ATTACHMENT B

Decision 20-11-046 November 19, 2020

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking on Regulations Relating to Passenger Carriers, Ridesharing, and New Online-Enabled Transportation Services.	Rulemaking 12-12-011

DECISION AUTHORIZING DEPLOYMENT OF PHASE I DRIVERED AND DRIVERLESS AUTONOMOUS VEHICLE PASSENGER SERVICE

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Appendix A

DECISION AUTHORIZING DEPLOYMENT OF PHASE I DRIVERED AND DRIVERLESS AUTONOMOUS VEHICLE PASSENGER SERVICE

Summary

This decision creates Phase I of two new autonomous vehicle programs that authorize fare collection (deployment programs), one for drivered autonomous vehicles and the other for driverless autonomous vehicles. Among other requirements, applicants to the existing driverless pilot program and the new driverless deployment program must submit Passenger Safety Plans that outline their plans to protect passenger safety for driverless operations.

In addition, the decision establishes four goals that apply to both the existing pilot programs and to Phase I of the new deployment programs: 1.) Protect passenger safety; 2.) Expand the benefits of AV technologies to all of Californians, including people with disabilities; 3.) Improve transportation options for all, particularly for disadvantaged communities and low-income communities; and 4.) Reduce greenhouse gas emissions, criteria air pollutants, and toxic air contaminants, particularly in disadvantaged communities. The Commission will collect data to monitor permit holders' progress toward each of the goals. The Commission will initiate Phase II in a subsequent proceeding or stage to evaluate the data collected in Phase I no later than three years from initiation of Phase I. The Phase I deployment programs will initiate upon approval of the first amended drivered AV deployment permit or approval of the first advice letter authorizing driverless AV deployment, whichever is first.

Permit holders in both of Phase I drivered and driverless deployment programs will be required to submit detailed quarterly program reports. The data must include aggregated and anonymized information about the pick-up and drop-off locations for individual trips; the availability and volume of

accessible rides; the service levels to disadvantaged communities; the fuel type of the vehicles; the vehicle miles traveled in periods 1, 2, and 3; and engagement with advocates for accessibility and disadvantaged communities. Finally the decision maintains existing data reporting requirements for participants in the drivered and driverless pilot programs. It also makes various administrative changes to the pilot, such as changing the timing that quarterly reports are due to better align with the California Department of Motor Vehicles' (DMV) reporting requirements.

This proceeding remains open.

1. Background

1.1. Decision 18-05-043

In Decision (D.) 18-05-043 we set out a framework and two pilot programs for the Commission's regulation of passenger service to the public in California provided by entities using Autonomous Vehicles (AVs). The first pilot program permitted the service defined as "Drivered AV Passenger Service," wherein Transportation Charter Party Carrier (TCP) permit-holders were authorized to add test autonomous vehicles (Test AVs) to their passenger carrier equipment statement. In this pilot program, the pilot participant was allowed to offer autonomous vehicle passenger service but test operators had to be present in the vehicle at all times. Furthermore, the TCP permit-holder had to provide its autonomous vehicle service free of charge (*i.e.,* fare collection is prohibited). As a pre-requisite for participation, the permit-holder had to hold an Autonomous Vehicle Tester Program Manufacturer's Testing Permit issued by the DMV (DMV AV Testing Permit). Additionally, the permit-holder was allowed to only add Test AVs to its equipment statement if the vehicle had been in permitted drivered AV operation for a minimum of 30 days.

For the second pilot program, D.18-05-043 authorized TCP permit-holders possessing a DMV Manufacturer's Testing Permit – Driverless Vehicles (DMV AV Testing Permit – Driverless Vehicle) to operate AVs in passenger service in driverless mode (Driverless AV Passenger Service) with a remote operator, subject to certain restrictions. The pilot program was available only to TCP permit holders with permitted driverless AVs that had been in permitted driverless AV operation for a minimum of 30 days.

Ordering Paragraph 4 and Ordering Paragraph 7 of D.18-05-043 required each company receiving a permit to provide Drivered AV Passenger Service and Driverless AV Passenger Service, respectively, to submit to the Commission quarterly reports of anonymized data about the operation, including the following disaggregated data:

- Total quarterly vehicle miles traveled during passenger service by all vehicles in the entity's list of Autonomous Vehicle equipment, provided per-vehicle;
- Total quarterly vehicle miles traveled during passenger service that are served by electric vehicles or other vehicles not using an internal combustion engine, provided per-vehicle;
- Total quarterly vehicle miles traveled during passenger service, from the vehicle's starting location when it first accepted a trip request to the pickup point for each requested trip, expressed in miles and provided per-vehicle;
- Amount of time each vehicle waits between ending one passenger trip and initiating the next passenger trip, expressed as both a daily average and a monthly total in hours or fraction of hours for each vehicle (idling or dwell time);

- Vehicle occupancy (total number of passengers) in each vehicle for each trip;
- Total number of accessible rides requested per quarter that are fulfilled;
- Total number of accessible rides requested per quarter that are unfulfilled because of a lack of accessible vehicles; and
- Total number of accessible rides requested per quarter that are declined by the driver.

In response to D.18-05-043, several companies sought permits to participate in the Drivered AV Pilot. After Commission staff reviewed each application, permits to participate in the Drivered AV Pilot were issued to the following seven companies with the date of issuance in parenthesis: Zoox, Inc. (12/21/2018); Waymo, LLC (07/02/2019); AutoX Technologies, Inc. (06/18/2019); Pony.ai, Inc. (06/18/2019); Aurora Innovation, Inc. (01/24/2020); Cruise LLC. (02/19/2020); and Voyage Auto, Inc. (04/16/2020). The permitted companies provided the Commission with seven quarters of data which reflected over 600,000 autonomous miles driven, and these quarterly AV Pilot reports are publicly available on the Commission's website.[1] No permits have been issued for the Driverless AV Pilot.

1.2. All-Party Workshop

On October 22, 2019, the Commission and the Department of Motor Vehicles (DMV) hosted an All-Party Workshop to discuss the state of the pilot programs. Participating parties included: autonomous vehicle service providers such as Aurora Innovation, Inc., AutoX Technologies, Inc., Cruise, LLC., Waymo, LLC., Voyage Auto, Inc., and Zoox, Inc.; trade groups such as the Silicon Valley

[1] https://www.cpuc.ca.gov/avcpilotdata/.

Leadership Group and the San Francisco Taxi Workers Alliance; advocacy groups such as the California Council for the Blind and the Disability Rights Education and Defense Fund; public agencies such as the Los Angeles Department of Transportation and the San Francisco Municipal Transportation Agency.

1.3. December 19, 2019 Ruling

On December 19, 2019, the assigned Administrative Law Judge (ALJ) issued his *Ruling* (*December 19, 2019 Ruling*) which ordered the parties to file and serve answers to eight questions that covered the following topics: Question One (regulatory framework next steps including whether to permit companies providing drivered and/or driverless autonomous vehicle passenger service to be able to charge fares); Question Two (goals-related questions); Question Three (Data-Related Questions); Question Four (Definition-Related Questions); Question Five (Permit-Related Questions); Question Six (Passenger Safety-Related Questions); Question Seven (Driver-Related Questions); and Question Eight (Vehicle-Related Questions). Questions in the *December 19, 2019 Ruling* that were in italics originally appeared in the *Amended Phase III. C. Scoping Memo and Ruling*, issued on October 25, 2019.

The following parties filed opening and/or reply comments and are grouped under the following classifications:

AV Service Providers (Referenced as a group as "AV Service Providers"):

- Aurora Innovation, Inc. (Aurora)
- Cruise, LLC. (Cruise)
- Lyft, Inc. (Lyft)
- UATC, LLC (UATC)

- Voyage Auto, Inc. (Voyage)
- Waymo, LLC. (Waymo)
- Zoox, Inc. (Zoox)

Trade Groups:

- Bay Area Council (BAC)
- California Chamber of Commerce (CCC)
- Hispanic Chambers of Commerce of San Francisco (HCCSF)
- San Francisco Council of District Merchants Association (SFCDMA)
- Silicon Valley Leadership Group (SVLG)
- The Technology Network (TechNet)
- San Francisco Taxi Workers Alliance (SFTWA)

Advocacy Groups:

- The American Automobile Association of Northern California, Nevada and Utah and the Automobile Club of Southern California (AAA Clubs)
- California Council for the Blind (CCB)
- The Greenlining Institute (Greenlining)
- Mothers Against Drunk Driving (MADD)
- Sierra Club (Sierra Club)

Public Agencies:

- California Transit Association (CTA)
- Los Angeles County Metropolitan Transportation Authority (LA Metro)
- Los Angeles Department of Transportation (LADOT)
- Los Angeles

- San Francisco Metropolitan Transportation Commission (SFMTC)
- San Diego Association of Governments (SANDAG)
- San Francisco Municipal Transportation Agency and the San Francisco County Transportation Authority (SFMTA and SFCTA)
- San Francisco International Airport (SFO)
- UC Davis Policy Institute for Energy, Environment, and the Economy (UC Davis)

The following parties filed opening comments on January 20, 2020, for Question 1: The AV Service Providers, AAA, BAC, CCB, CCC, HCCSF, MADD, SFCDMA, SFMTA and SFCTA, SVLG, TechNet, and UC Davis.

The following parties filed opening comments on February 10, 2020 for Questions 2-8: the AV Service Providers, BAC, CCB, CTA, LADOT, SFMTC, SFMTA and SFCTA, SFO, Sierra Club, SVLG, and UC Davis.

The following parties filed reply comments on March 6, 2020: the AV Service Providers, AAA, CTA, MADD, SANDAG, SFMTA and SFCTA, SFO, SFTWA, Sierra Club, SVLG and BAC (jointly), and TechNet.

2. Jurisdiction

The Commission has the authority to regulate both drivered and driverless passenger service provided by TCPs. California has long recognized that the provision of passenger service on public roads in the State is affected with a public interest, particularly in the areas of passenger safety, driver safety, consumer protection, and the fitness of the companies providing this service to

the public. [2] The Commission licenses TCPs to offer such service, develops rules and regulations for TCP permit-holders, and enforces the rules and regulations.

The introduction of both drivered AVs and driverless AVs providing commercial passenger service in California is a new stage in the development of passenger service. Offering AV service to the public raises both familiar and new passenger safety and consumer protection issues. The Commission has jurisdiction to address these issues, and properly must do so before companies offer this service. In issuing D.18-05-043, the Commission undertook its regulatory task contemporaneously with the effectiveness of the new DMV regulations.[3]

The Commission's longstanding statutory authority to regulate passenger carriers derives from Article XII of the California Constitution and the Public Utilities Code (Pub. Util.) Code. Pub. Util. Code § 425 states:

> The employees, representatives, and inspectors of the commission may, under its order or direction, inspect and examine any books, accounts, records, memoranda, documents, papers, and correspondence kept or required to be kept by any carrier or related business referred to in this article. This section shall, to the extent deemed necessary by the commission, apply to persons who have direct or indirect control over, or who are affiliated with, any transportation agency.

Pub. Util. Code § 5381 states in relevant part:

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[2] *See* Passenger Charter-party Carriers Act, Pub. Util. Code § 5351 *et seq*. Commission regulation relates to the provision of passenger service and does not apply to other contractual agreements for the use of an AV, such as rental car or leased car arrangements as defined in the California Vehicle Code.

[3] California Vehicle Code § 38750 obligates the DMV to develop regulations for the testing and public use of autonomous vehicles, which can be found at Government Code § 11343.4 and Cal. Code Regs., tit. 13 § 227.02 *et seq*.

> The commission may supervise and regulate every charter-party carrier of passengers in the State and may do all things…necessary and convenient in the exercise of such power and jurisdiction.
>
> Pub. Util. Code § 5360 states in relevant part:
>
> Subject to the exclusions of Section 5353,[4] "charter-party carrier of passengers" means every person engaged in the transportation of persons by motor vehicle for compensation, whether in common or contract carriage, over any public highway in this state.

To implement State statutes and Commission decisions applicable to passenger carriers, the Commission adopted General Order (GO) 157-E which places additional requirements on TCP permit-holders. Standard conditions applied to all TCP permit-holders include:

- Provide a preventive maintenance program for all permitted vehicles;
- Enroll in the DMV's Employer Pull Notice (EPN) Program;
- Maintain a safety education and training program for all drivers and subcarriers;
- File with the Commission a certificate of workers' compensation insurance;
- Enroll in a mandatory controlled substance and alcohol testing program;
- Maintain an adequate level of liability and property damage insurance;
- Maintain a passenger carrier equipment list with the Commission of all vehicles in use that includes the manufacturer, model, year, vehicle identification

[4] Section 5353 exempts 14 modes of transportation from Commission jurisdiction.

number, seating capacity, whether the vehicle is leased or owned, handicap accessible status, and license plate number, and

- Comply with the Vehicle Code.

The Commission requires TCP permit holders to provide proof of compliance with all requirements and maintains carrier information in a transportation database. The Commission enforces its TCP rules and regulations by, for example, disconnecting the telephone service to carriers operating without authority, issuing administrative citations and associated fines, and/or filing civil or criminal charges. The Commission may also initiate an investigation for any violation of a State law or Commission rule, and impose penalties if a TCP permit-holder is found to have committed any such violation.

3. Issues Before the Commission

On December 19, 2019, the assigned ALJ issued the *Administrative Law Judge's Ruling Ordering Parties To Comment On Questions Regarding The Commission's Regulation Of Autonomous Vehicles.* The questions and the parties' responses are discussed throughout this decision.

4. Discussion and Analysis

4.1. Fare Collection

The *December 19, 2019 Ruling* asked the parties to comment on whether the Commission has gathered enough information to authorize fare collection for drivered and/or driverless AV operations. The AV Service Providers, BAC, CCB, CCC, the HCCSF, the SFDCMA, MADD, UC Davis, SVLG, and TechNet all

support the immediate authorization of fare collection for both drivered and driverless operations.[5]

4.1.1. Party Comments

First, Cruise, Waymo, and Zoox argue that the volume of testing to date and the variety of pilot participants have provided sufficient data points for the Commission to issue a decision.[6] Waymo noted that pilot participants had reported over 444,000 vehicle miles traveled during passenger service; since then, the number has exceeded 600,000.[7] Furthermore, Waymo contends that the current set of participants in the Drivered AV Pilot Program is a representative sample of the type of companies that would participate under a full deployment framework. They assert that a large portion of the companies that have expressed interest in operating a driverless ridehailing service already hold permits for the drivered pilot. [8]

Second, certain AV Service Providers and the CCC argue that fared service would maintain existing levels of safety. They argue that, under a deployment framework, companies would still need to demonstrate to DMV and CPUC that

[5] Aurora Comments on Question 1, at 1; BAC Comments on Question 1, at 3; CCB Comments on Question 3, at 5; CCC Comments on Question 1, pdf at 3; Cruise Comments on Question 1, at 1; HCCSF Comments on Question 1, at 3; Lyft Comments on Question 1, at 2; MADD Comments on Question 1, at 3; SFCDMA Comments on Question 1, at 3; SVLG Comments on Question 1, at 2-3; TechNet pdf p3; UATC Comments on Question 1, at 3; UC Davis Comments on Question 1, at 8; Waymo Comments on Question 1, at 3-4; Zoox Comments on Question 1, at 4.

[6] Waymo Comments on Question 1, at 14; Cruise, Waymo, Zoox, October 22nd Workshop.

[7] Quarterly AV Pilot reports available at https://www.cpuc.ca.gov/avcpilotdata/

[8] All Party Workshop held on October 22, 2019.

they are safe to operate, and that fared service would not loosen those standards.[9]

Third, certain AV Service Providers, BAC, CCC, and HCCSF argue that fare collection will provide substantial benefits to the Commission and the AV Service Providers. In their view, fare collection would enable the Commission to collect data and customer feedback representative of actual service;[10] allow companies to earn money to defray operating costs;[11] accelerate access to technology that will benefit local businesses and the disability community;[12] and, foster competition, innovation, and investment in California, all of which would give companies the certainty to invest in California as opposed to other states.[13]

Fourth, Waymo argues that the logic to allow fare collection applies equally to the drivered and driverless operations so that, if the Commission authorizes fare collection for one, it should authorize fare collection for the other.[14]

LADOT, SFMTA and SFCTA, SFO, and SFTWA take contrary positions. LADOT and SFMTA and SFCTA argue that the Commission should not authorize fare collection because testing periods should focus on safety and other policy goals, not generating revenue for the service providers.[15] SFO agrees,

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[9] Aurora Comments on Question 1, at 3; CCC Comments on Question 1, at pdf at 5; Cruise Comments on Question 1, at 3-4.

[10] Aurora Comments on Question 1, at 2; CCC Comments on Question 1, at pdf at 3-4; Cruise Comments on Question 1, at 1-2, 4.

[11] Lyft Comments on Question 1, at 5; Zoox Comments on Question 1, at 4.

[12] HCCSF Comments on Question 1, at 3.

[13] Bay Area Council, Comments on Question 1, at 4.

[14] Waymo Comments on Question 1, at 11.

[15] LADOT Comments on Question 1, at 1; SFMTA and SFCTA Comments on Question 1, at 11.

arguing that the Commission should not approve AV service until the issues are fully addressed in a separate proceeding.[16] Should the Commission authorize fare collection, LADOT recommends the Commission use fare revenue to fund accessibility and equity programs.[17]

SFTWA opposes fare collection for both the drivered and driverless operations, arguing that fare collection would encourage AV service providers to deploy AVs at scale before the impacts of their operations are understood.[18]

4.1.2. Discussion

In this Decision, the Commission creates two new deployment programs: the Phase I Drivered Autonomous Vehicle Deployment Program and the Phase I Driverless Autonomous Vehicle Deployment Program. Both Phase I deployment programs would allow participants to charge fares for AV passenger service.

To be eligible, an applicant must possess a "Permit to Deploy Autonomous Vehicles on Public Streets" from the DMV. In doing so, applicants will have satisfied the agency's requirements related to initial safety of the vehicle and automated driving system. In D.18-05-043, the Commission required applicants for its AV testing pilot programs to possess the appropriate corresponding AV testing permit from DMV, which is the same process adopted here as a precondition to charging fares to passengers. The DMV will only issue a Permit to Deploy Autonomous Vehicles on Public Streets if, among other things, the agency is satisfied that the applicant has demonstrated two important provisions related to ability of the autonomous technology to drive safely: (1) The DMV

[16] SFO Comments on Questions 2-8, at 2.

[17] LADOT Comments on Question 1, at 5.

