San Francisco
County Transportation
Authority

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Steve Gordon
Director
California Department of Motor Vehicles
Office of Public Affairs
2415 First Avenue
Sacramento, CA 95818

SUBJECT:
San Francisco County Transportation Authority Initial Feedback on Proposed Draft Regulatory Language for Autonomous Vehicles

Dear Director Gordon:

The San Francisco County Transportation Authority (SFCTA) is pleased to respond to the Department of Motor Vehicles' (DMV) request for informal feedback regarding its Proposed Draft Regulatory Language for Autonomous Vehicles (Draft Regulations) issued on August 30, 2024.

The Draft Regulations are far ranging in scope. This document outlines SFCTA's initial points of feedback on key areas of interest and should not be considered as either comprehensive or definitive. Given the preliminary and informal nature of this process, we look forward to opportunities to engage with the DMV and other stakeholders collaboratively, and may submit additional feedback to further elaborate on the issues addressed in the Draft Regulations in the future.

Our comments on the Draft Regulations focus on four areas pertaining to non-commercial AVs:

1. Need for basic standards
2. Data reporting and transparency
3. Local role
4. Enforcement of traffic laws

NEED FOR BASIC STANDARDS

SFCTA recognizes that the Draft Regulations cover various autonomous vehicle types (Levels 3, 4 and 5) intended for diverse use cases (e.g., personal vehicles, robotaxis, delivery services, commercial freight vehicles) and can appreciate the challenge of setting standards that apply to the industry as a whole. Indeed, it is good policy to avoid being excessively prescriptive and to leave room for innovation to blossom in unexpected ways. However, we encourage the DMV to establish basic standards across the various regulatory functions described in the Draft Regulations, in order

to increase transparency for the public and all stakeholders on DMV expectations and practices. We believe this approach would boost the public's trust and confidence in the AV manufacturers that are awarded permits to test or deploy AVs in California.

Some examples on the adoption of standards include:

1. **Testing Permits.** In 227.18(b) AV manufacturers are required to test their AVs under controlled conditions that simulate, as closely as practicable, each ODD in which the manufacturer intends the vehicles to operate on public roads, so as to determine whether their vehicles are safe to operate in such ODDs. We see a need for additional DMV guidance or standards as it refers to these controlled tests or simulations. For example, what are the minimum hours or VMT of computer-based and private road simulations that the DMV deems necessary? How many different types of scenarios need to be tested? What capabilities need to be demonstrated and at what level of proficiency?
2. **Safety Cases.** We applaud the introduction of the manufacturer's Safety Case as a pivotal element in the application for, and the renewal of, permits, per 227.28(e), 227.38(a), 228.12(a). We also appreciate the definition of Safety Case in 227.02(ee) covering organizational safety, AV safety, and operational safety. However, we believe that the DMV should establish basic standards regarding what constitutes acceptable safety performance on California public roads, and require manufacturers to explicitly express in their Safety Case whether they can meet such standards. Put differently, what type of performance regarding collision rates, disengagement rates, or rate of violations of traffic laws constitutes "unreasonable risk to the safety of vehicle occupants, other road users, and the public" to the DMV?
3. **Remote Drivers/Assistants.** We support the new requirement that remote drivers and remote assistants are physically located in California, as per 227.32(e), as well as the requirement to include in the application a description of the redundancies in place to ensure the remote assistant and/or remote driver will be able to continuously monitor the status and provide remote support to the vehicle in the event that there is a loss or degradation of the communication link, as per 227.38(e)(1)(C). However, we believe the DMV needs to take the additional step of setting standards regarding the communication link between the AV and the remote support team. To offer a couple of examples, what is the maximum acceptable lag time in the transmission of camera feeds or any other perception system feeds from the AV to the remote support team that allows for timely support and guidance? What is the necessary quality of video that the remote support team needs to receive in order to provide their support and guidance accurately?

We can understand the various complexities associated with determining these types of standards, but believe standards like the ones listed above will be essential to the long term success of the AV industry in California. We urge the DMV to consult safety experts and stakeholders on best practices and the state of the art for standard-setting. Arriving at right answers might take time, but, in the meantime, the DMV could deploy the same approach utilized in the Draft Regulations with respect to VMT requirements for manufacturers applying for driverless testing and deployment permits –

namely, leaving placeholders in the Draft Regulations and engaging stakeholders to arrive at the final figures.

