

Department of Motor Vehicles

Invitation to Pre-Notice Public Discussions on Proposed Regulations Autonomous Vehicles

Pursuant to Government Code section 11346.45, the Department of Motor Vehicles (DMV) has set the time and place for the public to participate in discussions to facilitate the development of proposed regulations related to the safe operation of Autonomous Vehicles.

Request for Public Input

These revised draft regulations do not represent a formal rulemaking by the department. Rather, they represent the next step in an iterative process that is meant to encourage public dialogue and collect substantive feedback on the content of these regulations.

The department invites all interested parties, including manufacturers, individuals with technical and subject matter expertise in the design, development, and verification of autonomous vehicle technology, consumer and public interest groups, potential end-users of autonomous vehicle technology, and academic/research institutions, to attend our upcoming public workshop.

Autonomous Vehicle Public Workshop

Wednesday, October 19, 2016

9:30 a.m.

Capitol Room 4203

1315 10th St, Sacramento, CA 95814

Written comments may be submitted to: LADRegulations@dmv.ca.gov

Feedback received on the revised draft regulations will be used to inform a future rulemaking by DMV. Participation in the public workshop will be in addition to, and not in substitution for, any participation in any subsequent rulemaking process initiated by the department.

Background

Senate Bill 1298 (Chapter 570; Statutes of 2012) enacted Vehicle Code §38750 which requires the DMV to adopt regulations necessary to ensure the safe operation of autonomous vehicles on public roads, with or without the presence of a driver inside the vehicle.

Regulations for testing of autonomous vehicles with a human driver present in the vehicle were approved in May 2014, and became effective in September 2014. Fifteen manufacturers currently hold a permit to test autonomous vehicles in California.

Over the last several years, the DMV has engaged the public in discussions regarding the requirements for post-testing deployment of autonomous vehicles. In December 2015, the department released draft deployment regulations for review. At workshops held in January and February 2016, the DMV received substantive input from representatives of manufacturers, consumer and public interest groups, the disabled community, local agencies, academic/research institutions, and other stakeholders. A peer review conducted by California Partners for Advanced Transportation Technology (PATH) at the University of California, Berkeley provided thoughtful perspectives on future regulatory approaches.

Actions at the federal level also informed the latest draft of the regulations. Earlier this month, the National Highway Traffic Safety Administration (NHTSA) released their Federal Automated Vehicles Policy. The DMV worked closely with NHTSA and the American Association of Motor Vehicle Administrators (AAMVA) on the model state policy contained within the document. The DMV and NHTSA share a common objective of seeing autonomous vehicles developed, tested, and deployed safely and efficiently on public roads. The department's revised draft regulations adopt the general separation of duties between NHTSA and the states identified in NHTSA's policy.

Summary of Revised Draft Regulations

The DMV's focus continues to be on the safe operation of autonomous vehicles on California public roads. The revised draft regulations promote the development of autonomous technology that has the potential to increase safety and enhance mobility, while focusing on issues related to roadway safety, compliance with California laws, driver licensing, and vehicle registration.

Following are some key aspects of the DMV's revised draft regulatory approach:

1. Requires manufacturers to self-certify to meeting NHTSA vehicle performance guidance.

In order to test or deploy autonomous vehicles, manufacturers must certify that their vehicles comply with all relevant Federal Motor Vehicle Safety Standards (FMVSS) and follow NHTSA's "Vehicle Performance Guidance for Automated Vehicles." Manufacturers must also provide DMV with a copy of their 15-point safety assessment letter submitted to NHTSA.

Manufacturers seeking to test or deploy an autonomous vehicle without traditional controls (e.g. steering wheel, brake pedal) must either certify their vehicle complies with FMVSS or provide evidence that NHTSA considers the absence of such controls permissible.

The revised draft regulations continue prohibitions on the testing and deployment of motorcycles, vehicles with a gross vehicle weight over 10,001 pounds, trailers, and other large vehicle types. Given the size and unique considerations associated with these vehicles, the department will identify rules for these vehicles in a future regulatory package.