[18] SFTWA Comments on Question 1, at 5.

must agree that "the autonomous technology is designed to detect and respond to roadway situations in compliance with all provisions of the California Vehicle Code and local regulation applicable to the performance of the dynamic driving task in the vehicle's operational design domain, except when necessary to enhance the safety of the vehicle's occupants and/or other road users;" and (2) "the manufacturer has conducted test and validation methods and is satisfied, based on the results of the tests and validations, that the vehicles are safe for deployment on public roads in California."[19]

D.18-05-043 prohibited fare collection so that the public "will identify the pilot program as different from ordinary transportation and, therefore, will encourage the public to be more mindful of their experiences and provide critical feedback to the Commission and the permit-holders."[20] The Commission issued its first permit for the Drivered AV Pilot Program on December 21, 2018. Since then, the Drivered AV Pilot Program has grown to seven participants. These companies have different business models, vehicle types, and scales of operations. Together, they have conducted more than 600,000 miles of testing. As noted by D.18-05-043, though, the pilot experience is meaningfully different from a fared service for both customer and company. While testing has provided passengers with opportunities to provide feedback on their riding experience in a free program, the program is at an inflection point where fared service is an appropriate next step to support AVs in passenger service and to expand the public's understanding of the service.

[19] California Code of Regulations (CCR) § 228.06(a)(9) and CCR § 228.06(a)(11), respectively.

[20] D.18-05-043, at 22-23.

Accordingly, building on the frameworks for the Drivered Autonomous Vehicle Pilot Program and the Driverless Autonomous Vehicle Pilot Program, the Commission concludes it is appropriate to authorize fare collection for both drivered and driverless passenger service and creates two new deployment programs: the Phase I Drivered Autonomous Vehicle Deployment Program and the Phase I Driverless Autonomous Vehicle Deployment Program.

4.2. Fare-Splitting (Shared Rides)

The *December 19, 2019 Ruling* asked parties whether the Commission should authorize "fare-splitting" (*i.e.*, shared rides) for driverless operations.

4.2.1. Comments

Parties express near-unanimous support for shared rides, though several parties argue that the Commission should not authorize shared rides until the regulatory framework addresses issues related to safety, the environment, and other goals. Only SFTWA directly opposes shared rides.[21]

The AV Service Providers, BAC, SFMTA and SFCTA, and Sierra Club assert that shared rides, adopted at scale, could produce significant environmental and equity benefits. BAC, Lyft, Cruise, Sierra Club, and Zoox argue that shared rides could displace trips taken in single-occupancy vehicles; reduce congestion; complement public transport; and discourage car ownership in the long term.[22] Others highlight that sharing fares can increase affordability,

[21] Aurora Comments on Question 1, at 2; CCC Comments on Question 1, at pdf 5; Cruise Comments on Question 1, at 8; CTA Reply Comments, at 4; LADOT Comments on Questions 2-8, at 12; SFMTA and SFCTA Comments on Questions 2-8, at 10; SFTWA Comments on Question 1, at 6; Sierra Club Comments on Question 1, at 1; TechNet Comments on Question 1, at 3; UC Davis Reply Comments on Questions 2-8, at 20 ; Waymo Comments on Question 1, at 12; Zoox Comments on Question 1, at 4.

[22] BAC Comments on Question 1, at 3; Cruise Comments on Question 1, at 2; Lyft Comments on Question 1, at 6; Sierra Club Comments on Question 1, at 1; Zoox Comments on Question 1, at 5.

which would particularly benefit low income communities.[23] LADOT, SFMTA and SFCTA, SANDAG, and UC Davis suggest the Commission adopt policies that specifically encourage shared rides over single-occupancy rides.[24]

Cruise, Greenlining, Sierra Club, and UC Davis all express support for shared, all-electric fleets, arguing that the promised benefits of AVs can only arise when fleets emit neither greenhouse gases nor air pollutants.[25] Greenlining and Sierra Club argue that AV companies should bear the entire cost of electrifying their fleets.[26]

Cruise and Lyft note that there are already examples in California of shared transportation without a driver or authority figure immediately nearby such as MUNI, BART, airport shuttles, and casual carpools.[27]

SVLG points to the principles outlined in "Automated Vehicle Principles for Healthy and Sustainable Communities," a document authored by the Office of Planning and Research with input from many California state agencies, which explicitly supports shared rides as a goal for AVs.[28]

At the same time, many parties acknowledge that shared, driverless rides raise safety concerns that are categorically different from driverless rides that are

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[23] BAC Comments on Question 1, at 3; CCB Comments on Question 1, at 5; Cruise Comments on Question 1, at 8;Sierra Club Comments on Question 1, at 1.

[24] LADOT Comments on Question 1, at 2; SFMTA and SFCTA Comments on Question 1, at 10-11; SANDAG Reply Comments, at 3; UC Davis Comments on Question 1, at 8.

[25] Greenlining Comments on Question 1, at 11; Sierra Club Comments on Question 1, at 1; UC Davis Comment son Question 1, at 2.

[26] Greenlining Comments on Question 1, at 11; Sierra Club Comments on Question 1, at 1;

[27] Cruise Comments on Question 1, at 9; Lyft Comments on Question 1, at 7.

[28] Automated Vehicle Principles for Healthy and Sustainable Communities, 2018. At time of publication available at https://www.opr.ca.gov/docs/20181115-California_Automated_Vehicle_Principles_for_Healthy_and_Sustainable_Communities.pdf.

not shared.[29] Accordingly, multiple parties – particularly public agencies and advocacy groups – encourage the Commission to adopt clear and specific policies to protect the safety of passengers in driverless vehicles, particularly where two parties unknown to each other share a ride.[30] Cruise proposes the Commission should "request that pilot participants submit a general overview and plan of how the participant would address passenger safety in shared driverless rides."[31] Relatedly, SFMTA and SFCTA propose the Commission should require applicants to submit a Passenger Safety Plan that details how an AV passenger service applicant plans to protect the personal safety of passengers. [32] SANDAG and SFO agree.[33] Relatedly, LADOT urges the Commission to develop safety protocols for shared rides.[34] LADOT and Greenlining also argue the Commission should require an attendant be present for every shared driverless ride, at least for the duration of testing.[35] CCB asks the Commission to clarify the role of a remote operator in the safety of shared driverless operations.[36]

[29] CCB Comments on Questions 2-8, at 5; Greenlining Comments on Questions 2-8, at 13; SFMTA and SFCTA Comments on Questions 2-8, at 20; UATC Comments on Question 1, at 6.

[30] CCB Comments on Question 1, at 5; Greenlining Comments on Questions 2-8, at 13; SFMTA and SFCTA Comments on Questions 2-8, at 20-2.

[31] Cruise Comments on Questions 2-8, at 22.

[32] SFMTA and SFCTA Comments on Question 1, at 8.

[33] SANDAG Reply Comments, at 2; SF Reply Comments, at 2. SFO Reply Comments on Questions 1-8, at 2.

[34] LADOT Comments on Question 1, at 5.

[35] Greenlining Comments on Questions 2-8, at 13; LADOT Comments on Questions 2-8, at 19.

[36] CCB Comments on Questions 2-8, at 5.

4.2.2. Discussion

The Commission authorizes shared rides for its Phase I driverless deployment program. Applicants to the Phase I driverless deployment program must include a Passenger Safety Plan that, among other things, describes the technologies, procedures and protocols, and redundancies that the applicant will implement to minimize safety risks to passengers traveling in a shared, driverless ride. This includes a discussion of how the applicant will implement measures to prevent and respond to incidents of assault and harassment. The Passenger Safety Plan will be subject to public review and input. This public review process is further discussed in section 4.24 of this decision.

Many of the envisioned benefits of autonomous vehicles – more transportation options at lower cost, less congestion, smaller environmental footprint – are closely tied to the availability of shared rides. In the same way, the success of shared and driverless rides is inextricably tied to the assurance of the safe interaction of its users, which must be provided for in the design and operation of the vehicle. For that reason, D.18-05-043 prohibited shared driverless rides "until the Commission and law enforcement can address how to ensure safety for all passengers in such a situation."[37] To meet this requirement, the Commission will require applicants to describe how they will implement measures (technologies, protocols and procedures, and redundancies) to prevent and respond to incidences of assault and harassment during shared, driverless rides. Applicants must develop this safety plan as an integral part of their company's operations and business model. Public review of each applicant's Passenger Safety Plan will allow for the careful critique and assessment of the

[37] Decision 18-05-043, at 38.

adequacy of each applicant's plan by stakeholders, providing opportunity for suggestions that could further promote passenger safety. The DMV's deployment process will account for law enforcement's input as the DMV requires a law enforcement interaction plan as a condition of its deployment permit.

To understand the impacts of fare-splitting on passenger safety, permit holders for both the Phase I drivered and driverless AV deployment programs must submit data quarterly that reports the quarterly totals of complaints, incidents, the causes of those incidents, and the amount paid to any party in aggregate (if the amount is known by the permit holder). Permit holders will coordinate with CPED to standardize the methodology they use to identify and categorize these complaints and incidents.

These are the same reporting requirements adopted in D.16-04-041 which authorized fare-splitting for TNCs. [38] The Commission collects this information from TNCs to understand the impact of fare-splitting on public safety and consumer protections. In the same way, the Commission will collect this information from AV companies to enable the Commission to understand the public safety and consumer protection impacts of the range of driverless operations including shared services.

4.3. Local Authority Over AV Testing

4.3.1. Comments

LADOT, SFMTA and SFCTA argue that the Commission should not create a deployment program that would give participants blanket authority to operate

[38] Decision D.16-04-041, at 49.

a fared service anywhere in the State.[39] Instead, they ask the Commission to authorize "sandbox testing" where companies would be able to operate and collect fares only with the explicit approval of a local jurisdiction.[40] Additionally, LADOT, SFMTA and SFCTA request authority to issue data requests directly to AV Service Providers operating in their jurisdictions.[41] CTA, SANDAG, and SFO agree with all the foregoing arguments.[42]

CTA and SFMTA and SFCTA further assert that sandbox testing would allow cities to ensure AVs support state and local transportation goals.[43] They argue that this approach would benefit AV Service Providers because it would promote good will with public agencies and because the partnerships between AV companies and public agencies would demonstrate how AV service can complement local transportation options.[44] The Commission would then be able to evaluate multiple different frameworks for AV deployment which would help in the development of future policy.

AV Service Providers, TechNet, and MADD oppose the sandbox approach, stating that it could create a patchwork of regulations that could conflict, overlap,

[39] LADOT Comments on Questions 2-8, at 8; SFMTA and SFCTA Comments on Questions 2-8, at 7.

[40] SFMTA and SFCTA Comments on Questions 2-8, at 8-9.

[41] LADOT Comments on Questions 2-8, at 3; SFMTA and SFCTA Comments on Questions 2-8, Exhibit A at 5.

[42] CTA Reply Comments on Questions 1-8, at 3; SANDAG Reply Comments on Questions 1-8, at 2; SFO Reply Comments on Questions 1-8, at 2.

[43] CTA Reply Comments on Questions 1-8, at 3; SFMTA and SFCTA Comments on Questions 2-8, at 9.

[44] SFMTA and SFCTA Comments on Questions 2-8, at 11-12.

or duplicate each other.[45] This patchwork, in turn, would increase the regulatory burden and hamper the development of the AV industry.[46] Cruise and Waymo further claim that the sandbox approach would undermine the Commission's authority and responsibility by delegating it to local jurisdictions.[47]

4.3.2. Discussion

The Commission does not adopt the local jurisdiction sandbox approach. We agree with the AV Service Providers, TechNet, and MADD that a sandbox approach could create a patchwork of local regulations that could conflict with each other and complicate cross-municipality transport. Municipalities would obtain a "veto power" that would allow them to set the terms of any AV passenger service within their jurisdiction.

The Commission agrees with CTA and SFMTA and SFCTA that partnerships between AV Service Providers could provide useful examples of ways that AV service can advance equity goals, reduce environmental footprint, and integrate into the local transportation system. The Commission encourages AV Service Providers to work collaboratively with public agencies in the areas they deploy.

4.4. Airport Service

The *December 19, 2019 Ruling* asked whether the Commission should restrict passenger service to, from, and within airports.

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[45] Cruise Reply Comments, at 5; MADD Reply Comments, at 5; TechNet Reply Comments, at pdf p3; Waymo Reply Comments, at 4-5; Zoox Reply Comments, at 8.

[46] Cruise Reply Comments, at 7; MADD Reply Comments, at 3; TechNet Reply Comments, pdf at 2; Waymo Reply Comments, at 6; Zoox Reply Comments, at 7-8.

[47] Waymo Reply Comments, at 4-5; Cruise Reply Comments, at 5.

4.4.1. Comments

Aurora, Lyft, and Waymo argue that the Commission should carry over those same rules for AV deployment.[48] LADOT argues that airports should continue to develop regulations specific to their specific use cases.[49]

SFO disagrees, arguing that AV Service Providers should be banned from airports entirely until the Commission can address issues of terrorism, congestion, and hand non-standard signage (*e.g.*, people waving to direct traffic).[50]

4.4.2. Discussion

Permit holders in all of the Commission's AV programs are banned from operating in airports without the specific authorization of each airport they wish to serve**.**

D.18-05-043 prohibited driverless AV passenger service at airports until certain consumer protection and safety issues are resolved as part of a larger deployment framework.[51] Those issues included assurances that passengers could identify the correct vehicle, plans in event of a collision, AVs' contributions to congestion, and acceptable idling time for the vehicle. This Decision addresses those and other relevant issues. SFO's concerns around terrorism and AVs' ability to interpret hand signals are serious, but the DMV should address those issues as part of its permitting process.

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[48] Aurora Comments on Questions 2-8, at 7; Lyft Comments on Questions 2-8, at 20; Waymo Comments on Questions 2-8, at 11-12.

[49] LADOT Comments on Questions 2-8, at 18.

[50] SFO Opening Comments on Questions 2-8, at 8-9.

[51] D.18-05-043, at 36-37.

Section 3.02 of GO 157-E prohibits TCP operation at airports without authorization from the Commission and the airport itself. This prohibition applies to AV program permit holders**.**

4.5. Goals: General

The December 19, 2019 Ruling asked parties to comment on whether and how the Commission should incorporate goals related to safety, accessibility, equity and environmental justice, city planning, congestion, and the climate and environment into its regulatory framework. The December 19, 2019 Ruling also asked whether and how the Commission should measure progress toward goals in those areas.

4.5.1. Comments

Before addressing specific goals, parties commented on whether the Commission should set goals at all. Certain AV Service Providers, BAC, and TechNet offer several arguments to support their position that the Commission should not adopt goals or targets for its AV programs.

First, they argue that because an AV service has not been able to operate at any sort of scale, it is challenging to establish effective targets that are informed by actual operations of the vehicles.[52] As Waymo argues, the impact of prescriptive targets could be "minimal, or they could be extremely detrimental; it is simply unknown at this time."[53]

[52] Aurora Comments on Question 2-8, at 2; Bay Area Council Comments on Questions 2-8, at 5; Lyft Comments on Questions 2-8, at 5; TechNet Comments on Questions 2-8, pdf at 4.

[53] Waymo Comments on Questions 2-8, at 6. (Waymo's comment specifically referred to goals related to Equity and Environmental Justice, but the argument applies more broadly).

Second, they argue that certain requirements could rely on technology that does not yet exist or would be prohibitively costly to deploy at this time.[54]

Third, multiple parties argue that imposing goals on AV companies alone is inequitable as the Commission does not impose such goals on other transportation carriers.[55] UATC notes that that goals identified by the Commission are appropriate for the transportation system as a whole but that AVs are such a small portion of the transportation ecosystem that the Commission cannot rely on AVs to achieve all of those goals.[56]

Finally, certain parties argue that strict requirements – either individually or in aggregate – could threaten or indefinitely delay the ability of the companies to develop a commercially viable service. If the companies do not have a path to profitable service that operates at scale, they will not be able to provide any mobility services at all.[57]

Conversely, AAA, SFMTA and SFCTA, LADOT, and Sierra Club argue that this is the opportune moment to set goals for the AV programs.[58] While they agree with the AV Service Providers that it is too early to set uniform performance standards for AV service, they assert that it is important to set more detailed goals at the beginning of the program and to allow commercial

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[54] Lyft Comments on Questions 2-8, at 5. (Lyft's comment specifically referred to goals related to accessibility, but the argument applies more broadly).

[55] Aurora Comments on Questions 2-8, at 3; Bay Area Council Comments on Questions 2-8, at 4; TechNet Comments on Questions 2-8, pdf at 4; UATC Comments on Questions 2-8, at 6.

[56] UATC Comments on Questions 2-8, at 6.

[57] Aurora Comments on Questions 2-8, at 2; Lyft Comments on Questions 2-8, at 8; Zoox Comments on Questions 2-8, at 11.

[58] AAA Replies to Questions 1-8, at 4-5; SFMTA and SFCTA Comments on Question 1, at 5; LADOT Comments on Questions 2-8, at 3; LADOT Comments on Questions 2-8, at 3; Sierra Club's Comments on Questions 2-8, at 2.

deployment only when the AV companies can meet those goals. SFMTA and SFCTA argues that the Commission should articulate its goals and expected outcomes now as these goals will be in place for years to come.[59] Sierra Club agrees with SFMTA and SFCTA and further argues that, without a strong regulatory framework now, program participants and aligned stakeholders will fight to keep status quo. [60] Relatedly, CCB notes the technical decisions made at the outset of a program become de facto standards.[61]

4.5.2. Discussion

The Commission agrees with establishing goals for Phase I of the AV deployment programs that reflect the Commission's priorities. The Commission, however, declines at this time to prescribe targets and, instead, establishes reporting requirements that will allow the public to track the maturity of the industry; evaluate the permit holders' progress toward each of the goals; and to understand the permit holders' plans for the future.

The Commission prefers to set goals as guiding principles that will help monitor the maturity of the industry, periodically revise the goals if needed, and to revisit the establishment of targets when the industry is more mature.

The Commission is establishing several ways it will monitor the maturity of the industry in order to determine when it will set targets.

First, the Commission requires each permit holder to submit quarterly data reports that provide metrics to evaluate progress toward each goal and to evaluate the maturity of the industry. For example, AV companies must report

[59] SFMTA and SFCTA Comments on Questions 2-8, at 6.

[60] Sierra Club's Comments on Questions 2-8, at 2.

[61] CCB Opening Comments, at 4

the neighborhood (*i.e.*, census tract), where each trip begins and ends. This information will show which neighborhoods have greatest access to AV service, which will allow stakeholders to evaluate the equity of service.

Any permit holder who claims that any part of the quarterly data reports should not be made publicly available must comply with the requirements set forth in GO 66-D to establish any claims of privilege, confidentiality, or any other grounds that would prevent the information's public dissemination. Absent a determination that the data should be treated as confidential, the public will have the data necessary to evaluate companies' progress toward each goal, including information about fuel and travel distance to calculate environmental impacts; the level of service to different neighborhoods to evaluate equity; the type and volume of accessible rides, and more.

Second, permit holders must describe in their quarterly reports whether and how they have reached out to advocates for accessibility and for disadvantaged, low-income, or underrepresented communities, including the names of specific organizations or individuals so long as those organizations or individuals agree to have their names shared. The permit-holders must describe whether and how they have incorporated the advocates' feedback into their operations. AV companies have argued that, as the industry matures, it will provide increasing benefits to those communities. This reporting will give a continuous record of AV companies' responsiveness to those communities' needs and enable the public to evaluate progress over time.