DATA REPORTING AND TRANSPARENCY

SFCTA appreciates the Draft Regulation's new data reporting requirements for collisions, disengagements, and hard braking events. Some points of feedback for implementation of these requirements include:

1. **Collision Reports.** 227.50(a) modifies the reporting requirement for AV collisions under testing permits, adopting the use of the full National Highway Safety Administration (NHTSA) Standing General Order (SGO) collision report; 228.38(a) establishes the requirement to report collisions under deployment permits using the SGO collision report. SFCTA supports these new requirements, but we think the SGO Reports do not contain key important information about the collision, such as a complete enumeration of the parties involved and their respective level of injury. To be clear, we are not advocating for the DMV to require reporting of any type of personal information. Our recommendation is that, in order for the DMV and other key stakeholders to have a complete understanding of the collision in question, in addition to the SGO report, for each collision the DMV should require a record of each person involved with basic information like road user type (e.g. pedestrian, cyclist, vehicle occupant), age and severity of injury.[1]
2. **Disengagements Reports: MRCs.** Similarly, we appreciate the modifications to the definition of disengagement and various new reporting requirements for disengagements under testing permits, per 227.52, and the adoption of a definition and reporting requirements for disengagements under deployment permits, per 228.40. We also see in 227.52(a)(1), 227.52(a)(2), 228.40(a)(1), and 228.40(a)(1) comprehensive lists of the various categories of disengagements, but do not see those lists represented in the data reporting requirements described in 227.52(b)(3) and 228.40(b)(3). We believe disengagement category data will be critical to understanding how the Automated Driving System (ADS) is performing, and should be included in the reporting requirements. For example, specifically identifying whether there was a Minimal Risk Condition (MRC) event is necessary for tracking AV manufacturer's performance vis-a-vis the new requirement that in 95% of MRCs the AV needs to pull to a safe location whereby the travel lane is sufficiently cleared to allow traffic to pass through unimpeded within 60 seconds from the execution of fall back maneuver (see 227.42(a)(1) and 228.28(a) (1)). Moreover, as currently written, the Draft Regulations impose data reporting to demonstrate compliance with the MRC performance standard *after* the DMV has determined the manufacturer is not in compliance with the standard. The DMV should ensure that monthly reporting is designed to monitor these performance standards from the start.

[1] For example: Person 1 = Male, 35, passenger in AV, no injury; Person 2 = Female, 42, driver in Vehicle 2, minor injury; Person 3 = Male, 50, pedestrian, serious injury.

3. **Disengagement Reports: VMT by County/City**. Another point of feedback on the disengagement reporting requirements is the reporting of Vehicle Miles Traveled (VMT). SFCTA appreciates the adoption of a monthly cadence for VMT reporting, the breakdown between drivered and driverless VMT for testing permits, per 227.42(b)(4), and the new requirement to report VMT under deployment permits, per 228.40 (b)(4). Our main concern is that VMT reporting continues to be statewide, without geographic disaggregation. We believe that, at a minimum, VMT reports should include a breakdown of VMT by city and county for both testing and deployment permits. The purpose of this breakdown is at least twofold. Firstly, as AV manufacturers continue to expand across the state, it will become increasingly necessary for the DMV to monitor the extent of AV operations in the different areas of the state, and accordingly, to assess the differences in AV performance across those different areas. Secondly, other transportation and air quality agencies at the state, regional and local levels are increasingly focused on measuring and curbing VMT growth, and need AV VMT data at the county and city level. For example, VMT is the performance metric for transportation impact assessment under CEQA for Caltrans and Metropolitan Planning Organizations, county Congestion Management Agencies and local transportation agencies statewide. These various transportation agencies also need to track VMT at a more local level for other purposes, including assessing performance of the transportation network, managing congestion and developing long-range transportation investment and air quality plans.

The Draft Regulations establish a more expansive data reporting regime that should better enable the DMV to carry out regulatory functions. What remains unclear is what portions of that data are going to be made available to the public at large. In addition to the DMV, a wide range of local and regional government agencies, stakeholders and decision-makers also needs access to such a rich data set on AV operations to inform their functions and duties, not only transportation system management and operations, but also in many other areas of concern, such as transportation and land use planning, climate and air quality planning, equity, and public safety (emergency response and traffic code enforcement), to name a few. There is also great potential benefit in making such data available to researchers and academia that can help further our understanding of this new mode of transportation and its impacts. Finally, the public has an interest in transparency in the deployment of new experimental technology on public roads. Accordingly, SFCTA recommends that the Draft Regulations include explicit language indicating that all proposed reports will be published by the DMV on their website (with redactions of the personal information of any passengers, drivers, or other road users included in any report, and identification by AV providers of any trade secret information that should remain shielded, and the justification for that treatment, in advance).[2]

[2] The Draft Regulations should also clarify that the AV manufacturer bears the burden of proving the reasons why the DMV shall withhold any information, or any portion thereof, from the public. To request confidential treatment of information submitted to the DMV, a manufacturer should designate each page, section, or field, or any portion thereof, as confidential, and the final determination of such request shall be at the discretion of DMV staff. Additionally, if only a certain portion of

LOCAL INPUT

The Draft Regulations create an opportunity for improved regulation of the AV industry by way of the more detailed permit application processes and the richer data reporting requirements, both areas in which we and other local entities provided prior testimony and input. We continue to believe that continued local input is critically necessary, particularly from cities and first-responders with on-the-ground experience with AV deployment. We strongly urge the DMV to deepen its engagement with local entities, formally and informally, to consult on and inform the maturation of AV regulations and policies for this important sector.

