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June 9, 2025

Joseph Chapman, Assistant Chief Counsel
Department of Motor Vehicles, Legal Affairs Division
Sacramento, CA

Submitted by email to: LADRegulations@dmv.ca.gov

Dear Mr. Chapman,

Thank you for the opportunity to comment on proposed amendments to regulations governing testing and deployment of autonomous vehicles in California. These comments arise from collaboration among the SFMTA, the San Francisco Police Department, and the San Francisco Fire Department.

San Francisco supports many provisions of the Proposed Regulations. For example, we appreciate:

- New provisions clarifying DMV's authority to use enforcement tools such as permit modifications to address performance issues that may not warrant suspension or revocation (§ 227.46; 228.22).
- The requirement that both crash reporting and immobilization reporting continue for manufacturers holding deployment permits.

That said, San Francisco believes more work is needed. We address here 5 specific issues that call for more evaluation.

1. AB 1777 Implementation: Notices of AV Noncompliance; Form OL-325

In lieu of the moving violation penalties and points system that California law enforcement, courts and the DMV use to address risks from human driver errors, the proposed regulations create a substitute system for issuance of Notices of AV Noncompliance (NAVNC). San Francisco believes the NAVNC process should:

- Ensure it is **as easy for peace officers throughout the state to issue an NAVNC as it is to issue a moving violation to a human driver** – without increased costs or burdens that deter their issuance. The OL 325 form as drafted raises many questions and



challenges for peace officers (see Exhibit A). We recommend that the Department convene with representatives of Police Departments from cities with active driverless operations to discuss the form itself and how it is to be used.

- Ensure that DMV receives notices and citations issued by automated enforcement systems. (see Exhibit A).

2. AB 1777 Implementation: Two-Way Voice Communications

AB 1777 requires manufacturers to ensure that emergency response officials can establish voice to voice communication with a remote human staff person who has situational awareness of an AV within 30 seconds of their call for assistance (by phone or at the vehicle exterior). The proposed regulations largely replicate the statutory language without filling in details important to ensuring compliance with these requirements.

In contrast, the proposed regulations include new documentation requirements for the communication links that connect remote personnel to a vehicle itself and to passengers in the vehicle. These requirements address the need for redundant communications networks, continuous monitoring of a vehicle and the link, procedures for addressing loss or degradation of communications, and how the vehicle will be supported when communications are degraded. (Sections 227.42(e)(1), 228.08(b)(1)).

There are no such requirements for the communication links required for connecting emergency response personnel to a responsible human with situational awareness of a vehicle. The proposed regulations also include no requirements for permittees to submit data documenting the extent to which permittees *actually meet* the 30 second performance standard established in AB 1777 for voice-to-voice communications with emergency response personnel. We request that the Department add requirements ensuring that the communications links necessary to fulfill voice-to-voice communication requirements for emergency response officials are maintained to at least the same standards as those serving the vehicle and its occupants.

3. AB 1777 Implementation: Geofencing Messages Duration

The proposed regulations alter the language of AB 1777 governing emergency geofencing messages in a way that may seem reasonable but in fact places unreasonable burdens on public agencies without enhancing AV operations. Section 38751(d) gives emergency response officials the responsibility to designate the duration of a geofencing



message and authorizes officials to extend that duration where necessary. The directive dissolves without action if no agency extends the original message. The proposed regulations in contrast state that an avoidance area remains in place until it is cleared by the agency that initiated the request. Clearing a geofencing message can burden the time of emergency dispatchers and first responders.

The alteration of the statutory language fails to reflect that every emergency is different. Some may require response from multiple public agencies and may lead to limitations on use of a road that can extend for days. In other cases, the roadway may be able to return to normal operations before all emergency responders have even left the scene. It is reasonable for emergency response officials to be given responsibility for setting—and where needed extending—the duration of a geofencing message. And that is the model included in the statute. We request that DMV eliminate the language that conflicts with the statute and replace it with the statutory language. See Exhibit A for language.

4. Remote Driving

The proposed regulations will authorize Remote Drivers to operate autonomous vehicles from a location connected to a vehicle only by communications technologies and consoles. San Francisco supports the requirement that every Remote Assistant and Remote Driver be issued an individual permit (Sections 22738, 228.06) and that people in these roles should be available to law enforcement officers investigating a crash or other event. Beyond that, we have concerns about the adequacy of the proposed regulations.