Third, the Commission will hold workshops to review the state of the Phase I AV deployment programs. These workshops will include discussion about whether and when to set prescriptive targets, rules, or measures for Phase

II or subsequent permanent phases of the AV deployment programs in connection with each of the goals below.

Arguments that the Commission should not impose unique requirements on AV companies are noted, but the Commission regularly adds or removes requirements for specific carriers. For example, TNCs that primarily carry minors face more stringent background check requirements than do TNCs that carry riders over eighteen years old.

4.6. Goals: Vehicle Safety

The *December 19, 2019 Ruling* asked how the Commission should incorporate safety into its program goals. Parties made safety recommendations that can be generally placed into two categories: vehicle safety and passenger safety. This section addresses comments on vehicle safety.

4.6.1. Comments

AAA, Greenlining, LADOT, SANDAG, SFMTA and SFCTA, and SFO argue that the Commission should set road safety standards. SANDAG, SFMTA and SFCTA, and SFO note that the federal government has not developed a safety standard for an AV's driving system and therefore has no standards to enforce. They argue that the Commission and the DMV are the only regulators left with the authority to develop and enforce a safety standard for the automated driving system.[62] They further argue that the current data reporting requirements do not provide enough information to properly evaluate the vehicles' driving ability and that the Commission and the DMV have unique

[62] LADOT Comments on Questions 2-8, at 3-4; SANDAG Reply Comments on Questions 1-8, at 2; SFMTA and SFCTA Comments on Questions 2-8, at 14-16; SFO Reply Comments on Questions 1-8, at 2.

access to that data.[63] Accordingly, SFMTA and SFCTA propose that the Commission adopt a "Street Safety" goal that reads, "AV Passenger Service should improve safety for all road users."[64]

In practice, this would require the Commission to evaluate the vehicles' driving capabilities. SANDAG, SFMTA and SFCTA, and SFO recommend the Commission convene an "Expert Safety Committee" that would determine whether each applicant's vehicles are safer drivers than a typical human driver.[65] AAA broadly agrees.[66] The Committee would then issue a public report explaining how it reviewed the application.[67] Greenlining agrees and adds that the Commission should ensure that AVs can recognize pedestrians and bicyclists, bringing attention to studies that show AVs have a harder time detecting people with darker skin than people with lighter skin. [68] LADOT also supports public review of the safety plans.[69]

AV Service Providers suggest the Commission not adopt additional goals or regulations related to the safety of the vehicle or its driving system. They argue the DMV has already established comprehensive standards to ensure the vehicles can drive safely and that the federal government has responsibility for

[63] SANDAG Reply Comments on Questions 1-8, at p2; SFMTA and SFCTA Comments on Questions 2-8, at 16-19; SFO Reply Comments on Questions 1-8, at 2.

[64] SANDAG Reply Comments on Questions 1-8, at p2; SFMTA and SFCTA Comments on Questions 2-8, at 13; SFO Reply Comments on Questions 1-8, at 2.

[65] SANDAG Reply Comments on Questions 1-8, at p2; SFMTA and SFCTA Comments on Questions 2-8, at 14-15; SFO Reply Comments on Questions 1-8, at 2.

[66] AAA Reply Comment son Questions 1-8, at 5.

[67] *Ibid.*

[68] Greenlining Comments on Questions 2-8, at 4; LADOT Comments on Questions 2-8, at 4.

[69] LADOT Comments on Questions 2-8, at 4.

the safety of the vehicle itself.[70] They contend that any Commission action related to vehicle safety would be unnecessary, redundant, and would create jurisdictional confusion. Aurora, Cruise, and Lyft argue that, instead of vehicle safety, the Commission should focus exclusively on passenger safety.[71]

4.6.2. Discussion

The Commission declines to adopt a "Street Safety" goal for Phase I that exclusively addresses the vehicle's automated driving system and its ability to perform the dynamic driving task.

The Commission reaches this conclusion because vehicle safety is currently addressed by another State agency. To receive any autonomous vehicle permit from the Commission, the applicant must first obtain a DMV AV Testing Permit or DMV AV Deployment Permit. To obtain either a DMV AV Testing Permit or DMV AV Deployment Permit, applicants must demonstrate that their vehicle meets the description of Level 4 or Level 5 autonomy under Society of Automotive Engineer International's "Taxonomy and Definitions for Terms Related to Driving Automation Systems for On-Road Motor Vehicles."[72] Thus, the DMV is the appropriate authority to evaluate and affirm through the permit process the AVs' capability to perform the dynamic driving task.

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[70] Aurora Comments on Questions 2-8, at 3; Bay Area Council Comments on Questions 2-8, at 6; Cruise Comments on Questions 2-8, at 4-5; Lyft Comments on Questions 2-8, p3; SVLG, Comments on Questions 2-8; pdf at 3; TechNet, Comments on Questions 2-8, pdf at 4; UATC Comments on Question 1, at 8; Waymo, Comments on Questions 2-8, at 4; Zoox, Comments on Questions 2-8, at 5.

[71] Aurora Comments on Questions 2-8, at 8; Cruise Comments on Questions 2-8, at 5; Lyft Comments on Questions 2-8, at 3.

[72] *See* 13 CCR § 227.38 for testing permits and 13 CCR § 228.06 for deployment permits.

4.7. Goals: Passenger Safety and Consumer Protection

As noted above, the December 19, 2019 Ruling asked how the Commission should incorporate safety into its program goals. Parties made safety recommendations that can be generally placed into two categories: vehicle safety and passenger safety. This section also addresses five questions posed in the December 19, 2019 Ruling related to passenger safety. These include whether the Commission should authorize permit holders to carry minors; whether the Commission should impose any safety requirements specific to shared rides; whether the Commission should require permit holders to provide certain information to passengers in driverless AVs; whether the Commission should require permit holders to put unique identifiers on their driverless vehicles; and whether the Commission should require a continuous two-way link between the passengers and the permit holders.

4.7.1. Comments

SANDAG, SFMTA and SFCTA, and SFO propose a "Personal Safety Goal:" *"AV Passenger Service should ensure personal safety for all passengers, especially vulnerable passengers."*[73] (italics added) As discussed in [Section #] of this Decision, driverless rides – especially shared driverless rides – raise new passenger safety issues. Accordingly, multiple parties encourage the Commission to adopt clear policies to protect the safety of passengers in driverless vehicles, particularly where multiple parties unknown to each other share a ride.[74] Cruise proposes that

[73] SANDAG Reply Comments on Questions 1-8, at 2; SFMTA and SFCTA Comments on Questions 2-8, at 20; SFO Reply Comments on Questions 1-8, at 2.

[74] CCB Comments on Question 1, at 5; SFMTA and SFCTA Comments on Questions 2-8, at 20-21; Greenlining Comments on Questions 2-8, at 13.

the Commission "request that pilot participants submit a general overview and plan of how the participant would address passenger safety in shared driverless rides."[75] SANDAG, SFMTA and SFCTA, and SFO similarly propose the Commission should require applicants to submit a Passenger Safety Plan that details how an AV passenger service applicant plans to protect the personal safety of passengers.[76]

SFMTA and SFCTA argue the Passenger Safety Plan should "[demonstrate] conscientious efforts and reasonable methods to minimize passenger safety risks that can be reasonably anticipated and to respond appropriately to reported incidents."[77] Additionally, they ask companies to "describe institutional capacity to continue receiving and incorporating feedback from disabled passengers and responding to complaints of discrimination or abuse."[78]

Other parties raise specific questions that could fall under the umbrella of a Passenger Safety Plan. AAA argues the Commission should adopt passenger safety goals modeled after the safety requirements of other transportation modes without attendants.[79] CCB requests AV companies indicate whether and how remote operators will provide safety services both to the general public and to

[75] Cruise Comments on Questions 2-8, at 22.

[76] SANDAG Reply Comments on Questions 1-8, at p2; SFMTA and SFCTA Comments on Questions 2-8, at 21; SFO Reply Comments on Questions 1-8, at 2.

[77] SFMTA and SFCTA Comments on Questions 2-8, Exhibit B, at 2.

[78] SFMTA and SFCTA Comments on Questions 2-8, at 28.

[79] AAA Reply Comments on Questions 1-8, 5-6.

riders with disabilities.[80] SFMTA and SFCTA and Greenlining emphasize that any plan to protect passenger safety should address the needs of populations particularly vulnerable to harassment such as women, people of color, immigrants, LGBTQ, and other groups.[81]

SFMTA and SFCTA argue that parties should have opportunity to review and comment on each applicant's Passenger Safety Plan before the Commission issues a permit and that the Commission should require revisions if the public review identifies deficiencies in the Passenger Safety Plan.[82] SANDAG and SFO agree.[83]

No party specifically advocates for the Commission to adopt rules related to the transport of minors: most parties ignored the question, and those that responded were mostly neutral. Waymo and Zoox argue that the Commission should address this issue in the future, not at this time.[84] Lyft does not oppose the Commission developing rules for AV passenger service to accommodate minors.[85] Similarly, SFO does not oppose the development of rules but notes

[80] CCB Comments on Question 1, at 6. ("[We] assume it is the intent of the service providers that driverless AV remote operators may play a role in providing such safety assurance, but this needs to be made clear, especially in light of the issues discussed below regarding two-way communication between passengers and the remote operator. The Commission should require detail regarding how this matter will be addressed.")

[81] SFMTA and SFCTA, Questions 2-8, at 21-22; Greenlining Comments on Questions 2-8, at 4.

[82] SFMTA and SFCTA Comments on Questions 2-8, at 21-22.

[83] SANDAG Reply Comments on Questions 1-8, at 2; SFO Reply Comments on Questions 1-8, at 2.

[84] Waymo Comments on Questions 2-8, at 12-13; Zoox Comments on Questions 2-8, at 21.

[85] Lyft Comments on Questions 2-8, at 21.

that the Commission should include advanced protections for potentially vulnerable occupants.[86]

Parties are generally in favor of trade dress or other unique identifiers that enable passengers to identify their vehicles but disagree on the level of prescriptiveness of these requirements. SFO and SFTWA argue that unique identifying information should be made available on each AV to enable passengers to identify the vehicle that should pick them up.[87] CCB agrees, adding that such information "should be in one or more formats as may be necessary to ensure timely accessibility to all passengers."[88] SFMTA and SFCTA agree, arguing further that the information should be available both inside and outside the vehicle.

Lyft argues that the Commission should adopt the requirements that apply to TNCs, namely that the company provide a photo of the vehicle and its license plate number.[89] They further argue that the Commission should allow AV companies to experiment with other forms of vehicle identification and that the Commission should not prescribe any additional requirements. Zoox agrees.[90]

Cruise encourages the Commission to allow vehicle identification to be "in the form of a name instead of a number and allow car wrapping or decals that replace the requirement to display a TCP number."[91] Cruise argues that this will

[86] SFO Comments on Questions 2-8, at 10.

[87] SFO Comments on Questions 2-8, at 11; Comments on Questions 2-8, at 12.

[88] CCB, Comments on Questions 2-8, at 6.

[89] Lyft Comments on Questions 2-8, at 22.

[90] Zoox Comments on Questions 2-8, at 22.

[91] Cruise Comments on Questions 2-8, at 21.

allow passengers to better spot their vehicles because names or other car wrappings are easier to recognize than numbers.[92]

AAA argues that the vehicles should have labels that clearly state the name of the service provider and also clearly indicate that vehicles are autonomous.[93] GO 157-E current requires TCP permit holders to assign a unique number to each of its vehicles and for each vehicle to prominently display both its unique car number along with the permit holder's TCP number.[94]

4.7.2. Discussion

The Commission adopts the goal to "Protect passenger safety." This is akin to the Personal Safety Goal proposed by the SFMTA and SFCTA but does not identify any specific groups. The Commission protects the safety of all customers without preference or exception. The Commission recognizes, however, that certain groups will require safety practices and procedures tied to their individual needs.

Each applicant for a Phase I Driverless Permit or a Phase I Driverless Deployment Permit must submit a Passenger Safety Plan that describes their policies and procedures to minimize risk for all passengers in their driverless vehicles. The Passenger Safety Plan must, at minimum, detail how the applicant will: minimize safety risks to passengers traveling in a ride operated without a driver in the vehicle; minimize safety risks to passengers traveling in a shared, driverless ride, including prevention and response to assaults and harassments;

[92] Cruise Comments on Questions 2-8, at 22.

[93] AAA Reply Comments on Questions 1-8, at 3.

[94] General Order 157-E, Sections 4.03 and 4.04.

respond to unsafe scenarios outside and within the vehicle, such as hostile individuals; educate and orient passengers about the technology, experience, and safety procedures; ensure customers can safely identify, enter, and exit the AV they requested; enable passengers to contact the AV service provider during the ride and to ensure the passengers receive a timely and complete response; collect, respond to, and retain any passenger comments and complaints; and ensure the safety measures described above are accessible to and apply to all passengers, including those with limited mobility, vision impairments, or other disabilities. The Passenger Safety Plan must include the anticipated response time for when a passenger requests to contact the AV company. The Passenger Safety Plan must also include a written COVID-19 Emergency Plan consistent with the requirements by imposed on TCP permit-holders by Commission Resolution TL-19131. As required in Resolution TL-19131, the permit-holders must follow the CDC guidelines and the CDPH Guidance on preventing the transmission of COVID-19, and any revisions and/or updates to those guidelines, as practicable.

Requiring applicants to provide a detailed Passenger Safety Plan tailored to their technology and business model, and making that plan available for public review and comment, will enable parties to lend their expertise, ensure transparency in decision-making, and establish a public document against which the applicant's actions will be compared.

The Commission currently prohibits the transport of unaccompanied minors in autonomous vehicle passenger service. This prohibition will continue, and may be addressed at a later date.

4.8. Goals: Accessibility

The *December 19, 2019 Ruling* asked how the Commission should define accessibility; whether the definition of accessibility should apply to many demographics; how the Commission should incorporate accessibility into its program goals; how the Commission should evaluate progress toward those goals and whether the Commission should adopt the evaluation framework established in Rulemaking (R.) 19-02-012; and if the Commission should impose certain training requirements on manually-driven wheelchair accessible vehicles.[95]

4.8.1. Comments

Most parties support adopting a broad and inclusive definition of accessibility but argue for different levels of prescriptiveness for goals. LADOT argues that this proceeding is not a forum to develop a definition of accessibility and that affected communities can best describe their mobility needs. Instead of developing a definition, LADOT suggests the Commission require AV companies to meet a "universal design" standard. Under universal design standards, the entire service would be accessible to anyone without requiring any modifications.[96] CTA, SANDAG, SFMTA and SFCTA, and SFO agree, stating that universal design benefits everyone, not just persons with disabilities.[97] LADOT argues that universal design standards should be set

[95] December 19, 2019 Ruling, at 3.

[96] LADOT Comments on Questions 2-8, at 5.

[97] CTA Reply Comments on Questions 1-8, at 5; SANDAG Reply Comments on Questions 1-8, at 2; SFMTA and SFCTA Comments on Questions 2-8, at 29; SFO Reply Comments on Questions 1-8, at 2.

upfront to avoid significant costs of time of money for retrofitting.[98] Accordingly, SFMTA and SFCTA propose the goal that "AV Passenger Service should provide equivalent service to people with disabilities, including people using wheelchairs."[99] SANDAG and SFO agree.[100] LA Metro agrees with the positions outlined by CTA, LADOT, SFMTA and SFCTA.[101] Greenlining defines accessible service as affordable to low-income people, allows cash payments, and allows customers to book rides in ways that don't require a smartphone or internet. CCB suggest the Commission and AV companies should engage with disability advocates and the community itself to help define accessibility.[102]

LADOT argues that companies should be required to submit accessibility plans as a condition to participate in either a pilot or deployment program.[103]

AV Service Providers and SVLG agree with SFMTA and SFCTA that the Commission should adopt an inclusive definition of accessibility, but they argue the Commission should avoid prescriptive goals.[104] They argue that detailed requirements can discourage innovation in new accessibility services and delay the development of the overall industry.[105] As an alternative, Cruise suggests the

[98] LADOT Comments on Questions 2-8, at 6.

[99] SFMTA and SFCTA Comments on Questions 2-8, at 26.

[100] SANDAG Reply Comments on Questions 1-8, at p2; SFO Reply Comments on Questions 1-8, at 2.

[101] LA Metro Reply Comments on Question 1-8, at 3.

[102] CCB Comments on Questions 2-8, at 4.

[103] LADOT Comments on Questions 2-8, at 7.

[104] Aurora Comments on Questions 2-8, at 4; Cruise Comments on Questions 2-8, at 6; Lyft Comments on Questions 2-8, at 5; SVLG Comments on Questions 2-8; pdf at 4; Waymo Comments on Questions 2-8; pdf at 4.

[105] Cruise Comments on Questions 2-8, at 8.

Commission create an incentive for innovation rather than mandating specific solutions or requiring modifications to existing service and point to Senate Bill (SB) 1376 as an example.[106] Aurora highlights that the industry is taking proactive steps to educate and serve passengers with disabilities.[107]

Cruise asserts that it is premature to establish training requirements for wheelchair operators for it has not yet been determined that the WAVs would be manually driven.[108]

4.8.2. Discussion

The Commission adopts the goal to Expand the benefits of AV technologies to all of California's communities, including people with disabilities, and elects not to define "accessibility" at this time. The Commission agrees that any definition of accessibility should remain broad and inclusive to make clear that the Commission intends to expand the benefits of AV technologies to all communities and demographics. This includes, but is not limited to, people who need a WAV, people who are blind, people with other disabilities, and people without access to the internet or smartphones.

4.9. Goal: Equity and Environmental Justice

The December 19, 2019 Ruling asked how the Commission should incorporate equity and environmental justice into its program goals.

4.9.1. Comments

Multiple parties emphasize the importance of ensuring the benefits of AV passenger service are available to all of California's communities including

[106] Cruise Comments on Questions 2-8, at 8.

[107] Aurora Comments on Questions 2-8, at 4.

[108] Cruise Comments on Questions 2-8, at 8.

disadvantaged and low-income communities. They reference state law, the Commission's Environmental and Social Justice Action Plan (ESJ Action Plan), and basic principles of equity.

SFMTA and SFCTA along with LADOT argue that, unless the Commission adopts environmental justice goals, profit-driven business models may leave disadvantaged communities behind.[109] UC Davis and LADOT emphasize that even though disadvantaged communities are the communities that could benefit most from improved transportation options, they are the most likely to suffer environmental consequences from transportation operations.[110] Sierra Club agrees.[111]

SFMTA and SFCTA note that the Commission has adopted an ESJ Action Plan that establishes several objectives related to transportation.[112] In the ESJ Action Plan, the Commission states its intent to "promote equitable transportation services regulated by the CPUC; encourage greater utilization of Zero Emission Vehicles (ZEVs) by TNCs within ESJ communities, with a focus on communities that have been underserved by existing transportation options; and encourage that autonomous vehicles be available in disadvantaged communities. [113]

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[109] SFMTA and SFCTA Comments on Questions 2-8, at 33-34; LADOT Comments on Questions 2-8, at 7-8.

