehicle, in the operator's manual, or through the driver-vehicle interface).

**(6) Systems Safety Practices:**

For the purpose of facilitating the design of L2 and HAV systems that are free of unreasonable safety risks, the Guidance recommends that manufacturers and other entities follow a robust design and validation process based on a systems-engineering approach and be fully documented. This process should encompass designing HAV systems such that the vehicle will be placed in a safe state even when there are electrical, electronic, or mechanical malfunctions or software errors.

The overall process should adopt and follow industry standards, such as those provided by the International Standards Organization (ISO) and SAE International, and collectively cover the entire design domain of the vehicle. Manufacturers and other entities should also follow guidance, best practices, and design principles available from other industries such as aviation, space, and the military (e.g., the U.S. Department of Defense standard practice on system safety), to the extent they are relevant and applicable.

The process should include a hazard analysis and safety risk assessment step for the L2 or HAV system, the overall vehicle design into which it is being integrated, and when applicable, the broader transportation ecosystem. The process should describe design redundancies and safety strategies for handling cases of L2 or HAV system malfunctions.

All design decisions should be tested, validated, and verified as individual subsystems and as part of the entire vehicle architecture. The entire process should be fully documented and

all actions, changes, design choices, analyses, associated testing and data should be fully traceable.

Documentation of the system safety practices is intended primarily to assist manufacturers and other entities involved in designing L2 or HAV systems in managing this complex aspect of L2 or HAV safety engineering. NHTSA may request this information in the future as well, to review system safety practices for the purpose of evaluating the robustness of manufacturers' and other entities' overall approach to designing functionally safe (fail safe) HAV systems. NHTSA suggests that manufacturers and other entities retain this information for a period of five years.

**(7) Additional Data Collection Request Topics:**

In addition to the individually defined collection areas described above, the Guidance suggests that NHTSA may request more detailed information for matters that manufacturers and other entities already gather. Therefore, the Guidance encourages manufacturers and other entities to ensure that they retain data pertaining to these topics. They include data regarding: vehicle cybersecurity; HMI; crashworthiness (occupant protection and compatibility); post-crash behavior; Federal, State, and local laws, operational design domain; object event detection and response; and fall back (minimal risk condition).

These additional areas are important from the standpoint of ensuring L2 and HAV systems that are free from unreasonable safety risks. In the future, this data could be used to evaluate processes for testing and validating. For these additional areas, NHTSA expects that there would be minimal additional burden placed on manufacturers and other entities because these are all areas that the Agency expects would normally be part of the design, testing, and validation process of a new L2 or HAV system. NHTSA suggests that manufacturers and other

entities retain this information for a period of five years. More detailed descriptions of all of these areas can be found in *Federal Automated Vehicles Policy*.

*Estimated Burden for this Collection:* We estimate the following collection burden on the public. The numbers below are based on estimates that NHTSA has generated, and the agency seeks comment on the burden calculations below.

## **HAV AND L2 SAFETY ASSESSMENTS**

There are currently 15 manufacturers that have registered with the State of California as licensed entities capable of testing automated systems. NHTSA expects that this number will increase after the publication of *Federal Automated Vehicles Policy*, potentially doubling to 30 manufacturers and other entities within six months. As automated vehicle systems continue to develop, NHTSA expects either new manufacturers or entities to enter the market, or existing manufacturers or entities to progress to a point where they are introducing HAV systems. For purposes of estimating the burden of this collection, NHTSA estimates there will be a total of 45 respondents by the end of the three years covered by this information collection request.

Likewise, NHTSA estimates that a similar number of manufacturers and other entities will submit L2 Safety Assessments, although the agency notes that the 45 respondents for each assessment may not be identical, since some companies may be developing L3/L4 vehicles but not L2 vehicles, and vice versa.

The Agency expects much of the burden of submitting these Assessments to be a part of conducting good and safe engineering practices. It therefore believes that manufacturers and other entities will have access to all of the information needed to craft these Assessments already documented, and that the overall conformance burden will be the time needed to collate and

review answers sourced from pre-existing documentation. The summary table below highlights the estimated burden in hours for entities seeking to submit Safety Assessments by category:

Area	Hours	HAV	L2
General Overall Summary	80	✓	✓
Data Recording and Sharing	80	✓	✓
Privacy	40	✓	✓
System Safety	20	✓	✓
Vehicle Cybersecurity	20	✓	✓
Human Machine Interface	20	✓	✓
Crashworthiness	20	✓	✓
Consumer Education and Training	40	✓	✓
Registration and Certification	40	✓	✓
Post-Crash Behavior	20	✓	✓
Federal, State and Local Laws	80	✓	✓
Ethical Consideration	80	✓	✓
Operational Design Domain	20	✓	
Object and Event Detection and Response	40	✓	
Fall Back (Minimal Risk Condition)	80	✓	
Validation methods	80	✓	✓
Total		760	620