For example:

1. **AV Regulatory Oversight: ODD definitions and permit readiness.** As noted above, under 227.18(b), manufacturers are required to test their AVs under controlled conditions that simulate, as closely as practicable, each ODD in which the manufacturer intends the vehicles to operate on public roads, so as to determine whether their vehicles are safe to operate in such ODDs. The weight of this task should not be resting solely on the DMV. Local agencies, charged with managing the local transportation network and understanding firsthand all of its complexities should be called upon to support the DMV in assessing whether those tests are indeed close representations of the ODD and the likely scenarios AVs will face in public roads
2. **AV Regulatory Oversight: Safety Case reviews.** This also applies to the review of the Safety Case that needs to be submitted with any application for a new permit and for the renewal of an existing permit, per 227.28(e), 227.38(a), 228.12(a). The Safety Case is defined in 227.02(ee) as "the manufacturer's structured argument, supported by a body of relevant evidence, that provides a compelling, comprehensive, and valid case that an automated driving system, for a given ODD, does not pose an unreasonable safety risk to the safety of vehicle occupants, other road users, and the public." Accordingly, knowledge of the local transportation network, its surrounding context, and its challenges will be crucial to assess whether an AV manufacturer's Safety Case is indeed valid. Local transportation agencies with firsthand knowledge of the ODD should be part of a broader Safety Case review panel, also including industry and academic experts, that assists the DMV in its review of Safety Cases prior to awarding new permits or renewing existing ones.
3. **Other Operational, Regulatory, Policy Support.** Local transportation agencies' unique perspectives and expertise can advise DMV and augment its capacities in a broader set of issues pertaining to AVs, including safety assurance, standards setting, data reporting, among others. We stand ready to collaborate to support the maturation of DMV policies and regulation, and to advocate for the necessary resources to grow the state's oversight capacity, as partners and stakeholders in this complex and important endeavor.

information is claimed to be confidential, then only that portion rather than the entire submission should be designated as confidential.

ENFORCEMENT OF TRAFFIC LAWS

The passage of AB 1777 lays a foundation on which to build upon for enforcing AV compliance with the California Vehicle Code (CVC) and local traffic ordinances. The DMV is now tasked with developing regulations addressing the issuance of "notices of autonomous vehicle noncompliance "to implement the new law. We look forward to engaging with the DMV in that process, and use this opportunity to share the following input to inform the DMV in its forthcoming efforts:

1. Future regulations should establish clear protocols for due process for AV providers who receive notices of non-compliance, as well as procedures for holding AV providers accountable for violations of traffic laws, up to and including permitting consequences. If human drivers are found to have violated traffic laws, they face various forms of consequences, including: (i) monetary penalties; (ii) point deductions that can amount to loss of their driving privilege; and (iii) legal liability. There are very evident differences between AV manufacturers and humans, and, accordingly, the framework of consequences for AV manufacturers may not mirror the existing one for human drivers. Instead, the framework of evaluating and ensuring appropriate consequences to AV manufacturers should be tailored to many considerations, including: (i) the underlying causes of non-compliance; (ii) severity and impacts of the violation; (iii) the broader risks posed given the size of the permitee's network; and (iv) ease and timeliness of compliance (fix it ticket), among other important factors.
2. Future regulations should require AV manufacturers to submit a monthly report of all their traffic violations that resulted in notices of non-compliance that have not been dismissed. The report should include, for each traffic violation, the following data elements: (i) date, time, and location of the violation; (ii) the specific state or local traffic law or regulation that was the basis of the notice of noncompliance; (iii) the circumstances that led to the issuance of the citation; (iv) any actions taken by the AV manufacturer to contest or accept the notice of noncompliance; (v) any justification offered for the citation; (vi) actions taken to prevent future violations of the same kind; (vii) the testing or deployment permit number issued by DMV and the permit number issue by the Public Utilities Commission, if applicable; (viii) the vehicle identification number of the autonomous vehicle; (ix) whether a safety driver was present; and (x) whether a remote driver, the remote assistant or the automated technology was in control of the vehicle at the time of the violation.

CONCLUSION

SFCTA appreciates the opportunity to provide feedback and input on the Draft Regulations, and reserves the right to submit additional feedback at a later date. Please do not hesitate to contact us should you have any questions on these comments or if you consider we can be of help in any other capacity. We look forward to engaging with DMV staff on the Draft Regulations and the forthcoming rulemaking process.

Sincerely,

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