[110] LADOT Comments on Questions 2-8, at 7-8; UC Davis Comments on Questions 2-8, at 7-11.

[111] Sierra Club Comments on Questions 2-8, at 4-5.

[112] SFMTA and SFCTA Comments on Questions 2-8, at 33-34.

[113] CPUC Environmental and Social Justice Action Plan, at 16-17. As of publishing, the Action Plan is available at https://www.cpuc.ca.gov/uploadedFiles/CPUCWebsite/Content/UtilitiesIndustries/Energy/EnergyPrograms/Infrastructure/DC/Env%20and%20Social%20Justice%20ActionPlan_%202019-02-21.docx.pdf.

Accordingly, SFMTA and SFCTA propose the goal that "AV Passenger Service should prevent negative impacts on disadvantaged communities and improve transportation options for all, giving priority to disadvantaged communities with unmet transportation needs."[114] SANDAG and SFO support this goal.[115]

While Waymo argues that it is too early to set prescriptive equity goals, they assert that authorizing fare collection encourages companies to expand their service more broadly, including to low-income communities. Waymo gives the example of a partnership they formed with a transit agency in Arizona to provide first- and last-mile service to groups underserved by public transit.[116]

4.9.2. Discussion

The Commission adopts the *equity* goal to "Improve transportation options for all, particularly for disadvantaged and low-income communities." The *environmental justice* goal is addressed by ensuring that disadvantaged communities have preferential access to the greenhouse gas and air quality benefits of AVs. The latter goal is addressed more fully in the following section on "Environmental and Climate Impacts."

Parties are correct to highlight that the Commission already recognizes the many burdens faced by DACs including a lack of access to transit options and a disproportionate share of the environmental and health burdens caused by transportation services like particulate emissions from passenger vehicles. As noted in Goal #2 of the ESJ Action Plan, the Commission aims to improve the

[114] SFMTA and SFCTA Comments on Questions 2-8, at 29.

[115] SANDAG Reply Comments on Questions 1-8, at p2; SFO Reply Comments on Questions 1-8, at 2.

[116] Waymo Comments on Question 1, at 8.

local air quality (*i.e.,* criteria pollutants and air toxics) and public health in disadvantaged communities.[117] AVs may be an important service to reduce these burdens.

The Commission will collect data to evaluate progress toward this goal including the census tracts in which trips begin and end; the volume and frequency of shared rides in each neighborhood; and narrative descriptions of each permit holder's outreach activities. These data are discussed in more depth in [Section #] of this Decision.

As discussed above, it is too soon for the Commission to set uniform equity targets. Companies will operate under different business models and at different scales. Some companies have stated they intend to provide broad market ride hailing services while other companies focus exclusively on shuttle services for single communities. As the market matures, the Commission can reconsider if and when to impose uniform equity targets.

4.10. Goal: Environmental and Climate Impacts

The December 19, 2019 Ruling asked how the Commission should incorporate environmental and climate concerns into its program goals; whether it should establish fleet-level requirements for AV companies in coordination with Senate Bill 1014; and whether and how it should incorporate goals from key transportation and climate legislation into its program goals.

4.10.1. Comments

There is general agreement that AVs hold the potential to reduce the environmental footprint of passenger transportation and reduce street congestion among other benefits. Yet multiple parties note that AVs could harm

[117] ESJ Action Plan, at 6.

the environment and worsen congestion by adding cars to the road and increasing the amount of single-occupancy, long distance trips.[118]

AAA, LADOT, SFMTA and SFCTA, and Sierra Club all agree that the Commission must take action to prioritize the potential benefits of AVs and mitigate potential negative consequences.[119] LADOT, SFMTA and SFCTA, and Sierra Club point to legislation that established the State's environmental and transportation goals and argue that the Commission is compelled to adopt goals that advance the objectives of those laws.[120] AAA and UC Davis encourage the Commission to adopt principles outlined in "Automated Vehicle Principles for Healthy and Sustainable Communities."[121] LADOT encourages the Commission to adopt the goals established by Assembly Bill (AB) 32, SB 32, SB 350, SB 375, and SB 1014 and therefore focus on AVs' ability to encourage electric vehicle (EV) adoption and reduce vehicle miles traveled (VMT).[122]

Accordingly, SFMTA and SFCTA propose the Commission adopt the goal that "AV Passenger Service should reduce GHG and air quality hazards in California," and adopt two objectives underneath that goal: first, AVs should help California reduce VMT and support other modes of travel; second, AVs

[118] CTA Comments on Questions 2-8, at 4; Sierra Club Comments on Questions 2-8, at 5.

[119] AAA Reply Comments on Questions 1-8, at 4; LADOT Comments on Questions 2-8, at 9; SFMTA and SFCTA Comments on Question 1, at 3-5; Sierra Club Comments on Questions 2-8, at 1-2.

[120] LADOT Comments on Questions 2-8, at 9; SFMTA and SFCTA Comments on Questions 2-8, at 22; Sierra Club Comments on Questions 2-8, at 7-9;

[121] AAA Reply Comments on Questions 1-8, at 6; UC Davis Comments on Questions 2-8, at 11.

[122] LADOT Comments on Questions 2-8, at 10.

should help California reach its EV adoption targets.[123] SANDAG and SFO agree.[124]

Relatedly, SFMTA and SFCTA also advocate for AV Service Providers to adopt ZEVs. [125] They argue that applicants to the deployment programs should demonstrate that a reasonable portion of their AVs are ZEVs and submit a timeline to reach a full ZEV fleet.

Greenlining, Sierra Club and UC Davis also focus on EVs.[126] They assert that it is necessary to transition AV fleets to electric, shared vehicles as quickly as possible. Sierra Club encourages the Commission to require each AV company to adopt a 100% shared, zero emission fleet and to do "much sooner than the traditional vehicles subject to the Clean Miles Standard."[127] LADOT agrees that the Commission should hold AV companies to a standard more stringent than the Clean Miles Standard.[128] Greenlining argues that AV companies should electrify their entire fleet and bear the full cost of that electrification themselves.[129]

AV Service Providers argue that the Commission should not adopt specific mandates. Lyft asserts that there is a limited number of platforms available for companies to test AV technology, and not all of them are electric. Accordingly,

[123] SFMTA and SFCTA Comments on Questions 2-8, Exhibit A at 4.

[124] SANDAG Reply Comments on Questions 1-8, at p2; SFO Reply Comments on Questions 1-8, at 2.

[125] SFMTA and SFCTA Comments on Questions 2-8, at 26.

[126] Greenlining Comments on Questions 2-8, at 12; Sierra Club Comments on Questions 2-8, at 7; UC Davis Comments on Questions 2-8, at 15.

[127] Sierra Club Comments on Questions 2-8, at 7.

[128] LADOT Comments on Questions 2-8, at 10.

[129] Greenlining Comments on Questions 2-8, at 11.

mandating the use of EVs could limit the options companies can use to develop AV technology which could complicate and delay the technology advancement.[130] Waymo and Zoox support the deployment of EVs but argue that the Commission can best support ZEVs by authorizing the buildout of ZEV infrastructure.[131] They argue that the CPUC should address these issues in its Transportation Electrification proceeding, R.18-12-006.[132]

Cruise also voices support for EV, noting that their fleet is entirely electric.[133] They support policies that promote electric vehicles, noting that EVs provide a dual benefit of zero-emission transportation combined with the vehicles' ability to serve as energy storage.[134] Even so, Cruise argues against setting environmental targets in this proceeding as it would likely duplicate or confuse the environmental targets established in other proceedings overseen by other agencies.[135] Similarly, Lyft emphasizes the value of electric fleets and encourages the Commission to support policies that incent electrification of fleet vehicles and to increase access to subsidies for ZEVs.[136]

4.10.2. Discussion

The Commission adopts the goal to "Reduce greenhouse gas emissions, criteria air pollutants, and toxic air contaminants, particularly in Disadvantaged Communities." As discussed above, at this time it is challenging for the

[130] Lyft Comments on Questions 2-8, at 10.

[131] Waymo Comments on Questions 2-8, at 8; Zoox Reply Comments on Questions 1-8, at 12-13.

[132] Waymo Comments on Questions 2-8, at 8; Zoox Reply Comments on Questions 1-8, at 12-13.

[133] Cruise Comments on Questions 2-8, at 2.

[134] Cruise Comments on Questions 2-8, at 13-14.

[135] Cruise Comments on Questions 2-8, at 14.

[136] Lyft Comments on Questions 2-8, at 9.

Commission to set uniform, informed, and effective targets. Accordingly, the Commission will not adopt the sub-goals proposed by SFMTA and SFCTA related to reducing vehicle miles traveled (VMT) and promoting EV adoption as the challenges associated with mandating ZEV adoption are analogous to the challenges with mandating WAV adoption. For the same reasons, the Commission will not formally adopt goals outlined in SB 32, AB 32, SB 350, SB 1014, SB 1376, or SB 375.

Stakeholders are right to highlight the common threads between the laws and regulations discussed above: reducing greenhouse gas emissions, reducing VMT, and improving fleet efficiency. Furthermore, as noted in prior section on Equity and Environmental Justice, the Commission aims to reduce the criteria pollutants and air toxics associated with energy production and transportation, particularly in disadvantaged communities. The goals above boil down to reducing greenhouse gases, reducing criteria pollutants, and reducing toxic air contaminants, and these objectives are reflected in the goal adopted above.

The goals and metrics associated with the laws discussed above will inform the data the Commission will collect in each set of quarterly reports. They will collect information on total vehicle miles traveled, the sum of all the distance that individual travels traveled (*i.e.*, passenger miles traveled), the vehicles' drivetrains, and the volume of shared rides. These data are discussed in more depth in 4.12 of this Decision.

Shared rides have potential to reduce VMT, reduce congestion, and lower fares for service. The viability of shared rides, however, depends on the scale of operations and each company's business model. The quarterly data reports for the pilot programs show that, during the testing phase, initial operations have

deployed non-ZEVs on the road. This may continue to be the case until AV services mature and expand. SB 1014 may set emissions standards for AV companies in addition to TNCs.

4.11. Goal: City Operations & Planning and Congestion, Traffic, Curb Use, & Public Transit

The December 19, 2019 Ruling asked whether the Commission should adopt goals related to city operations and planning into its regulatory framework and whether it should evaluate AVs' impacts on congestion, traffic, curb use, and public transit. No parties support the Commission's direct involvement in developing policies related to city planning and operations, but several parties encourage the Commission to evaluate AVs' impacts on congestion, traffic, and curb use or at least collect the data necessary for such analysis.

4.11.1. Comments

CTA, Greenlining, LA Metro, and UC Davis support policies that collect data that help understand the effect of AVs on congestion, traffic, curb use, and public transit.[137] However, they do not think that the Commission is the right entity to establish those policies.[138] They state that the Commission should not adopt its own goals related to city planning and operations, congestion, and traffic but should instead work with local governments to address these issues.[139] They argue that the local governments are the appropriate entities to address

[137] Greenlining Questions 2-8, at 10; UC Davis Comments on Questions 2-8, at 12-13.

[138] *Ibid.*

[139] *Ibid.*

these issues but that the Commission should provide the local governments with the enforcement power and data they need to make their own policy decisions.[140]

Lyft opposes the Commission evaluating traffic impacts, arguing that it is too early to evaluate AVs' as they are not yet deployed at scale.[141] Waymo and Zoox argue against the Commission adopting goals related to city operations and planning or congestion, stating that the Commission should not serve as an intermediary for other government entities.[142]

4.11.2. Discussion

The Commission will not adopt goals related to city operations and planning or congestion, traffic, curb use, and public transit at this time but will collect data that could inform those operations for Phase II or subsequent phases of the AV deployment programs. This Decision focuses on broader-scale questions around commercial deployment of AVs, and city operations and planning require granular knowledge of a specific city. In Phase II or subsequent phases of the AV deployment programs, as AV companies begin further deployment, the Commission and local governments will have more visibility into the impacts of AVs on local streets based on the data collected in Phase I.

The Commission will collect data in Phase I to help public stakeholders evaluate the impact of AVs on their streets including the census tract in which trips begin and end, vehicle miles traveled, and passenger miles traveled. These data are discussed in more depth in 4.12 of this decision.

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[140] Greenlining Comments on Question 2-8, at 10; LADOT Comments on Questions 2-8, at 8; SFMTC Comments on Questions 2-8, at 5-6; SFMTA and SFCTA Comments on Questions 2-8, Exhibit A, at 4; UC Davis Comments on Questions 2-8, at 11.

[141] Lyft Comments on Questions 2-8, at 9.

[142] Waymo Comments on Questions 2-8, at 7; Zoox Comments on Questions 2-8, at 12-13.

4.12. Data Reporting Requirements: AV Operations

The December 19, 2019 Ruling asked parties to comment on whether and how the Commission should track progress toward each of its goals; what data, quantitative or qualitative, the Commission needs to collect to measure progress; whether and with whom the data should be shared; and the best entity to collect, manage, analyze, and share any data.

4.12.1. Comments

AV Service Providers along with BAC, CCC, SVLG, and TechNet argue the Commission should not collect any more data about AV operations than it currently does. First, they argue there are statutory restrictions on the collection of geolocation data.[143] Second, they argue collecting and sharing information could put at risk detailed personal information about riders.[144] Third, parties cite studies stating that datasets of transportation data can be used to identify individual riders.[145] Cruise cites a study that data gathered from a small number of trips can be used to identify individual riders.[146] Waymo notes that the risk of revealing passengers' personal information grows higher when the Commission collects more granular data.[147] Relatedly, they assert that expanded data collection might deter customers from taking rides due to privacy concerns.[148]

[143] Cruise Comments on Question 1, at 14-15; SVLG Comments on Question 1, at 5; Cruise also argues that personal information and geolocation data are private and protected by the California Consumer Privacy Act. Cruise Comments on Question 1, at 15.

[144] Cruise Comments on Question 1, at 15-16.

[145] Aurora Comments on Questions 2-8, at 5; UATC Comments on Question 1, at 9.

[146] Cruise Comments on Questions 1, at 17-18;

[147] Waymo Comments on Question 1, at 13.

[148] Aurora Comments on Questions 2-8, at 5; Bay Area Council Comments on Question 1, at 5.

Fourth, they argue that data collection risks the exposure of trade secrets.[149] Fifth, they argue that sensitive data such trade secrets or personally identifying information can be stolen, leaked, or otherwise inadvertently disclosed.[150] Sixth and finally, UATC argues that data collection would "foist a severe burden on AV developers and operators."[151] Aurora states that any data collection the Commission does undertake should be grounded in specific policy goals.[152]

Greenlining, SFO, SFMTA and SFCTA, SFMTC, Sierra Club, and UC Davis all argue that the Commission should expand its data collection to include detailed information about AV operations including the locations of pick-ups and drop-offs or at least whether the pick-up or drop-off site is located in a DAC.[153]

Multiple parties highlight the benefits of collecting location data to understand the impacts of AVs' operations on the environment, equity, and traffic patterns. As Greenlining and Sierra Club note, location data can be used to determine the level of service and the comparative environmental impact of AVs on DACs.[154] While SFMTA and SFCTA prefer that the Commission collect exact location data, they suggest that census tract-level data[155] could serve as a

[149] Aurora Comments on Questions 2-8, at 5; Cruise Comments on Questions 1, at 21.

[150] Cruise Comments on Question 1, at 16.

[151] UATC Comments on Question 1, at 9.

[152] Aurora Comments on Question 2-8, at 4.

[153] Greenlining Comments on Questions 2-8, at 12; SFO Comments on Questions 2-8, at 2-3; SFMTC Comments on Questions 2-8, at 7-8; SFMTA and SFCTA Reply Comments, at 19.

[154] Greenlining Comments on Questions 2-8, at 12; Sierra Club's Comments on Questions 2-8, at 5.

[155] The US Census Bureau describes census tracts as "small, relatively permanent geographic entities within counties (or the statistical equivalents of counties) delineated by a committee of

starting point.[156] SFO argues for even more detailed data, requesting real-time data about the vehicles' speed and location; the number of shared rides; aggregated data about fares changed to customers; and require AV companies to document each "close call" (*i.e.*, barely-averted accident) with a standardized form describing the incident.[157]

4.12.2. Discussion

As a starting point, the Commission will require companies to report where each trip started and ended by census tract and by zip code. The purpose of gathering this information is to evaluate equity of service by identifying which demographics have access to AV service and which do not. This is an important metric for the Commission's goal to improve transportation options for all, especially for DACs and low-income communities. While the Commission declines to set specific equity targets at this time, it is important to evaluate equity of service to understand gaps and inform future policy. As CPED receives

local data users. Generally, census tracts have between 2,500 and 8,000 residents and boundaries that follow visible features."
https://www2.census.gov/geo/pdfs/reference/GARM/Ch10GARM.pdf

The Census Bureau provides maps of all the census tracts at https://www.census.gov/geographies/reference-maps/2010/geo/2010-census-tract-maps.html.

California uses census tracts for many administrative purposes, one of which is to identify "Disadvantaged Communities." The Office of Environmental Health Hazard Assessment, part of the Air Resources board, maintains the definition of Disadvantaged Communities as well as an interactive map of the census tracts in California. Those documents are available here: https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-30.

[156] SFMTA and SFCTA Reply Comments, at 19. ("As a starting point we suggest adding data fields for census tract level information wherever location information is needed.")

[157] SFO Comments on Questions 2-8, at 2-3.

and analyzes the locational data by census tract and by zip code, it will decide whether AV companies should provide more granular trip data.

Relatedly, the Commission will collect the time at which each ride begins and ends. This data is important to understand whether AVs alleviate or contribute to traffic, the availability and uptake of the service at different times of day, and more.

Separately, the number of trips provided in passenger service is a metric for the growth of the industry so this data will help the Commission understand the industry's progress toward a commercially viable service. For now, the Commission will not collect information about the actual fares.

No party has offered factual support for the proposition that data collection will reduce customers' interest in the service. The Commission currently collects from TNCs much of the same data proposed for collection from AV companies yet no evidence has been presented to support claims of a chilling effect on consumers' willingness to use TNC service.

In each of these cases, the Commission is mindful of privacy concerns. Cruise cites studies that discuss the risks of sharing location data assumed that the *exact* location of a customer was collected; however, census tracts are far more general.

In deciding to require the production of census tract-level data, the Commission rejects the AV Service Providers' position that either the California Electronic Communications Privacy Act (CalECPA) or the California Consumer Privacy Act (CCPA), prevents the Commission from collecting this data at either the census tract level or with greater granularity which would include the exact pick up and drop off locations.