2. Provides a path for manufacturers to test and deploy driverless vehicles.

Real-world validation that driverless vehicles comply with California's traffic laws and safely interact with law enforcement and other road users is critical to allowing driverless technology to transition from a testing to deployment phase.

The draft regulations establish a framework for manufacturers to safely test driverless vehicles on California public roads.

- Test vehicles may only be operated by a representative of the manufacturer and within each vehicle's "operational design domain" (the specific roadway, speed, environmental, or other conditions in which the vehicle is designed to properly operate).
- Manufacturers must obtain an ordinance or resolution from local authorities specifying the authorized operational design domain of the vehicles. This requirement ensures communities are aware of and have the opportunity to provide input on the locations and conditions in which driverless vehicles will be tested on their local streets.

- Manufacturers must describe how their driverless test vehicles will be monitored and provide training to remote operators. A two-way communication link will enable communication between a remote operator and any passengers in the vehicles.
- Consistent with the current testing regulations, manufacturers will be required to report any accidents and unplanned disengagements of autonomous control that occur during testing. These reporting requirements provide a mechanism to monitor that a manufacturer is safely testing on public roads and evaluate whether the vehicles comply with traffic laws.

The draft driverless deployment regulations require manufacturers to have obtained a California driverless test permit and to have submitted at least one annual report of unplanned disengagements to the DMV. Such testing will demonstrate the vehicle's ability to meet California's traffic laws, interact with law enforcement, and safely operate in California's driving environment.

As a condition of driverless deployment, the manufacturer must certify to having evaluated and resolved the cause of any reported unplanned disengagements. The manufacturer will also certify to meeting other safety, equipment, and performance requirements.

3. Clarifies that a licensed driver is only required in a SAE Level 3 vehicle.

The Society of Automotive Engineers (SAE) has identified levels of autonomous vehicle technology, from driver-assistance features to higher levels of autonomous operation. California's definition of an autonomous vehicle correlates to an SAE Level 3-5 vehicle.

- At SAE Level 3, an automated system can both actually conduct some parts of the driving task and monitor the driving environment in some instances, but the human driver must be ready to take back control when the automated system requests;
- At SAE Level 4, an automated system can conduct the driving task and monitor the driving environment, and the human need not take back control, but the automated system can operate only in certain environments and under certain conditions; and
- At SAE Level 5, the automated system can perform all driving tasks, under all conditions that a human driver could perform them.

Operation of a SAE Level 3 vehicle requires a licensed driver. Operation of a SAE Level 4 or Level 5 vehicle does not require a licensed driver.

4. Provides mechanisms for law enforcement to interact with autonomous vehicles.

It is critical that law enforcement has a means to safely interact with driverless vehicles in the course of enforcing traffic safety laws and responding to emergency situations.

- Consistent with state law requiring every party involved in an accident to provide owner and insurance information, driverless vehicles must have the ability to display or transfer owner information in the event of an accident or if required by law enforcement.
- Manufacturers will be required to develop and distribute a law enforcement interaction plan to instruct law enforcement agencies and other first responders on how to interact with the vehicle in emergency or traffic enforcement situations.

In order to facilitate law enforcement investigation of any crashes involving autonomous vehicles, manufacturers will certify that they will release autonomous technology sensor data in their possession or control to law enforcement or peace officers within 24 hours of a request for such data.

5. Addresses advertising of autonomous vehicle capabilities.

The department shares the concerns raised by NHTSA and other entities regarding the risk of driver complacency and misuse of lower level systems where drivers are expected to remain fully engaged in the driving task. It is therefore important that drivers of vehicles not fully capable of autonomous operation be aware of that limitation.

As specified in the revised draft regulations, a vehicle cannot be advertised as autonomous in California unless it meets the definition of "autonomous" specified in Vehicle Code §38750 and the autonomous vehicle regulations. The terms "self-driving", "automated", "auto-pilot", and other statements that lead a reasonable person to believe a vehicle is autonomous constitute advertising regulated by the truth-in-advertising provisions in the Vehicle Code.