The Initial Statement of Reasons asserts that a remote driver is “akin to a test driver.” ISR, p.12. While the minimum driving record standards may appropriately be the same for Remote Drivers and test drivers, the actual functions are very different. When test drivers operate an AV, they do so from a seat behind the wheel where they are able to use their own senses and FMVSS-compliant vehicle equipment to understand the roadway and nearby road users and interact with them safely if they perceive the automated system is making an error. And each vehicle operating with a test driver has *its own test driver*. Sitting behind a console in a completely different environment is quite different. Requiring Remote Drivers to have a license authorizing driving for the vehicle being driven is the barest minimum. We are aware of no state or federal standards governing remote driving equipment and we see in the proposed



regulations no equipment standards, inspection requirements, communications latency requirements, monitoring requirements or staff-to-vehicle ratios.

Human drivers are required to take an in-vehicle test in which they must demonstrate that they can use vehicle equipment to drive in compliance with California law. But the proposed regulations allow permittees to assess both whether the equipment Remote Drivers are given is adequate for this task and whether each driver *can and does use that equipment* effectively to drive remotely in compliance with California law. We also see nothing that limits a remote driver to operating a single vehicle or setting any parameters for how many vehicles a remote driver can operate at one time.

Finally, we are concerned about the removal of the requirement that Remote Drivers be located in California. Can they be located overseas? Do they need to speak English well enough to interact with California first responders who do not speak additional languages? How will law enforcement officers assess the sobriety of Remote Drivers that are not located within their jurisdiction? How will they interview them or assess their sobriety if they are located out of state or even outside the United States?

These matters should not be left to chance.

5. Data Reporting, Transparency and Collaboration

We encourage DMV to maintain and expand its past practice of making required reports on AV activity available to the public – including reports on vehicle miles traveled, disengagements, immobilizations and crashes. The Department’s transparency practices should be expanded to include the geographic location of all reportable events. This is essential so that independent researchers can analyze safety and other trends. It will also help cities and public road owners to evaluate patterns that call for infrastructure modifications, changes to industry practices, changes in regulations or all of these.

We also request the following improvements in data reporting. DMV has historically collected annual Vehicle Miles Traveled (VMT) reporting on a statewide basis and in conjunction with disengagement reporting. As the largest state in the nation (considering area plus population), California’s public roads encompass very diverse driving environments. We appreciate that Waymo developed a safety portal that gives the general public – including independent safety researchers and analysts – some collision data that NHTSA redacts (crash location and date). The portal illustrates Waymo’s understanding that measuring safety trends



is most sensitive and meaningful when it distinguishes among different driving environments.¹ VMT reporting by county and large city would support the Department's assessment, as well as independent assessment of automated and remote driving and facilitate use of the Department's newly clarified enforcement tools where a permittee is having challenges in one county that may not occur in another county. We thus request that VMT reporting:

- be severed from disengagement reporting,
- be continued for permittees at the deployment stage,
- call for submissions on a County by County basis with two exceptions:
 - (1) miles driven on state and interstate highways that are not also local surface streets (such as Van Ness Avenue and Lombard Street in San Francisco), which could be reported and aggregated at the state level; and
 - (2) miles driven in cities with population greater than 500,000, which should be aggregated at the City level as well as the County level.

With respect to collaboration, whether incorporated in proposed regulations or not, San Francisco encourages the Department to create a public sector working group where the Department can be informed by local transportation officials and first responders in cities with driverless AV operations and *regularly solicit input* on its administration of current and proposed regulations. The following examples identify important issues that warrant regular discussions to enhance the safety of all road users and ensure appropriate use of public resources:

- Newly arising challenges such as use of public resources to perform tasks that should be addressed promptly by manufacturers – such as waking sleeping passengers and relocating AVs
- Response time to AV immobilizations
- Effectiveness of manufacturer response to emergency geofencing messages
- Making progress on standardization in “First Responder Interaction Plans”
- Discussion of observed patterns of collisions, Notices of AV Noncompliance and immobilizations

Finally, the proposed regulations call for manufacturers to include a “safety case” in their permit applications but don’t include metrics or thresholds that must be met to receive or renew a deployment permit. These omissions could make safety case submissions ineffectual in actual practice. AVs should meet the standards governing professional drivers who carry passengers

¹ Waymo Safety Portal: <https://waymo.com/safety/impact/>



for compensation – without transferring risk either to public agencies (e.g., first responders, road owners and operators) or to other road users.