CalECPA

Enacted by Senate Bill 178 and effective January 1, 2016, CalECPA is part of the California Penal Code covering criminal proceedings. CalECPA restricts access by a government entity (*i.e.* a "department or agency of the state or a political subdivision thereof, or an individual acting for or on behalf of the state or a political subdivision thereof") to electronic information without a warrant or wiretap order.[158] California Penal Code § 1546.1(a) prohibits government entities from (1) compelling the production of or access to electronic communication information from a service provider, (2) compelling the production of or access to electronic device information from any person or entity other than the authorized possessor of the device, and (3) accessing electronic device information by means of physical interaction or electronic communication with the electronic device.[159] There are some exceptions to these prohibitions in the form of warrants, subpoenas, and other investigatory tools.[160] CalECPA, to a large extent, mirrors the federal ECPA statute,[161] which amended title III of the Omnibus Crime Control and Safe Streets Act of 1968—the Federal Wiretap law—to protect against the unauthorized interception of electronic communications.[162] While the federal ECPA has been amended over the years, its fundamental

[158] OLC letter to Honorable Jacquie Irwin, August 1, 2019, https://cdn.theatlantic.com/assets/media/files/calecpa_dockless_mobility_provider_lc_opinion_(2).pdf at 1.

[159] Cal. Pen. Code § 1546.1(a)

[160] Cal. Pen. Code § 1546.1(b) and (c).

[161] *See* 18 U.S.C. §§ 2701 *et seq*.

[162] Following the Supreme Court case of *Berger v. New York* (1967) 388 U.S. 41, Congress enacted the Federal Wiretap Act, which includes §§ 2510-2522 of Title 18 of the United States Code.

purpose has been to protect individuals from unauthorized governmental law enforcement surveillance.[163]

That same purpose in protecting individuals from unauthorized law enforcement intrusions is at the heart of CalECPA. SB 178's author, then Senator Mark Leno, explained the reason for proposing this legislation:

SB 178 updates existing federal and California statutory law for the digital age and codifies federal and state constitutional rights to privacy and free speech by instituting a clear, uniform warrant rule for *California law enforcement access* to electronic information, including data from personal electronic devices, e-mails, digital documents, text messages, metadata, and location information. (*Italics* added.)

The impetus behind SB 178 was two United States Supreme Court decisions that involved search and seizure rights under the Fourth Amendment to the Unites States Constitution: *U.S. v. Jones* (2012) 565 U.S. 400; and *Riley v. United States* (2014) 573 U.S. 373.[164] Thus, while the term "government entity" is broadly defined in Penal Code § 1546(i), the purpose behind SB 178 was to place parameters around the branches of law enforcement gaining access to electronic information in furtherance of a criminal proceeding.

When tasked with applying CalECPA, courts have done so in matters regarding the use of personal electronic information during criminal proceedings or as mandatory search requirements embedded in probation agreements.[165] For

[163] *See Carpenter v. United States* (2018) 138 S.Ct. 2206.

[164] Assem. Com. On Privacy & Consumer Protection, Analysis of SB 178, as amended June 2, 2015, at 7.

[165] *See People v. Guzman* (2018) 23 Cal.App.5th 53; *People v. Valdivio* (2017) 16 Cal.App.5th 1130; and *People v. Sandee* (2017) 15 Cal.App.5th 294.

that reason, the Commission does not believe the Legislature intended to apply CalECPA to a regulatory agency such as the Commission when not acting in a criminal law enforcement capacity. As such, CalECPA does not prevent the Commission, when acting in a regulatory capacity, from obtaining census tract-level data required by this decision, or more granular data should the Commission require its production at a later date.

Our conclusion that CalECPA does not restrict the Commission's ability, in its regulatory capacity, to obtain data from AV companies is supported by the rules of statutory interpretation. The Commission follows the rules of statutory interpretation that the California Supreme Court has adopted: first, examine the plain language of the statute in their context and give the words their usual and ordinary meaning. Second, if the language permits more than one reasonable interpretation, the Commission may consider other aids such as the statute's purpose, legislative history, and public policy. Third, if these external aids fail to provide clear meaning, then the final step is to apply a construction that leads to the more reasonable result. The Commission must avoid a construction that would lead to an unreasonable, impractical, or arbitrary result.[166]

First, we must examine the definition of "government entity." As noted above, that term is broadly worded and arguably would cover the Commission because it is a state agency of constitutional origin.[167] It would also appear that the Commission is covered since Penal Code § 1546.1(j) states:

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[166] D.12-05-035, quoting from *Imperial Merchant Services, Inc. v. Hunt* (2009) 47 Cal.4th 381, 387-388. *See also People v. Canty* (2004) 32 Cal.4th 1266, 1276; *Lungren v. Deukmejian* (1988) 45 Cal.3d 727, 735; and *California Manufacturers Ass'n v. Public Utilities Commission* (1979) 24 Cal.3d 836, 844.

[167] Cal. Const., art. XII, §§ 1-6. *See also Pacific Gas & Electric Company v. Public Utilities Commission* (2015) 237 Cal.App.4th 812.

> This section does not limit the authority of the Public Utilities Commission or the State Energy Resources Conservation and Development Commission to obtain energy or water supply and consumption information pursuant to the powers granted to them under the Public Utilities Code or the Public Resources Code and other applicable state laws.

Why would Penal Code § 1546.1(j) be needed if the Commission was not otherwise covered by the scope of CalECPA?

On the other hand, "government entity" must be understood in the context of the larger statutory scheme. CalECPA was enacted, like its federal counterpart, to cover the actions of law enforcement government entities that are attempting to gather electronic information to pursue a criminal proceeding. If a government entity was attempting to obtain electronic information for a nonlaw enforcement reason, then that government entity should not be subject to CalECPA's scope. It would also seem reasonable, then, to limit the definition of "government entity" to those entities endeavoring to obtain electronic information as part of a criminal investigation. That would appear to explain why California Penal Code § 1546.1(j) was included to make clear that CalECPA did not apply if the Commission was acting in a regulatory capacity when it obtained energy or water supply and consumption information. As there appear to be two reasonable interpretations of the word "government entity" (*i.e.* all government entities or government entities acting in a law enforcement capacity), the Commission must look at the second and third steps for interpreting a statute.

The second step requires an examination of the legislative intent. As noted above, the purpose history behind CalECPA was to regulate law enforcement activities, which would support the conclusion that CalECPA's definition of

"government entity" would not apply to the a government entity like the Commission while acting in a regulatory capacity.[168] Thus, the legislative intent appears to suggest that CalECPA's scope was not designed to encompass all instances where the Commission acted in a regulatory capacity.

The third step requires an examination of whether either proffered interpretation, if accepted, would lead to an unreasonable, impractical, or arbitrary result. If the Commission were to accept the AV companies construct and make CalECPA applicable to the Commission, such a result could potentially nullify the Commission's investigatory and regulatory powers, which would indeed be an unreasonable and impractical result. The Legislature gave the Commission plenary powers to monitor and investigation utility operations in California, which would include AV companies that provide drivered and/or driverless AV services. In furtherance of those powers, the Legislature enacted Pub. Util. Code § 311, which authorizes the Commission and its staff to administer oaths, examine witnesses, issue subpoenas, examine waybills, books, accounts, documents and testimony in any inquiry, investigation, hearing or proceeding.[169]

Similarly, Pub. Util. Code § 5389, which is specific to TCPs, provides broad authority to the Commission to obtain TCP records and other information:

> (a) The commission, each commissioner, and each officer and person employed by the commission may, at any time have access to the land, buildings, or equipment of a charter-party carrier of passengers used in connection with the operation of

[168] Other legislative history materials appear to support this conclusion. (*See, e.g.* Bill Analysis, Senate Committee on Appropriations (April 27, 2015); and Bill Analysis, Senate Committee on Appropriations (September 4, 2015), at 4-5.

[169] Similar authorizations are found at Pub. Util. Code §§ 314, 581, 582, and 584, 701, and 702.

> its business and may inspect the accounts, books, papers, and documents of the carrier. Any inspection by the commission may include photocopying or the electrostatic or photostatic reproduction of documents either at the premises of the carrier or the offices of the commission, at the option of the carrier. The commission shall reimburse the carrier for any copying or reproduction expenses incurred by it at the direction of the commission.
>
> (b) Subdivision (a) also applies to access to property and inspections of the accounts, books, papers, and documents of any business which is a subsidiary or affiliate of, or a corporation which holds a controlling interest in, a charter-party carrier of passengers with respect to any transaction between the carrier and the subsidiary, affiliate, or holding corporation.
>
> (c) Subdivisions (a) and (b) also apply to any person or corporation engaged in the transportation of persons by motor vehicle for compensation, which the commission, or an officer or person employed by the commission, determines is holding itself out as a charter-party carrier of passengers.

Reading Pub. Util. Code §§ 311 and 5389 together, these statutes give the Commission and its staff extensive oversight and scrutiny over TCPs and their records, which the Commission and its staff may obtain *without the need to issue a subpoena.*

But if Cruise's proposed interpretation of CalECPA were accepted, it would nullify the Commission's authority to obtain AV company trip information without a warrant. Instead, the Commission could only do so by either a warrant (Penal Code § 1546.1(b)(1)); a wiretap order (Penal Code § 1546.1(b)(2)); an order for electronic reader records (Penal Code § 1546.1(b)(3)); or a subpoena (Penal Code § 1546.1(b)(4).) We do not accept the AV Service Providers' construction of CalECPA, since to do so would eviscerate the

Commission's ability to regulate and investigate TCPs pursuant to Pub. Util. Code §§ 311 and 5389.[170] TCPs cannot and should not be able to use customer privacy and the need to safeguard against intrusive law enforcement action as a basis to shield themselves from the Commission's oversight and scrutiny.

CCPA

Effective January 1, 2020, the purpose of the CCPA is to regulate the sale and distribution of consumer information to third parties for business purposes. It notifies consumers of their right to request that businesses disclose the information that has been collected about them, to request the deletion of that information, to direct a business not to sell their personal information, and to request disclosure of the types of information sold to third parties, and to whom it was sold.[171]

But CCPA does not apply to the Commission's efforts to obtain either geolocational data or personal information. First, CCPA is designed to regulate business efforts at consumer data collection. Business is defined as:

> A sole proprietorship, partnership, limited liability company, corporation, association, or other legal entity that is organized or operated for the profit or financial benefit of its shareholders or other owners that collects consumers' personal information or on the behalf of which that information is collected and that alone, or jointly with others, determines the purposes and means of the processing of

[170] Our conclusion is not by the conclusions reached by the Legislative Counsel Bureau in its August 1, 2019 letter that Cruise references in its comments. While the Legislative Counsel Bureau did interpret CalECPA, it did not discuss the Commission and its regulatory authority to obtain records pursuant to Pub. Util. Code §§ 311 and 5389, and, as such, did not endeavor to resolve those two statutory schemes.

[171] *See* Cal. Civ. Code §§ 1798.100, 1798.105, 1798.110, and 1798.120.

consumers' personal information, that does business in the State of California.[172]

The Commission, as a state regulatory agency, does not fit within CCPA's definition of a business.

Second, CCPA places restrictions on the selling of consumer information. The statute defines "sell, selling, sale, and sold" as releasing, disclosing or otherwise communicating a consumer's personal information by the business to another business or a third party *for monetary or other valuable consideration* (emphasis added).[173] The Commission is not gathering and selling consumer personal information for monetary or other valuable consideration.

Accordingly, CCPA is not relevant to the Commission's ability to compel AV companies to provide the Commission with a consumer's census tract-level trip information, or more granular information should the Commission require it at a later date.

4.13. Data Reporting Requirements: Passenger Safety

4.13.1. Comments

AAA comments on the current requirement for companies to maintain a two-way communication link between the passenger and the remote operator of a vehicle.[174] AAA argues that companies should report on the usage of their two-way communication link. They request to know the number of times the

[172] Cal. Civ. Code 1798.140(c).

[173] Cal. Civ. Code 1798.140(t)(1).

[174] The DMV requires its permit-holders to maintain a communication link between the vehicle and the remote operator to obtain information on the vehicle's location and to allow two-way communication between the passenger and the remote operator. The CPUC adds the additional requirement that companies must record (but not share) all communications between the passenger and the remote operator.

communication link was used, the reason it was used, and how the incident (if any) was resolved.[175]

CCB asks the Commission to broaden its collection of data around safety incidents to include incidents such as when a passenger catches his or her hand in the door, or when a passenger is struck by a car while existing the vehicle.[176] The CPUC currently does not capture that information from its permit-holders. Currently the CPUC requires that any time one of its permit-holders submit the accident report form "OL 316" to the DMV, the permit-holder must send that form to the CPUC as well. The DMV created the OL 316 specifically to capture information about traffic incidents involving autonomous vehicles.

CCB asks whether the two-way communication link will be accessible to passengers with disabilities.[177]

4.13.2. Discussion

As part of their quarterly reports, permit holders for both the drivered and driverless deployment programs must report data quarterly with the totals of complaints and incidents, the causes of those incidents, and the amounts paid to any party in each incident (if the amount is known by the permit holder). CPED, in collaboration with stakeholders, will develop a standard to identify and categorize these complaints and incidents. Additionally, permit holders must alert the CPUC any time they notify the DMV of a safety incident. Currently, participants in the AV pilot programs must simultaneously transmit to the

[175] AAA Comments on Question 1, at 6.

[176] CCB Comments on Question 1, at 7.

[177] CCB Comments on Questions 2-8, at 6.

Commission any collision reports required by DMV regulations.[178] The Commission emphasizes that this includes not just form OL 316, but also form SR-1. SR-1 forms are required whenever "someone is killed, injured, or property damage exceeds $1,000" and each party involved must submit an SR-1.[179] These categories cover the type of incidents referenced by CCB.

This data will provide insight into the safety of AV companies relative to each other and to other modes of transportation.

While the Commission shares AAA's goal to understand the operations of AVs in passenger service, the Commission declines to adopt AAA's recommendation to collect data about the frequency of communications. Reporting the frequency with which customers communicate may not be representative of the number or type of complaints or incidents for each AV company as each company's business model and approach to communication may differ. The reporting requirements described above instead meet the intent of AAA's recommendation.

As part of the Passenger Safety Plan, applicants must address CCB's question of whether the two-way communication link will be accessible to passengers with disabilities.

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[178] D.18-05-043, at 26.

[179] *See* https://www.dmv.org/ca-california/accident-guide/#:~:text=Serious%20Accidents.%20An%20accident%20must%20be%20reported%20to,of%20Traffic%20Accident%20Occurring%20in%20California%20%28Form%20SR-1%29.. Link active at time of publication.

4.14. Data Reporting Requirements: Accessibility

4.14.1. Comments

Waymo suggests several changes to the accessibility reporting requirements. First, Waymo asks the Commission to clarify the definition of accessible rides.[180] The Commission currently requires pilot participants to report the total number of accessible rides that are fulfilled, requested but declined by the driver, or requested but declined because no accessible vehicle was available.[181] SFMTA and SFCTA ask the Commission to clarify whether it meant for companies to report on rides given in WAVs or some other definition of accessibility.[182]

Waymo proposes that the Commission define an accessible ride as "[any ride] using service features that were developed to accommodate passengers with disabilities of any kind." It argues that the broad definition would allow the Commission to understand the range of benefits that AVs can offer the disabled population.

Second, Waymo argues that the Commission should require participants to provide a narrative description of the accessibility services they provide.[183] This narrative would supplement and give context to the number of accessible rides each company reports.

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[180] Waymo Comments on Question 1, at 9.

[181] *D.18-05-043*, at 54-55.

[182] SFMTA and SFCTA Comments on Questions 2-8, at 47.

[183] Waymo Comments on Question 1, at 10. ("Waymo recommends the Commission revise its existing accessibility reporting requirements to "codify" these lessons learned by requiring a narrative explanation of the accessible rides reported.")

Lastly, Waymo states that the metric "accessible rides requested per quarter that are declined by the driver" is not applicable to existing AV operations because the vehicle operators are trained and the driving system could not "choose" to decline.[184]

SFMTA and SFCTA propose that the Commission work with the AV Accessibility Working Group to determine what data are needed to demonstrate progress in providing accessible services.[185] As a starting point, though, SFMTA and SFCTA propose the Commission gather quantitative and qualitative data.

With regard to quantitative data, SFMTA and SFCTA request the Commission collect the number of WAVs in operation and statistics about the number of WAV rides requested, whether those rides were fulfilled or denied, and the reason for any unfulfilled requests. They also request that participants list the geographic coverage and response times for requests for WAVs and non-WAVs in their fleet.[186]

As for qualitative data, SFMTA and SFCTA recommend each participant submit a narrative report describing its current and future capacity to provide WAV service and services for the vision impaired.[187]

CCB expresses concern that any data collection would reveal the data disability status of a passenger.[188]

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[184] Waymo's Comments on Question 1, at 10.

[185] SFMTA and SFCTA Comments on Questions 2-8, at 45.

[186] SFMTA and SFCTA Comments on Questions 2-8, at 48.

[187] SFMTA and SFCTA Comments on Questions 2-8, at 48-49.

[188] CCB Comments on Question 1, at 7.

4.14.2. Discussion

Permit holders' quarterly reports must include information about the number of WAV trips requested, accepted, rejected and fulfilled, as well as the total number of WAVs each provider has in service.

The Commission adopts SFMTA and SFCTA's suggestion to track the total number of WAVs each permit-holder has in service but rejects their request to gather information about the geographic coverage of WAVs and response times. The number of WAVs in operation provides a snapshot metric of AV companies' capacity to serve customers in wheelchairs. This will provide a leading indicator of the permit holders' ability to serve people who need a WAV. It is too early, however, for the Commission to gather meaningful data by tracking the geographic coverage and response times for WAV vs. non-WAV service.

As part of their quarterly reports, permit holders must also submit a narrative description of how they have engaged with accessibility advocates and the actions they have taken to provide accessible services. The Commission agrees with Waymo that a narrative component allows companies to provide greater context to their quarterly data reports.

In response to the requests from SFMTA and SFCTA and Waymo, the Commission replaces the requirement for permit-holders to report "accessible rides" and instead report whether each trip was wheelchair accessible. This provides a straightforward metric to track the number of people in wheelchairs who use each AV service. The Commission is careful to note that "accessible rides" and "wheelchair accessible" are not interchangeable terms. Accessibility extends beyond wheelchair accessibility: accessible rides and accessible service are inclusive of all people with sensory, cognitive, and physical disabilities.

The Commission declines to adopt Waymo's proposed definition because it is now moot as the requirement to report the number of "accessible rides" has been removed.

The Commission rejects Waymo's request to remove the field "accessible rides requested per quarter that are declined by the driver." Its argument that a trained vehicle operator would never choose to decline a WAV ride is unsupported.

To CCB's concern, the Commission does not require AV companies to collect information about the disability status of any individual rider. Permit holders must report the total number of WAV rides filled on a monthly basis rather than a trip-by-trip basis.

4.15. Data Reporting Requirements: Equity and Environmental Justice

4.15.1. Comments

Party comments about the data necessary to evaluate the impacts of AV service on equity and environmental justice are largely covered in 4.12 on "AV Operations."

Relevant excerpts:

> *"Greenlining, SFO, SFMTA and SFCTA, MTC, Sierra Club, and UC Davis all argue that the Commission should expand its data collection to include detailed information about AV operations including the location of pick-ups and drop-offs or at least whether the pick-up or drop-off site is located in a Disadvantaged Community.[189]"*

> *"Multiple parties highlight the benefits of collecting location data to understand the impacts of AVs' operations on the environment, equity, and traffic patterns. As Greenlining and*

[189] Greenlining Comments on Questions 2-8, at 12; SFO Comments on Questions 2-8, at 2-3; SFMTC Comments on Questions 2-8, at 7-8; SFMTA and SFCTA Reply Comments, at 19.