<b>Industry Burden</b>		
<b>Safety Assessments</b>	<b>HAV</b>	<b>L2</b>
Number of Respondents	45	45
Time per Response (hours)	760	620
Frequency of Collection (for each new HAV/L2 system)	1	1
<u>Total Estimated Annual Burden (hours)</u>	34,200	27,900

In addition to the industry burden, because NHTSA will be collecting these Assessments, there is a government burden that will be incurred by the Agency. NHTSA expects that it will take three employees an hour each to fully process, catalogue, store each submission for a total of three burden hours. It will take an hour for a single employee to craft an acknowledgement of receipt to both the submitter and the public. The Agency also expects that 5 engineers will review these

Assessments for technical completeness, spending four hours each, for a total of 20 hrs. This is expected to occur every time a Safety Assessment is received.

<b>Government Cost Burden</b>	
<b>HAV and L2 Safety Assessments</b>	<b>Estimate</b>
Number of Safety Assessments	90
Time per Response (hours)	24
Frequency of Collection (for each new HAV/L2 system)	1
<b>Total Estimated Annual Burden (hours)</b>	<b>2160</b>

## **DATA SHARING AND RECORDING**

In conforming to this Guidance, manufacturers and other entities may see an increased burden to document their procedures. The Agency anticipates that the 45 manufacturers and other entities will have to spend an increased amount of time documenting their crash recorders, positive outcomes, event triggers/schema, data management, their data sharing plan, and data privacy. If these entities have already responded to the Safety Assessment discussed previously, the core of the information likely will already be documented. Below are estimates of the additional hourly burden NHTSA expects.

<b>Area</b>	<b>Hours</b>	<b>HAV</b>	<b>L2</b>
Crash Recorder	40	✓	✓
Positive Outcomes	40	✓	✓
Event Triggers, Schema	40	✓	✓
Data Privacy	40	✓	✓
Data Management	40	✓	✓
Data Sharing Plan	40	✓	✓
<b>Total</b>	<b>240</b>	<b>240</b>	<b>240</b>

<b>Data recording and sharing for purposes of crash reconstruction and general knowledge sharing</b>		
	<b>HAV</b>	<b>L2</b>
Estimated Number of Respondents	45	45

Estimated increased documentation burden (hours)	240	240
Frequency of Collection (for each new system)	1	1
<u>Total Estimated Annual Burden (hours)</u>	10,800	10800

## SYSTEMS SAFETY PRACTICES

As with the prior discussions, manufacturers and other entities may choose to document their system safety practices in response to the Guidance. It is anticipated that up to 45 companies may choose to document their efforts in response to the NHTSA Guidance and that they will incur corresponding costs for each new L2 or HAV system in the field. NHTSA estimates this will happen about once per year. If manufacturers and other entities have already responded to a Safety Assessment, NHTSA anticipates that the core of the information will already be documented. The following table documents the additional estimated burden.

Area	Hours	HAV	L2
Industry Standards Followed	10	✓	✓
Best Practices , Design, and Guidance Followed	10	✓	✓
Hazard Analysis	40	✓	✓
Safety Risk Assessment	40	✓	✓
Redundancies	20	✓	✓
Software Development, Verification, and Validation	40	✓	✓
System Testing and Traceability	40	✓	✓
Total		200	200

<b>Company documentation for recommended system safety practices</b>		
	HAV	L2
Number of Respondents	45	45
Estimated increased documentation burden (hours)	200	200
Frequency of Collection	1	1
<u>Total Estimated Annual Burden</u>	9000	9000

## CONSUMER EDUCATION AND TRAINING

As previously stated, NHTSA expects that manufacturers will develop documentation to support a claim or assertion that they are following the Guidance. NHTSA may request a subset of this



documentation in some instances. However, the burden estimated here reflects additional time the manufacturers and other entities may take, outside of normal business practices, to document and store information specifically pertaining to their efforts to educate and train their customers and users.

NHTSA anticipates that up to 45 companies may choose to document their efforts as part of the NHTSA Guidance. In the table below are estimates for the burden, in hours, for the task of documenting consumer education and training efforts, over and above normal business practices. This is currently estimated to occur about once per year. If manufacturers and other entities have already responded in a Safety Assessment, NHTSA anticipates that the core of the information will already be documented, reducing the relative burden. It is also expected that some of the entities may not directly interact with consumers, in which case their burden will be lower.