Please see the attached Exhibit A for suggested regulatory language changes or additions that would address the issues raised above. Again, we thank you for your continued efforts to manage the benefits and challenges of driving automation in California.

Sincerely,

A handwritten signature in blue ink, appearing to read 'V. Wise'.

Viktoriya Wise
Director of Streets, SFMTA

Copies to:

Julie Kirschbaum, SFMTA Director
Paul Yep, Acting Chief, San Francisco Police Department
Nicole H. Jones, Commander, Special Operations Bureau, SFPD
Dean Crispin, Chief, San Francisco Fire Department
Patrick Rabbitt, Deputy Chief for Operations, San Francisco Fire



Exhibit A

1. AB 1777 Implementation: Notices of AV Non-Compliance; Form OL-325

1.1. Questions calling for discussion with traffic enforcement leaders in cities with driverless operations:

- A. If a driver is present at the time of a traffic stop, how will an officer determine whether autonomous technology was engaged at the time of the observed driving violations?
- B. We note that the proposed regulations call for first responders to observe vehicle status from an indicator *inside* the vehicle. Section 227.42, p.35; Section 228.08, p.13. Even if an officer asks the driver to get out of the vehicle so the officer can identify the vehicle status information from the interior, the status of the vehicle at the time of a stop may not reflect the status of the vehicle at the time of the alleged CVC violation. How will an officer decide whether to issue an OL-325 to a manufacturer or a TR-130 to a driver?
- C. San Francisco finds that forms that balance use of checkboxes that can channel officer reporting and open fields calling for narrative is most efficient for officers; this facilitates both adequate information and consistency across officers. The OL-325 relies very heavily on narrative reporting but also provides very little space for that reporting. We request that the Department modify the OL-325 to more closely follow the TR-130 to facilitate efficient and effective reporting.
- D. If an officer is unable to complete a traffic stop because the subject vehicle does not stop, when the officer runs the plate, will the Department provide AV manufacturer information to support filing an OL-325?
- E. What is intended to be captured by the first option in the "Disposition of the Vehicle" area (Section 5)?



1.2 Language Addressing Reporting Automated Enforcement Citations

We suggest the following text be added to Articles 3.7 and Article 3.8 to ensure that DMV is informed of all notices and/or citations issued by an automated enforcement system:

§ 227.XX / 228.A manufacturer authorized to operate an autonomous vehicle on public roads in deployment, a manufacturer providing an automated driving system service, or a manufacturer authorized to operate an autonomous vehicle on public roads in pursuant to a Driverless Testing Permit issued under Section 227.42 of Article 3.7, upon receiving a citation from an automated enforcement mechanism shall prepare and submit to the department a monthly report providing the information below for each citation. Automated enforcement mechanisms include but are not limited to automated traffic enforcement systems under Vehicle Code section 21455.5, speed safety systems under Vehicle Code section 22425, and transit-only lane and transit stop violations under Vehicle Code section 40240.

Monthly reports shall be submitted by the first business day on or after the fifteenth day of the following month. The report shall include the following information for each citation:

- A copy of the notice/ warning or citation.
- The section of the Vehicle Code allegedly violated
- The date and time of the occurrence.
- The precise location (by latitude and longitude where available)
- License plate



2. AB 1777 implementation: Geofencing Messages Duration

Comparison of AB 1777 language with language of proposed regulations:

| CVC 38752 language | Corresponding language in Proposed Regulations |
|---|--|
| An emergency geofencing message shall include the initial duration for the defined avoidance area based on a reasonable assessment of the emergency. Where necessary, an emergency response official may extend the duration for the avoidance area. | 227.42(e)(3)(F) A manufacturer whose autonomous vehicle is operating under a Drivered Testing Permit, form OL 315 (Rev. 9/2024), or Driverless Testing Permit, form OL 315A (Rev. 10/2023), must direct its fleet to leave or avoid an identified area within 2 minutes of receiving an emergency geofencing message from an emergency response official. The avoidance area shall remain in place until it is cleared by the same agency that initiated the request. Same is found at: 228.08(c)(10)(E) |