Sierra Club note, location data can be used to determine the level of service and the comparative environmental impact of AVs on DACs.[190]"

4.15.2. Discussion

As discussed in 4.12, the Commission requires companies to include in their quarterly program reports information about the pick-up and drop-off locations of each trip, and the fuel type of the vehicle for each trip. This will enable stakeholders to compare service to neighborhoods in disadvantaged communities vs neighborhoods outside disadvantaged communities. This will provide information about the equity of service as well the trips' environmental impacts.

4.16. Data Reporting Requirements: Environmental and Climate Impacts

4.16.1. Comments

Lyft and Waymo both request that the Commission remove the requirement to report the idling or dwell time for each vehicle. Lyft argues that while dwell time may provide useful information in the context of TNCs, the information is not meaningful in the context of AV operations. [191] As noted earlier, UC Davis encourages the Commission to align its policies with the goals of SB 1014.[192]

4.16.2. Discussion

The Commission agrees with the parties that encourage coordination with SB 1014. Tracking the fuel type of the vehicle allows the Commission to

[190] Sierra Club's Comments on Questions 2-8, at 5; Greenlining Comments on Questions 2-8, at 12.

[191] Lyft's Comments on Question 1, at 10.; Waymo's Comments on Question 1, at 11.

[192] UC Davis Comments on Question 2-8, at 14-15.

understand progress toward ZEV goals at a more granular level. As Senate Bill (SB) 1014 captures autonomous vehicles, collecting detailed information about the Period 1, 2, and 3 VMT along with the timestamps for pick-ups and drop-offs is necessary for its implementation responsibilities in the program.

It is crucial that the Commission be able to track the level of shared rides as they are one of the most important ways that AVs can, at a minimum, reduce greenhouse gases and particulate emissions, make rides more affordable, and relieve congestion. Understanding the occupancy of the trip, the passenger miles traveled, whether the passenger authorized a shared ride, and whether the trip was a shared ride, are all key metrics in this area.

The Commission rejects Lyft and Waymo's requests to remove the requirement to report idling or dwell time. The point of the metric is to track the amount of time the vehicle spends on the road when it is not transporting passengers, as any time spent on the road impacts traffic flow and road use. Their argument that AVs put their idle time to productive use (*e.g.*, training the AV system) does not alleviate the negative impacts to congestion and traffic caused by such deadheading.

As noted by Cruise and Zoox, the large-scale deployment of EVs could provide support to the electric grid.[193] The impacts to the electric grid will depend on the number of EVs on the road and when and where those vehicles charge. Furthermore, information about the type of charger, the utility serving the charging station and the electric rate for the charging will help the Commission understand how fleets of EVs use charging infrastructure.

[193] Cruise Comments on Questions 2-8, at 13; Zoox Comments on Questions 2-8, at 13.

Permit holders must submit environment-related information in their quarterly reports. On a per-trip and per-month basis, permit holders must report the vehicles' fuel type; number of passengers; Period 1, 2, and 3 VMT; Passenger Miles Traveled; whether the passenger requested a shared ride; and whether the ride was shared or for a single party. Each report must also contain a narrative description of the activities

Companies that operate plug-in hybrid electric vehicles (PHEVs) and/or battery electric vehicles (BEVs) must submit additional data about their vehicle charging behavior. This information will enable the Commission to understand the carbon footprint of the vehicles' fuel and the impact of charging behavior on the electric grid. Companies must include the following information in their quarterly data reports: for each charger, the census tract in which it is located; the power level of the charger (*i.e.*, level 1 versus level 2); the type of charger (privately owned by company, workplace, public, etc); and the load serving entity (*i.e.*) utility serving the charging station and the electric rate for the charging. Companies must also provide information about their charging session data including time, day, and duration of charge.

4.17. Data Reporting Requirements: Customer Feedback

The December 19, 2019 Ruling asked whether the Commission should gather and incorporate information such as rider experiences (*e.g.*, complaints) and community feedback into its decision-making process

4.17.1. Comments

Multiple parties offered opinions on the approach to gathering feedback and complaints. CCB, Greenlining, LADOT, and SFMTA and SFCTA argue that

the Commission should establish several venues to collect feedback and complaints.

First, SFMTA and SFCTA suggest the Commission establish a clear process for any passenger to submit feedback directly to the Commission and use this information to identify issues and, if necessary, initiate investigations.[194] LADOT argues the Commission should "establish both a regular schedule of evaluation, as well as a mechanism for parties and local jurisdictions to raise concerns over safety performance that result in an unscheduled review."[195] LADOT also argues AV companies should be required to solicit feedback as a condition for operations.[196]

CCB suggests the Commission go further and proactively seek interviews from passengers with and without disabilities. It also suggests the Commission work with disability advocates to find volunteers to ride in and evaluate companies' ability to provide accessible services. In all cases, CCB recommends the Commission allow customers to provide anonymous feedback and to protect each individual's personal information, including disability status.[197]

Second, CCB, Greenlining, SFMTA and SFCTA, and UC Davis all suggest the Commission require AV Service Providers to engage with disability advocates, advocates for DACs, and representatives from the communities where AVs operate in passenger service.[198] They argue this engagement should take

[194] SFMTA and SFCTA Comments on Questions 2-8, at 46.

[195] LADOT Comments on Question 1, at 7-8.

[196] LADOT Comments on Questions 2-8, at 14.

[197] CCB Comments on Questions 2-8, at 3.

[198] Greenlining Comments on Questions 2-8, at 7.

place before and during the application phase and then on an ongoing basis after operations begin. SFMTA and SFCTA specifically refer to the AV Accessibility Working Group, established by D.18-05-043, and the Disadvantaged Communities Advisory Group that is jointly facilitated by the Commission and the California Energy Commission.[199] Greenlining argues that AV companies should conduct a robust community engagement process that starts with assessment of the community's mobility needs, implements projects responsive to those needs, and incorporates the community's feedback on an ongoing basis.[200]

Third, LADOT and SFMTA and SFCTA state AV companies and local governments should collaborate and share data continuously.[201]

Waymo opposes any requirement for AV companies to collect and disclose passenger feedback to the Commission. It argues that collecting passenger feedback might inhibit "AV companies from soliciting critical, actionable feedback from their riders, and discourage riders from sharing detailed feedback with AV companies due to concerns over government monitoring." Waymo and Zoox both argue that the Commission should rely on its existing consumer complaint process and its Public Advisor's Office.[202]

[199] SFMTA and SFCTA Comments on Questions 2-8, at 46 (AV Working Group) and 35 (DACAG).

[200] Greenlining Comments on Questions 2-8, at 7-8.

[201] LADOT Comments on Questions 2-8, at 3; SFMTA and SFCTA Comments on Question 2-8, at 46.

[202] Waymo Comments on Questions 2-8, at 9-10; Zoox Comments on Question 2-8, at 16.

4.17.2. Discussion

The Commission will require Phase I deployment programs permit holders to demonstrate that all customers – including those that request a ride but were unable to obtain a ride, or unable or unwilling to enter the vehicle – are able to submit feedback to the permit holder. In its application, the permit holder must describe how it will identify and take action on any complaints regarding the safety or accessibility of the service.

At this time, the Commission will not require program participants to transmit this feedback directly to the Commission. Permit holders must retain all customer feedback, including complaints, and make it available to the Commission upon request.

Permit-holders must ensure their mobile application makes customers aware that they can file a complaint with the Commission and provides the contact information of the Consumer Intake Unit of the Commission's Transportation Enforcement Branch. This is consistent with the requirements imposed on TNCs by D.13-09-045.[203]

As discussed in the section addressing fare-splitting, permit-holders must submit aggregate statistics about the type and volume of complaints and incidents about their service.

[203] Commission Decision D.13-09-045, at 27.

4.18. Data Reporting Requirements: Data Sharing

4.18.1. Comments

Most AV Service Providers oppose sharing data with entities other than the Commission, arguing that it is unnecessary and risks the collection and disclosure of personally identifying information as well as trade secrets.[204]

Cruise and Lyft argue that the Commission should not be used as a conduit for data requests from agencies that do not regulate AV companies. Finally, Lyft adds that the Commission could encourage companies to "[collaborate] with interested parties" to develop one-off data sharing protocols.

Most parties who are not AV Service Providers argue that data should be made public to the extent feasible. SFMTA and SFCTA assert that "in this nascent stage of the industry, it is imperative that lessons learned be shared widely across sectors to facilitate planning for and response to a rapidly changing landscape that impacts the safety and wellbeing of many people."[205] AAA agrees.[206] LADOT, SANDAG, SFMTA and SFCTA, SFMTC, and SFO argue the Commission should not just share its data with local governments but also authorize local jurisdictions to issue their own data requests.[207] SFO agrees that the Commission should make the data available to any relevant public agency that requests it.

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[204] Aurora Comments on Questions 2-8, at 5; Cruise's Comments, at 15-19; Lyft's Comments, at 12; Waymo's Comments, at 9; and Zoox's Comments, at 16.

[205] SFMTA and SFCTA Comments on Questions 2-8, at 46.

[206] AAA Reply Comments on Questions 1-8, at 7.

[207] SFMTA and SFCTA Comments on Questions 2-8, at 46; SFMTC Comments on Questions 2-8, at 6; LADOT Comments on Questions 2-8, at 3 and 8.

4.18.2. Discussion

In Decision D.20-03-014, the Commission established a process for TNCs to request confidential treatment of their annual reports. This decision adopts a similar process, namely that AV permit-holders that request confidential treatment of their quarterly reports must identify the specific sections for which they request confidentiality and explain the rationale for each pursuant GO-66-D. The Commission places the burden on AV companies to establish that their quarterly data reports, or components thereof, should not be made publicly available. Each permit holder who claims that any part of the Quarterly Data Reports should not be made publicly available must comply with the requirements set forth in GO 66-D to establish any claims of privilege, confidentiality, or any other grounds that would prevent the information's public dissemination.

4.19. Data Reporting Requirements: Reporting Schedule

4.19.1. Comments

Lyft argues the Commission should collect information annually rather than on the quarterly reporting schedule currently in place for the AV pilot programs. Lyft claims that reporting information on a quarterly basis is "unnecessarily burdensome."[208] Lyft also notes the Commission's and DMV's reporting deadlines do not align and requests the Commission synchronize its reporting deadlines with the DMV. [209]

[208] Lyft Comments on Questions 2-8, at 11.

[209] Lyft Comments on Questions 2-8, at 11.

4.19.2. Discussion

Lyft's argument about aligning reporting schedules has merit. To align with the DMV's reporting schedule, the Commission will now require companies to submit their quarterly reports at the beginning of each quarter.

The Commission rejects Lyft's request to submit information on an annual basis. Collecting and reporting data on an annual basis does not provide CPED and other stakeholders with the timely data they need to track developments in a rapidly evolving field.

CPED will maintain on its website a list of the data it collects from AV companies and a data reporting template AV companies shall use when submitting their quarterly reports. CPED has the authority to create and modify the data reporting template as needed to ensure the reports capture all the information necessary to evaluate the AV programs.

4.20. Public Workshops

CPED will plan to hold a workshop to evaluate the status of the Phase I AV deployment operations in passenger service within a year of the issuance of this Decision. CPED may adjust the timing of the workshop as necessary to ensure there is a meaningful amount of data to discuss. The objectives of the workshop will include but are not limited to: the quality and quantity of data gathered to date; progress toward the Commission's goals for AV operations in passenger service; whether and how to revise the data collection requirements; whether to revise the program goals and establish targets; and whether there is need for any other changes to the AV pilot and the Phase I deployment programs.

4.21. Application Requirements: Third Party Contractors as Test Operators

The December 19, 2019 Ruling asked whether the Commission should authorize AV program participants to utilize third party contractors as test operators for the drivered and/or driverless programs.

4.21.1. Comments

Under General Order 157-E (GO 157-E), which establishes the rules and regulations related to the operations of Charter-Party Carriers (TCPs), TCPs drivers must be employees of the TCP itself, an employee of its sub-carrier, or an independent driver that holds TCP authority and is acting as a sub-carrier.[210] As third party contractors do not fall into any of those categories, their use is prohibited under GO 157-E. However, GO 157-E contains a provision that allows permit-holders in the any of the Commission's pilot programs to seek an exemption from any of the requirements established in GO 157-E.[211] Permit-holders that seek an exemption must justify the need for the exemption then demonstrate that their operations under with the exemption will be "functionally equivalent" to their operations without the exemption. Any exemption will last for 12 months and may be renewed once, and CPED will post on its website the justification for any exemption it offers.

The Commission has granted four companies' requests to utilize third party contractors as test operators. The companies' permits and the justifications for these exemptions are available on the Commission's website.[212] Pony.ai justifies its request on the basis that it holds contractors and employees to the

[210] General Order 157-E, Section 5.03.

[211] General Order 157-E, Section 8.02.

[212] https://www.cpuc.ca.gov/avcissued/.

same requirements including for screening, training, and standards of conduct; that all drivers whether employed or contracted must undergo the same drug and alcohol testing regimes; and that the staffing agency must provide tis contractors with workers compensation insurance. Pony.ai's justification is similar to those of other companies.

The AV Service Providers along with LADOT support the use of third party contractors. Cruise argues that allowing the use of third party contractors would not impact safety because those contractors are required to meet all of the same standards (training requirements, drug testing, and Employer Pull Notice enrollment) set by DMV.[213] Lyft and Zoox agree.[214] Waymo argues that the Commission should lift the ban because the DMV does not have a ban.[215] LADOT supports the use of third party contractors so long as the drivers are subject to the same provisions as employees, including requirements established by AB 5.[216]

Greenlining, SFO, and SFTWA object to the use of third party contractors.[217] Greenlining argues the use of third party contractors present a greater safety risk because high employee turnover which would stop the companies from building up institutional memory of safety practices. SFO argues that AV companies should always have direct control over their AV

[213] Cruise Comments on Questions 2-8, at 23.

[214] Lyft Comments on Questions 2-8, at 23; Zoox Comments on Questions 2-8, at 23.

[215] Waymo Comments on Questions 2-8, at 15.

[216] LADOT Comments on Questions 2-8, at 21.

[217] Greenlining Comments on Questions 2-8, at 14; SFO Opening Comments on Questions 2-8, at 12; SFTWA Opening Comments on Questions 2-8, at 13.

operators, implicitly arguing that AV service providers do not have direct control over contract employees.

4.21.2. Discussion

The Commission will allow participants in the Phase I deployment programs to seek exemptions for the use of third-party contractors as AV operators. These exemptions will last until the permit expires. The Commission will only grant this exemption to companies that demonstrate that their operations would be functionally identical to their operations were they to use only employees as vehicle operators. CPED will provide guidance for companies that seek an exemption.

The Commission has already authorized exemptions authorizing four companies to use third party contractors as AV operators. These exemptions were granted because the applicants demonstrated that their operations would be functionally identical to their operations if they used only employees as vehicle operators. No party has presented evidence that using third party contractors as vehicle operators presents a greater safety risk than using employees.

4.22. New Regulatory Category

The Commission asked whether it should designate a new regulatory category, such as Autonomous Vehicle Carrier (AVC), to authorize a person or entity to provide prearranged passenger transportation service using AVs operated without a driver in the vehicle.

4.22.1. Comments

SFMTA and SFCTA argue that the Commission should create a new regulatory category for companies that wish to offer AV passenger service. That framework should encompass testing and deployment of drivered and driverless

operations. They argue for a new category because the TNC framework is premised on a platform that connects customers to drivers operating personally owned vehicles. AVs are a fundamentally different technology and business model from TNCs. Additionally, much of the TNC framework does not apply to driverless AVs such as driver background checks, zero tolerance rules, and vehicle inspection requirements.[218] AAA and SFTWA agree that AVs are unlike any existing framework and call for a new category that should be established by the Legislature.[219]

LADOT argues that the Commission should not only adopt a new regulatory category but also create a separate proceeding specifically to tackle Autonomous Vehicle-related issues.[220] SFO and AAA agree.[221]

Lyft argues that the Commission should create a new regulatory category of transportation provider, the "Autonomous Vehicle Carrier, or AVC," and that the TNC framework should serve as the basis for the AVC framework.[222] Lyft notes that existing TCP regulations, some of which cannot be modified, assume that a human operator is in the vehicle; thus, attempting to regulate AVs under existing regulations would conflict with statute and create ambiguity.

Lyft asserts that the Commission has authority to create an AVC framework in the same way it created the TNC framework.[223] Lyft lists desired

[218] SFMTA and SFCTA Comments on Questions 2-8, at 36-41.

[219] AAA Reply Comments on Questions 1-8, at 9; SFTWA Comments on Questions 2-8, at 9.

[220] LADOT Comments on Questions 2-8, at 3.

[221] SFO Comments on Questions 2-8, at 5-6; AAA Reply Comments on Questions 1-8, at 9.

[222] Lyft Comments on Questions 2-8, at 14.

[223] Lyft Comments on Questions 2-8, at 16.

changes to the TCP framework that relate to vehicle inspection, proof of insurance, eligible vehicles, and passenger interaction.[224]

Aurora argues the Commission should not designate a new regulatory category for AVs. Instead, the Commission should modify the existing TCP framework to account for AV passenger service such as "by allowing companies to disregard requirements related to physical drivers, modifying existing TCP inspection requirements, or by piggybacking on DMV requirements related to passenger communications links in driverless AVs."[225] Cruise agrees and suggests further amendments to the TCP framework. Specifically, they argue the Commission should "[remove] the reference to a driver's name as a required part of the waybill, [remove] the entirety of Part 5 – Drivers, and [remove] the entirety of Part 10 – Controlled Substance and Alcohol Testing Certification Program."[226] Waymo and Zoox broadly agree.[227]

4.22.2. Discussion

The Commission does not see a need to create a new regulatory category before providing initial authorization for deployment of AVs in passenger service. Instead, many of the requirements of the TCP framework applied to the Commission's AV Pilot Programs by D.18-05-043 are reasonable or necessary to extend into deployment.

This Decision proposes that possessing a DMV AV Deployment Permit be required for an AV company to be eligible to charge fares to passengers. In order

[224] Lyft Comments on Questions 2-8, at 19-20.

[225] Aurora Comments on Questions 2-8, at 6-7.

[226] Cruise Comments on Questions 2-8, at 21.

[227] Waymo Comments on Questions 2-8, at 11; Zoox Comments on Questions 2-8, at 19.

to satisfy the requirement of California Vehicle Code § 38750(c)(3), DMV's regulations concerning the financial requirements for a permit to deploy AVs on public roads requires the same $5 million insurance coverage amount that the Commission currently requires for AV testing. Therefore, the requirements of D.18-05-043 to maintain insurance for the test AVs offered for passenger service in compliance with DMV regulations may simply be extended into AV deployment.