<b>Area</b>	<b>Hours</b>	<b>HAV</b>	<b>L2</b>
System Intent	5	✓	✓
Operational Parameters	10	✓	✓
System Capabilities	10	✓	✓
Engagement/Disengagement	20	✓	✓
HMI	20	✓	✓
Fallback	20	✓	
Driver Responsibilities	10	✓	✓
Changes in system performance in Service	10	✓	✓
On-Road Hands On Training	5	✓	✓
On-Track Hands On Training	5	✓	✓
Total		115	95

<b>Consumer Education and Training</b>		
	HAV	L2
Number of expected companies	45	45
Estimated increased documentation burden (hours)	115	95
Frequency of Collection	1	1
<u>Total Estimated Annual Burden (hours)</u>	5175	4275

## **ADDITIONAL AREAS**

NHTSA expects that approximately 45 manufacturers or other entities will choose to follow the Guidance and incur a documentation burden covering design, development, and deployment of an L2 or HAV system that has not been captured above. The Agency estimates this burden will be incurred about once per year. If manufacturers and entities have already responded to a Safety Assessment, it is anticipated that the core of the information will already be documented.

The following table documents the additional estimated burden.

<b>Area</b>	<b>Hours</b>	<b>HAV</b>	<b>L2</b>
Vehicle Cybersecurity	60	✓	✓
Human Machine Interface	80	✓	✓
Crashworthiness	20	✓	✓
Post-crash Behavior	40	✓	✓
Federal, State, and Local Laws	20	✓	✓
Operational Design Domain	20	✓	
Object Event Detection and Response	20	✓	
Fall Back	60	✓	
<b>Total</b>		<b>320</b>	<b>220</b>

<b>Additional areas (Cybersecurity, HMI, Crashworthiness, Post-Crash, Fed/State/Local laws, ODD, OEDR, Fallback)</b>		
	<b>HAV</b>	<b>L2</b>
Number of Respondents	45	45
Estimated increased documentation burden (hours)	320	220
Frequency of Collection	1	1
<b>Total Estimated Annual Burden (hours)</b>	<b>14,400</b>	<b>9900</b>

## **CERTIFICATION**

Manufacturers and other entities that produce vehicles may choose to conform to the Guidance's recommendation regarding certification, and thus may incur an additional documentation burden over and above normal documentation retention practices. Secondly, some entities may choose to implement a physical label, thereby incurring additional costs.

Not all of the companies that respond to the Safety Assessment may produce, alter, or modify vehicles in such a way that they would need extra labeling (e.g. tier 1 suppliers that do not offer aftermarket upgrades), Therefore it is expected that only 30 companies could choose to implement registration and certification procedures for new L2 or HAV systems in the field. The estimated burden is expected to occur once a year. The table below documents the additional estimated burden in terms of hours

<b>Area</b>	<b>Hours</b>
Identifying Information	10
Description of L2 or HAV System	10
Total	20

<b>Certification</b>		
	HAV	L2
Estimated Number of Respondents	30	N/A
Estimated increased documentation burden (hours)	20	N/A
Frequency of Collection	1	N/A
<u>Total Estimated Annual Burden (hours)</u>	600	N/A

As discussed above, some entities may choose to implement a physical label. From previous documentation for Part 567 labels<sup>5</sup>, the cost of the physical label to approximately \$1 per label. This takes into account 3 minutes to install the label along with the actual cost of the label. For the smaller fleets of HAVs, it is expected that this number will be more expensive per vehicle. NHTSA estimates that fleets will not exceed approximately 300 vehicles during the lifespan of the current ICR, and that the cost of labeling, including cost to design, print, and affix labels to be approximately \$10 per vehicle. For 30 fleets of 300 cars each, this represents a cost burden of \$90,000.

<sup>5</sup> See the supporting statement titled 2127-00510\_Supporting\_Statement\_2014\_CSv2.doc located at [http://www.reginfo.gov/public/do/PRAViewDocument?ref\\_nbr=201501-2127-001](http://www.reginfo.gov/public/do/PRAViewDocument?ref_nbr=201501-2127-001) (retrieved September 7, 2016)

	<b>HAV</b>	<b>L2</b>
<b><u>Overall Estimated Burden Hours Per Year</u></b>	<b>74,175</b>	<b>61,875</b>
<b><u>Total Estimated Burden Hours Per Year</u></b>	<b>136,050</b>	

Authority: 44 U.S.C. Section 3506(c)(2)(A).

Issued on:

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Nathaniel Beuse  
Associate Administrator for  
Vehicle Safety Research

Billing Code 4910-59-P

[Signature Page for NHTSA-2016-XXXX, Reports, Forms, and Record Keeping Requirements]