4.23. Converting Drivered Pilot Permits to Phase I Drivered Deployment Permits

AV companies currently participating in the Commission's Drivered AV Pilot Program may apply to convert their pilot permit into a Phase I deployment permit. For permit holders in the Drivered AV Pilot Program, the only new requirement is to obtain the DMV Deployment Permit. Accordingly, if AV drivered pilot permit holders in good standing present CPED with an active DMV Deployment Permit, the CPED will issue an amended permit that expresses the conditions for drivered AV deployment which would include the new requirements adopted by this Decision.

4.24. Applying for Phase I Driverless Deployment Permits

An entity seeking to participate in the driverless deployment program shall submit to the Director of CPED an application for a permit in the form of a Tier 3 Advice Letter. The application process should be modeled on the General Rules of GO 96-B. GO 96-B provides a procedural vehicle by which an entity seeks a Commission order that the requested relief is consistent with Commission policy and applicable law. Pursuant to GO 96-B, entities seeking to participate in Phase I of the driverless deployment program shall follow the

requirements under 7.2 for Serving Advice Letters and Related Documents using the service list for the open Transportation Network Company rulemakings and any forthcoming rulemakings to ensure that all parties participating in open proceedings related to Transportation Network Companies and Autonomous Vehicles are served. The permit application will demonstrate compliance with G.O. 157-E; include all the information required by this Decision, particularly the Passenger Safety Plan as specified in Ordering Paragraph 8; the DMV deployment permit; and an expanded data reporting plan. CPED staff will review each application and prepare a draft resolution recommending appropriate disposition of each application for a Commission resolution.

Entities seeking to appeal the resolution of an advice letter to participate in Phase I of the driverless deployment program shall follow the requirements under section 8 of GO 96-B- Application for Rehearing and Petition for Modification of Resolution; Request for extension. Such appeals will be reviewed by the Commission's Legal Division.

Entities may apply to offer driverless service with or without shared rides. If an entity applies to offer driverless service without shared rides, its Passenger Safety Plan need not describe how it will minimize safety risks to passengers traveling in shared, driverless rides.

If an entity authorized to participate in Phase I of the driverless deployment program subsequently wishes to provide shared rides using driverless AVs, the request shall be made in the form of an Tier 3 Advice Letter that revises the carrier's Passenger Safety Plan to include the required content related to shared rides. CPED staff will review each Advice Letter and prepare a draft resolution recommending appropriate disposition on the revised Passenger

Safety Plan to provide shared rides for a Commission decision. Relatedly, if an entity authorized to participate in Phase I of the driverless deployment program intends to change its operations in a way that would materially affect the approaches outlined in its Passenger Safety Plan, that entity should provide the Commission's Director of Consumer Protection and Enforcement Division with an updated Passenger Safety Plan by way of Tier 2 Advice Letter.

5. Comments on Proposed Decision

The proposed decision of the assigned Commissioner in this matter was mailed to the parties in accordance with Section 311 of the Public Utilities Code and comments were allowed under Rule 14.3 of the Commission's Rules of Practice and Procedure.

On November 4, 2020, the following parties filed and served opening comments: Alliance for Automotive Innovation, Dr. Bruce Appleyard (San Diego State University), Aurora Innovation, California Chamber of Commerce (jointly with TechNet, Bay Area Council, Consumer Technology Association and Internet Association), Cruise, California Transit Association, Hispanic Chambers of Commerce of San Francisco, Lighthouse for the Blind and Visually Impaired – San Francisco, Los Angeles Department of Transportation, Lyft, Metropolitan Transportation Commission, Mothers Against Drunk Driving of Northern California, National Federation of the Blind, NextSF, Pony.ai, Dr. William Riggs (University of San Francisco), San Francisco International Airport, San Francisco Municipal Transportation Agency and San Francisco County Transportation Authority (jointly), San Francisco Taxi Workers Alliance, Securing America's Future Energy, Sierra Club, Silicon Valley Leadership Group, UC Davis, Waymo, and Zoox.

On November 9, 2020, the following parties filed and served reply comments: Cruise, California Chamber of Commerce, Lyft, San Francisco Municipal Transportation Agency and San Francisco County Transportation Authority (jointly), San Francisco Taxi Workers Alliance, Self-Driving Coalition for Safer Streets, Silicon Valley Leadership Group, and Waymo.

The Commission has reviewed all the opening and reply comments and appreciates the plethora of issues and solutions that the parties, collectively, have addressed. Clearly a considerable amount of time and effort has been devoted to alerting the Commission to proposed changes that parties deem appropriate or necessary given the significance and scope of the undertaking that the Commission is adopting by this decision. But given the number of comments, rather than address each party's comments individually, the Commission believes that it will be more efficient to address and resolve comments collectively by subject matter, paying most attention to the subject matters deemed the most significant. These comments will be discussed and resolved under the heading "request for substantive changes." The second set of comments will be discussed and resolved under the heading "request for corrections and clarifications." As appropriate, the decision will reference representative comments that are supportive of or in opposition to a particular issue, rather than cite to every set of comments.

Request for Substantive Changes

- Should the Commission Replace the Tier 3 Advice Letter Process with Greater Commission Staff Discretion?

The AV industry, their trade associations, and academia oppose the Tier 3 Advice Letter process on the basis that the process would be lengthy (>10

months) and politicized.[228] Instead, they argue that CPED should have the authority to grant permits at their discretion, and to make the Passenger Safety Plans public once a permit is granted.[229]

The Commission declines this request. While it is true that, at times, there can be delays in the advice letter approval process, the Tier 3 Advice Letter process best ensures that parties are given the opportunity to provide comments and to allow for greater public input. Since the Phase I AV deployment programs is transitioning from a pilot program to Phase I deployment, it is important that each party's right to due process (*i.e.* notice and the opportunity be heard) is protected.

- Should the Commission Require AV Companies to Prepare Detailed Equity, Accessibility, and Climate Protection Plans?

Local governments argue the Commission should require permit applicants to submit detailed Equity, Accessibility, and Climate Protection plans.[230] Similar to the Passenger Safety Plans, the companies would describe how they plan to meet the Commission's goals in each area.

AV Industry members oppose these plans, arguing that the narrative reporting requirements are sufficient.[231]

The Commission declines to require the AV companies to prepare detailed Equity, Accessibility, and Climate Protection plans for now. As the AV industry

[228] *See* Aurora Innovation Comments, at 5-6; Alliance for Automotive Innovation Comments, at 3.and Cruise Comments at 5 and 7.

[229] *See* Cruise Comments, at 7.

[230] *See* San Francisco Municipal Transportation Agency/San Francisco County Transportation Authority Comments, at 8-9.

[231] *See* Silicon Valley Leadership Group Comments, at 3.

is a nascent industry, the content of such plans might be speculative. Instead, Commission would like to give the companies the opportunity to develop their operations first, and the Commission can decide later whether to require such detailed plans.

But in the meantime, instead of requiring detailed plans, the AV companies can outline their near-term Equity, Accessibility, and Climate Protection plans in their quarterly reports, and update them when additional information becomes known.

- Should the Commission Permit Greater Local Control of AV Deployment?

Local governments want authority to manage AV deployment, issue their own data requests, and levy fees and taxes.[232]

The AV industry parties oppose these requests on the ground that they could lead to patchwork and inconsistent local regulatory requirements.[233]

The Commission declines the request to expand more local regulation of the AV companies. As the decision has pointed out, local control could lead to a patchwork of regulations that, potentially, could be inconsistent with the regulations the Commission is adopting in this decision.

With respect to taxes, the Commission does not delegate authority to impose or authorize local taxes through a decision. Rather, this is something that must be authorized by the Legislature. For example, Pub. Util. Code § 5446 allowed San Francisco voters to pass an initiative to tax TNC rides. This law was

[232] *See* Los Angeles Department of Transportation Comments, at 4.

[233] *See* Zoox Comments, at 3.

enacted after a series of negotiations between the City and County of San Francisco and the Legislature.[234]

- Should the Commission Require AV Companies to Include a Plan to Protect all road users as part of their Passenger Safety Plans?

The Los Angeles Department of Transportation reiterates its request that the Commission evaluate vehicle safety plans so that all road users are protected.[235]

The Commission rejects this request as it has already been considered. While it is important for AVs to protect all road users, that capability is part of the AVs' driving ability which falls under the purview of the DMV. Of course, the Commission retains its regulatory authority to inquire about the status of AV industry safety plans and to reach out to the DMV regarding its evaluation of the AV safety plans.

- Should the Commission Adjust Data Collection Requirements to Allow Greater Aggregation Considering Privacy Concerns?

The AV Industry, their trade associations, and academia argue for greater protection of customer privacy by reducing and aggregating the overall data collection.[236] In doing so, they put forward different, and at times conflicting, suggestions for modifying the information that the Commission should require: census tracts but not zip codes; zip codes but not census tracts; exempting census tracts with fewer than 3,000 people; reducing timestamp granularity (for

[234] *See* https://www.sfcta.org/press-releases/deal-reached-first-ever-local-ridehail-tax-california.

[235] Los Angeles Department of Transportation Comments, at 7.

[236] *See* Aurora Innovation Comments, at 8.

example, by aggregate reporting into 3-hour blocks for each day of the week, rather than specific days and times); and adding a "presumption of confidentiality."[237]

The Commission rejects these requests. The information is needed for the Commission to determine how the AV programs are being deployed. This information is essential in the event the Commission determines that additional regulations should be promulgated based on the information received.

The Commission also rejects the confidentiality claims as not well supported either factually or by law. In fact, the Commission already gathers more granular information from permitted TNCs. As such, the Commission does not find support in the record for less granular data collection practices.

- Should the Commission Expand or Narrow Data Collection Fields?

Local governments generally argue to maintain or slightly expand current data collection. For example, the SFMTA requests that the Commission gather data about rides that were requested and unfulfilled; whether a passenger requested a WAV; the time and date of a trip rather than just the time.[238] The Commission finds these requests to be reasonable and, therefore, will expand the data collection fields accordingly.

SFMTA and LADOT request the Commission gather additional information about VMT.[239] While this request may have merit, the Commission

[237] *See* Cruise Comments, at 10-12; Self-Driving Coalition for Safer Streets Comments, at 5-8; Dr. William Riggs Comments, at 8; and Waymo Comments, at 12.

[238] San Francisco Municipal Transportation Agency/San Francisco County Transportation Authority Comments, at 11.

[239] San Francisco Municipal Transportation Agency/San Francisco County Transportation Authority Comments, at 10-11.

believes that the parameters should be discussed and developed further at a workshop. After additional information is obtained, CPED has authority to update the template and data collection regarding VMT.

Alliance for Automobile Innovation again asks the Commission to remove reporting on idling vehicles.[240] The Commission rejected this argument in the decision and there is no reason to revisit the issue.

LADOT requests data on near misses to account for how autonomous vehicles are interacting with other street users.[241] The Commission rejects this request as it relates to safety of the driving system and thus falls under purview of DMV. But the Commission will work collaboratively with DMV regarding this data field to ascertain if the Commission should also require the AV Industry to report near misses or if the DMV, assuming it collects this information, will share this data with the Commission.

- Should the Commission Reduce EV Charging Data Collection to Match CARB Information Requirements?

The AV Industry, their trade associations, and academia argue against collecting EV charging data except at the most aggregated levels. They argue that the data collection is infeasible for many reasons including that not all chargers are networked and that the collection would disincentivize adoption and would not provide material benefit. Instead, Cruise, with support of Waymo, suggests adopting CARB's reporting requirements as part of the Low Carbon Fuel

[240] Alliance for Automotive Innovation Comments, at 3-4.

[241] Los Angeles Department of Transportation Comments, at 7.

Standard: the number of chargers, their location, max demand of the chargers, and total usage per charger.

The Commission rejects this request. The Commission is gathering information for additional reasons than why CARB is gathering information. The Commission needs to understand EVs' impact on the energy grid and whether EVs are capable of providing grid services. The level of detail required by this decision is important because AV fleets' impact could be both significant and locational.

- Should the Commission Adopt Prescriptive Data Auditing of Quarterly Reports?

LADOT asks the Commission to audit quarterly reports because they claim AV companies have financial incentives to "adjust" their reporting. LADOT asks the Commission to reaffirm its authority to collect and verify data and to develop plans to do so.[242]

The Commission rejects this request. The Commission has no need to reassert its authority because it gathers and verifies data on an ongoing basis. The Commission can initiate an audit itself or on a tip from an outside source. Adopting a specific audit schedule reduces Commission flexibility which is critical to its ability to conduct audits on an as needed basis.

- Should the Commission Replace Quarterly Reporting Frequency of Data Reporting with Greater or Lesser Reporting?

The AV Industry and their trade associations argue that quarterly reporting is overly burdensome and request annual or bi-annual reporting.[243]

[242] Los Angeles Department of Transportation Comments, at 4.

[243] *See* Aurora Innovation Comments, at 9.

SFMTA wants quarterly reporting because the AV Industry is changing at a rapid pace. SFMTA points out that over the course of a year, pilot participants went from driving several hundred miles per quarter to several hundred thousand miles per quarter.[244] LADOT wants monthly or weekly reporting so it is better able to make scalable decisions about AV services, or to communicate to other local stakeholders about the status of AV services in their neighborhoods.[245]

The Commission declines to alter the data reporting frequency at present. The Commission and its staff can evaluate this issue in the future depending on level and usefulness of the data that quarterly reporting reveals.

Request for Corrections and Clarifications:

- Access to Airports.

Waymo states that the decision would prohibit AV companies participating in the Commission's Phase I AV deployment programs from operating at airports without the permission of the Commission and the airport authority itself.[246] Waymo asks for clarification that airports should retain discretion and control to permit AV service on airport property by an AV operator with a Commission deployment permit. Without this clarification, Waymo suggests that the decision could be interpretated to require a Commission deployment permit holder to seek further Commission permission each time it reaches agreement with an airport.

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[244] San Francisco Municipal Transportation Agency/San Francisco County Transportation Authority Reply Comments, at 4.

[245] Los Angeles Department of Transportation Comments, at 9.

[246] Waymo Comments, at 10-12.

The Commission finds this request to be reasonable and will clarify the language in the decision.

- Goal Calculation

Los Angeles Department of Transportation asks the Commission to be clearer about how it will decide to periodically revise its goals, and instead of requesting that permit holders describe whether and how they have reached out to advocates in their quarterly reports, the Commission, through a competitive process, should permit a representative group to regularly evaluate the permit holders.[247]

The Commission rejects this request. Any determination of whether to periodically revise its goals will be based on the record developed in this proceeding, any subsequent proceeding, and any information Commission staff acquires through its interactions with the AV industry and from other sources.

- Definition of Vehicle Occupancy.

The decision requires companies to distinguish between employees and non-employees when reporting vehicle occupancy. Waymo suggests that this distinction is intrusive and unworkable from a practical data collection standpoint.[248]

The Commission rejects Waymo's request. Distinguishing between employees and non-employees when reporting vehicle occupancy gives the Commission the clearest understanding of all persons occupying a vehicle during a ride.

- Definitions of Complaint, Incident, and Safety Incident.

[247] Los Angeles Department of Transportation Comments, at 7.

[248] Waymo Comments, at 14.

Waymo asks for definitions of or limits on reporting of complaints.[249] Without definitions, Waymo argues that the intended scope of a relevant complaint or incident is unclear. While the decision declines to define the terms "complaints" or "incidents," the Commission will clarify that "complaints" and "incidents" that reports are required are those that impact the safety of either the passenger in the vehicle or the public.

- Definitions of Remote Operator.

Waymo states that Ordering Paragraph 7(a) should be revised so that "remote operators" is qualified with the phrase "capable of performing the dynamic driving task."[250] Waymo also requests that "dynamic driving tasks" (plural) should be corrected to refer to "dynamic driving task (singular) so that the language is consistent with the DMV's definition.[251]

The Commission finds these requests to be reasonable and will clarify the language in the decision.

- Concurrent CPUC/DMV Applications.

Self Driving Coalition for Safer Streets states that requiring the sequential applications to the DMV and the Commission is inefficient and will further delay the deployment of a much-needed passenger services.[252] It argues that, in the interest of administrative efficiency, the Commission should allow concurrent applications to the Commission and the DMV for deployment permits.

[249] Waymo Comments, at 10.

[250] Waymo Comments, at 13.

[251] Waymo Comments, at 13-14.

[252] Self Driving Coalition for Safer Streets Comments, at 5.

The Commission rejects the request to allow for concurrent applications. The sequence is necessary because the Commission requires companies to obtain a DMV permit to demonstrate the safety of the vehicle. Once that safety clearance test has been satisfied, the Commission can move forward with the understanding that the DMV has determined the safety of the vehicle for use as part of the AV deployment.

- Converting Pilot Permits to Deployment Permits.

Aurora Innovation points out that the decision's Conclusions of Law appears to indicate that only entities that hold a Charter-Party Carrier Class P permit would be eligible to charge for rides in the Commission's AV deployment program.[253] Aurora points out that it holds a Class-A charter party certificate in the Drivered AV Passenger Service Pilot Program and it fears that, without clarification, it might not be authorized to apply for a deployment permit.

The Commission agrees with Aurora Innovation's concern. The Commission will revise the decision so that P permit-holders and A certificate-holders may both be allowed to apply for an AV deployment permit.

- GO 157-E Exemptions.

Waymo asks that the decision clarify the standard and scope of AV permit exemptions from GO 157-E.[254] It notes that while the decision allows participants in the AV deployment to seek exemptions for the use of third-party contractors (which Waymo supports), it asks that the decision be clarified that exemption requests may be for relief from any of GO 157-E's rules and regulations.

[253] Aurora Comments, at 9.

[254] Waymo Comments, at 8-9.

The Commission rejects this request to expand the scope of permit exemptions from GO 157-E.

- Transport of Minors

Waymo states that the Commission currently prohibits the transport of unaccompanied minors in autonomous vehicle passenger service. Yet Waymo claims that D.18-05-043 requires each AV-TCP to develop a plan to ensure that AV service is available only to be chartered by adults 18 years and older.[255] Waymo suggests revising the decision so that it is aligned with D.18-05-043.

The Commission rejects Waymo's request. No one under 18 may travel unaccompanied, regardless of whoever chartered the vehicle. Waymo's requested change would create a loophole in the Commission's regulations that would permit an adult to charter a vehicle for the transport of a minor without the chartering adult being present in the vehicle.

- Definition of Accessibility

UC Davis argues that the decision applies different definitions of accessibility and that this lack of apparent lack of consistency that will make interpretation of the decision difficult.[256]

The Commission agrees that accessible rides and accessible service are inclusive of all people with sensory, cognitive, and physical disabilities. The decision will be revised to reflect that consistency.

- CEQA Review.

[255] Waymo Comments, at 14.

[256] UC Davis Comments, at 3, referring to sections 4.7.2 (accessible service) and 4.14.2 (accessible ride).

San Francisco Municipal Transportation Agency/San Francisco County Transportation Authority, and California Transit Association fault the decision for not addressing their concerns regarding The California Environmental Quality Act (CEQA).[257] They ask that the decision be revised to identify what environmental review supports the decision by analyzing the environmental and other impacts, and by identifying the mitigation measures or alternatives that could avoid or minimize them.

The Commission has authorized deployment on a phased basis in order to gather information about various aspects of the deployment programs during Phase I and to use that information to shape future phases. Parties may raise the application of CEQA in future phases.

There is no direct physical impact nor reasonably foreseeable indirect change caused by this regulatory scheme at this time. To the extent the Decision may result in AV utilization by TCPs, it is far too speculative to undertake environmental review of any such possible effects. At this stage, it is unclear what effects, if any, AVs will have on subsequent TCP operations and it is not at all foreseeable that there will be adverse environmental impacts or that any impacts would worsen. We explicitly do not create new categories of operations or seek to encourage or discourage TCP AV operations.

- TNCs' Commitment to Electric Vehicles.

The Sierra Club writes that the Proposed Decision "may be interpreted as implying that Uber and Lyft's voluntary commitments will set the default

[257] San Francisco Municipal Transportation Agency/San Francisco County Transportation Authority Comments, at 12-13; California Transit Association Comments, at 5.

expectations for the deployment of zero emission vehicles in this sector. However, after developing a record on the relevant issues, the Commission will likely find that a much swifter transition to zero emission technologies is appropriate." [258] The Sierra Club requests following change to pages 46-47 of the Proposed Decision to the reflect that change:

> *Shared rides have potential to reduce VMT, reduce congestion, and lower fares for service. The viability of shared rides, however, depends on the scale of operations and each company's business model. The quarterly data reports for the pilot programs show that, during the testing phase, initial operations have deployed non-ZEVs on the road. This may continue to be the case until AV services mature and expand. ~~That said, Uber and Lyft's recent commitments to transition to 100% electric vehicles by 2030 offers a compelling benchmark for AV companies and at upcoming workshops the onus will be on the companies to justify different timelines to reach the same target. Until that time,~~ SB 1014 may set emissions standards for AV companies in addition to TNCs."*

The Commission adopts this request.

6. Assignment of Proceeding

Genevieve Shiroma is the assigned Commissioner and Robert M. Mason III and Debbie Chiv are the assigned Administrative Law Judges in this proceeding.

Findings of Fact

1. D.18-05-043 authorized a pilot test program for autonomous vehicle passenger service with drivers and a pilot program for driverless autonomous vehicle passenger service.

[258] Sierra Club Comments, at 2.

2. The Commission issued permits to the following parties to participate in the AV pilot programs: Zoox, Waymo, AutoX Technologies, Pony.ai, Aurora Innovation, Cruise, and Voyage Auto.

3. The seven participants in the pilot submitted data over seven quarterly reporting periods, showing that over 600,000 autonomous vehicle miles were driven.

4. The California DMV regulates the safe operation of AVs, and the Commission regulates certain for-hire transportation to provide for safety and consumer protection.

5. Division 16.6, Sections 38750-38756 of the California Vehicle Code, requires the DMV to develop regulations for the testing and public use of autonomous vehicles.

6. The DMV has divided the development of AV regulations into two phases: (1) testing, followed by (2) public use, which the DMV characterizes as deployment.

7. AV manufacturers must receive a DMV AV Testing Permit before operating Test AVs on public roads and testing must be conducted by the manufacturer.

8. AV manufacturers must comply with multiple financial, insurance, operator, safety, and reporting requirements.

9. The DMV issued new draft regulations in December 2015 and held public workshops in early 2016 to continue developing regulations to address driverless AV operations.

10. The DMV noticed the formal rulemaking in March 2017, followed by amended text in October 2017 and November 2017. The most recent DMV comment period ended on December 15, 2017.

11. The DMV submitted the proposed final regulations to the OAL for final approval on January 11, 2018, and OAL approved the regulations on February 26, 2018.

12. Pursuant to Government Code Section 11343.4, the driverless AV operations regulations became effective April 1, 2018.

13. The National Highway Traffic Safety Administration has adopted automation levels developed by SAE.

14. SAE specifies six distinct levels of automation; Levels 3, 4 and 5 meet the "autonomous" standard.

15. Level 3 automation technology requires a human driver to intervene when necessary; Levels 4 and 5 are capable of driverless operation.

16. The DMV regulations define an autonomous test vehicle as one equipped with technology that can perform the dynamic driving task but requires either a human test driver or remote operator (in the case of driverless AVs) to continuously supervise the vehicle's performance.

17. Manufacturers of test vehicles equipped with Levels 4 or 5 technologies may apply for and receive a Manufacturer's Testing Permit for Driverless Vehicles if the manufacturer certifies compliance with certain additional requirements.

18. The DMV regulations allow the Department to suspend or revoke the Manufacturer's Testing Permit of any manufacturer for any act or omission of the manufacturer or one of its agents, employees, contractors or designees which the

DMV finds makes the conduct of autonomous vehicle testing on public roads by the manufacturer an unreasonable risk to the public.

19. The DMV regulations do not allow permit-holders to accept monetary compensation for rides in Test AVs.

20. The Commission regulates passenger service provided by all common carriers.

21. The Commission licenses TCPs to offer such service, develops rules and regulations for TCP permit-holders, and enforces the rules and regulations.

22. The Commission has an interest in the safety and consumer protection provided to passengers who receive passenger service in an AV, just as in all vehicles available for charter.

23. The Commission's TCP Permit process can accommodate the entities wishing to deploy AVs commercially.

24. Data about the operation of Drivered AV Passenger Service in Phase I of the AV Passenger Services deployment programs will be important to consider as AVs begin operation in California and can be used for analysis in future phases.

25. Data about the operation of Driverless AV Passenger Service in Phase I of the AV Passenger Services deployment programs will be important to consider as AVs begin operation in California and can be used for analysis in future phases.

26. Today's order and the modified AV regulations do not have any direct physical impact on the environment and will not result in any reasonably foreseeable indirect change.

Conclusions of Law

1. It is reasonable for the Commission to create Phase I of a drivered AV deployment program under which the Commission authorizes entities that hold a Charter-Party Carrier Class P permit or a Charter-Party Carrier Class A certificate to add autonomous vehicles to their passenger carrier equipment statement, where that permit-holder also holds a California Department of Motor Vehicles AV Deployment Permit and wishes to offer Drivered AV Passenger Service in California.

2. It is reasonable for the Commission to create Phase I of a driverless AV deployment program under which the Commission authorizes entities that hold a Charter-Party Carrier Class "P" permit or a Charter-Party Carrier Class "A" certificate to add autonomous vehicles to their passenger carrier equipment statement, where that permit-holder also holds a California Department of Motor Vehicles AV Deployment Permit and wishes to offer Driverless AV Passenger Service in California.

3. It is reasonable for the Commission to authorize participants in Phase I of the drivered and driverless AV deployment programs to accept monetary compensation for rides in autonomous vehicles.

4. It is reasonable for the Commission to authorize participants in Phase I of the drivered and driverless AV deployment programs to accept rides from more than one chartering party (*i.e.*, fare-splitting or "shared rides" are permitted).

5. It is reasonable for the Commission to order that the requirements applicable to Transportation Charter-Party Carrier permit-holders participating

in Phase I of the deployment program for Drivered Autonomous Vehicle Passenger Service shall include:

a. Hold and comply with all standard terms and conditions of the California Public Utilities Commission's Transportation Charter-Party Carrier permit; including ensuring that remote operators comply with all terms and conditions applicable to drivers;
b. Hold a California Department Motor Vehicles Autonomous Vehicle Deployment Permit and certify that the entity is in compliance with all Department of Motor Vehicles regulations;
c. Maintain insurance for the Autonomous Vehicle offered for Drivered Autonomous Vehicle Passenger Service in compliance with Department of Motor Vehicles regulations;
d. Conduct vehicle inspections and maintenance consistent with the requirements of the Transportation Charter-Party Carrier permit;
e. Enroll all drivers in the Department of Motor Vehicles Employer Pull Notice Program;
f. Show proof of compliance with Department of Motor Vehicles regulations addressing Autonomous Vehicle driver training and certification;
g. Attest to the drivered autonomous vehicle operations of one of the entity's vehicles that represents the vehicle and technology characterizing the fleet to be offered for the service for a minimum of 30 days on roads in California following the entity's receipt of the Department of Motor Vehicles Autonomous Vehicle Deployment Permit, and include in the attestation:
    i. The start date of actual operations on California roads,
    ii. The times of day and number of hours per day in operation during the 30-day period,

iii. A statement and map of the Operational Design Domain as stated on the entity's Department of Motor Vehicles Autonomous Vehicle Deployment Permit,

iv. A statement that the vehicle's 30 days of operations were conducted in the specific Operational Design Domain in which the applicant intends to pilot them for passenger service.

h. Transmit simultaneously to the Commission all reports required by Department of Motor Vehicles regulations, including the process in the event of a collision, law enforcement interaction plan, collision reporting, disclosure to the passenger regarding collection and use of personal information, and annual Autonomous Vehicle disengagement reports;

i. File with the Commission a plan for how the Transportation Charter-Party Carrier permit holder will provide notice to the passenger that they are receiving Drivered Autonomous Vehicle Passenger Service, and how the passenger will affirmatively consent to or decline the service;

j. Provide to the passenger a photo of the vehicle that will provide the service during the offer/consent exchange;

k. Transmit to the Commission quarterly reports of data about the operation of their vehicles providing Drivered AV Passenger Service. The data to be reported shall include the following:

i. For each trip request, where applicable:

(1). The time and date the trip was requested.

(2). The census tract in which the customer submitted the trip request.

(3). The zip code in which the customer submitted the trip request.

(4). Whether the trip was fulfilled.

(5). Reason the trip was unfulfilled, if applicable.

(6). The vehicle's VIN.

(7). Whether the vehicle is a Plug-in Hybrid Electric Vehicle (PHEV), Battery Electric Vehicle (BEV), Fuel Cell Electric Vehicle (FCEV), or something else.

(8). Whether the vehicle is a Wheelchair Accessible Vehicle (WAV).

(9). Vehicle occupancy, excluding employees of or contractors for the company ("Passengers").

(10). The time and date at which the vehicle accepted a ride.

(11). The time and date at which the vehicle picked up the passenger.

(12). The time and date at which the vehicle dropped off the passenger.

(13). Vehicle miles traveled while the vehicle is neither carrying passengers nor en route to picking up a passenger ("Period 1 VMT").

(14). Vehicle miles traveled between the point where the vehicle was when it accepted a trip to the point where it picked up the passenger ("Period 2 VMT").

(15). Vehicle miles traveled between the pick-up point and the drop-off point ("Period 3 VMT").

(16). The number of passengers multiplied by the number of miles traveled with those passengers in the car ("Passenger Miles Traveled").

(17). Electric Vehicle Miles Traveled ("eVMT").

(18). The census tract in which the passenger was picked up.

(19). The census tract in which the passenger was dropped off.

(20). The zip code in which the passenger was picked up.

(21). The zip code in which the passenger was dropped off.

(22). Whether the passenger requested a WAV.

(23). Whether the passenger requested or authorized a shared ride.

(24). Whether the trip was a shared ride.

(25). Whether the ride was fared.

ii. For each month in the reporting period:

(1). The total amount of time vehicles waited between ending one passenger trip and initiating the next passenger trip, expressed as a monthly total in hours.

(2). The sum of all vehicles' Period 1 VMT.

(3). The sum of all vehicles' Period 2 VMT.

(4). The sum of all vehicles' Period 3 VMT.

(5). The sum of all vehicles' ZEV VMT.

(6). The total number of passengers transported, excluding employees of or contractors for the company.

(7). The sum of all vehicles' Passenger Miles Traveled.

(8). For each census tract in company's operational design domain (ODD), the total number of trips that began (*i.e.*, picked up a customer) in that census tract.

(9). For each census tract in company's ODD, the total number of trips that ended (*i.e.,* dropped off a customer) in that census tract.

(10). Total number of Wheelchair Accessible Vehicles in service as of the date that the report is due.

(11). Total number of WAV rides requested.

(12). Total number of WAV rides requested but unfulfilled because no WAV was available.

(13). Total number of WAV rides accepted and fulfilled.

iii. For the entire reporting period:

(1). Total number of complaints, separated into buckets based on a template developed by CPED.

(2). Total number of incidents, separated into buckets based on a template developed by CPED.

(3). Total payouts to parties involved in incidents, if known.

(4). For each electric-vehicle charger used by one of the company's battery electric vehicle or plug-in hybrid electric vehicle:

a) The charger's location, by census tract.

b) The power level of the charger.

c) The type of charger (privately owned by company, residential, workplace, public, etc).

d) Load serving entity (i.e., utility) serving the charger and its electric rate.

e) The time, day, and duration of each charging session.

iv. Narrative responses to the following questions:

(1). Is your AV service open to the general public? If not, who is eligible to participate?

(2). What accessibility services does your service provide? Include a description of activities to accommodate customers who use wheelchairs or are otherwise movement impaired; are blind or have other visual impairments; and any other accessible services you provide.

(3). How have you engaged with accessibility advocates to inform your operations?

(4). Describe any new accessibility services you expect to provide in the near term.

(5). What actions have you taken to ensure your AV operations reduce greenhouse gas emissions and air quality hazards in California?

(6). Describe any new activities you to expect to take in the near term to reduce greenhouse gas emissions and air quality hazards.

(7). How have your operations provided service to low-income communities; disadvantaged communities; and communities that are rural, speak a primary language other than English, or are otherwise hard to reach?

(8). How have you engaged with advocates for those communities to inform your operations?

(9). Describe any new services you plan to add in the near term that will expand service to those communities.

v. Any claimed confidentiality of the quarterly reports shall be governed by GO 66-D.

vi. If any permit holder seeks to claim confidential treatment of their quarterly reports, the permit holder must:

(1). Identify each page, section, or field, or any portion thereof, that it wishes to be treated as confidential.

(2). Specify the basis for the Commission to provide confidential treatment with specific citation to an applicable provision of the California Public Records Act. A citation or general marking of confidentiality, such as "General Order-66-D" and/or "Pub. Util. Code § 583," without additional justification is insufficient to meet the burden of proof.

(3). If the permit holder cites Government Code § 6255(a) (the public interest balancing test) as the basis to withhold the document from public release, then the permit-holder must demonstrate with granular specificity on the facts of the particular information why the public interest served by not disclosing the record clearly outweighs the public interest served by disclosure of the record. A private economic interest is an inadequate interest to claim in lieu of a public interest.

(4). If the permit holder cites Government Code § 6254(k) (which allows information to be withheld when disclosure is prohibited by federal or state law), it must cite the applicable statutory provision and explain why the specific statutory provision applies to the particular information.

(5). If the permit holder claims that the release of its quarterly report(s), or any part thereof, will place it an unfair business disadvantage, the permit-holder's competitor(s) must be identified

and the unfair business disadvantage must be explained in detail.

(6). If the permit holder claims that the release of its quarterly report(s), or any part thereof, will violate a trade secret (as provided by Civil Code §§3426 through 3426.11 and Government Code §6254.7(d)), the permit-holder must establish that the annual report(s) (a) contain information including a formula, pattern, compilation, program, device, method, technique, or process; (b) derives independent economic value (actual or potential) from not being generally known to the public or to other persons who can obtain economic value; and (c) are the subject of efforts that are reasonable under the circumstances to maintain their secrecy.

l. Submit these reports using a template provided by the Consumer Protection and Enforcement Division.

m. Starting April 1, 2021, submit Quarterly Data reports on the following dates: January 1, April 1, July 1, and October 1. These reporting period for each of these submissions will be September 1 to November 30, December 1 to February 28 (February 29 in leap years), March 1 to May 31, and June 1 to August 31, respectively.

n. Comply with all other applicable State and Federal regulations.

6. It is reasonable for the Commission to require that a Transportation Charter-Party Carrier permit-holder offering Drivered Autonomous Vehicle Passenger Service shall be suspended immediately from the deployment program upon suspension or revocation of their deployment permit by the California Department of Motor Vehicles and not reinstated until the Department of Motor Vehicles has reinstated the deployment permit.

7. It is reasonable for the Commission to require that permit-holders participating in Phase I of the Driverless AV Deployment program shall:

a. Hold and comply with all standard terms and conditions of the California Public Utilities Commission's Transportation Charter-Party Carrier permit; including ensuring that remote operators comply with all terms and conditions applicable to drivers;

b. Hold a California Department Motor Vehicles Autonomous Vehicle Deployment Permit and certify that the entity is in compliance with all Department Motor Vehicles regulations;

c. Maintain insurance for the Autonomous Vehicle offered for Driverless Autonomous Vehicle Passenger Service in compliance with Department of Motor Vehicles regulations;

d. Conduct vehicle inspections and maintenance consistent with the requirements of the Transportation Charter-Party Carrier permit;

e. Enroll all remote operators that are capable of performing dynamic driving task in the Department of Motor Vehicles' Employer Pull Notice Program;

f. Attest that one of the entity's vehicles that represents the vehicle and technology characterizing the fleet to be offered for the service for a minimum of 30 days on roads in California following the entity's receipt of the Department of Motor Vehicles Autonomous Vehicle Deployment Permit, and include in the attestation:

   i. The start date of actual operations on California roads,

   ii. The geographic location of the operations in California,

   iii. Times of day and number of hours per day in operation during the 30-day period,

iv. A statement and map of the Operational Design Domain as stated on the entity's Department of Motor Vehicles test permit,

v. A statement that the vehicle's 30 days of operations were conducted in the specific Operational Design Domain in which the applicant intends to pilot them for passenger service.

g. Transmit simultaneously to the Commission all reports required by Department of Motor Vehicles regulations, including the process in the event of a collision, law enforcement interaction plan, collision reporting, disclosure to the passenger regarding collection and use of personal information, and annual Autonomous Vehicle disengagement reports;

h. File with the Commission a plan for how the Transportation Charter-Party Carrier permit-holder will provide notice to the passenger that they are receiving Driverless Autonomous Vehicle Passenger Service, and how the passenger will affirmatively consent to or decline the service;

i. Provide to the passenger a photo of the vehicle that will provide the service during the offer/consent exchange;

j. Not offer or provide passenger service operations at airports without the express authorization of the relevant airport authority;

k. Ensure that the service is available only to be chartered by adults 18 years and older, and provide proof of such assurance to the Commission with their Transportation Charter-Party Carrier permit application and upon request anytime thereafter;

l. Record all communications from the passenger in the vehicle with the remote operator while Driverless Autonomous Vehicle Passenger Service was being provided and retain the recording for one year from the date of the recording. Any and all such recordings must be

provided to the Commission upon request. The claimed confidentiality of the recording or recordings shall be governed by GO 66-D;

m. Transmit to the Commission quarterly reports of data about the operation of their vehicles providing Driverless AV Passenger Service. The data to be reported shall include the following:

i. For each trip request, where applicable:

(1). The time and date the trip was requested.

(2). The census tract in which the customer submitted the trip request.

(3). The zip code in which the customer submitted the trip request.

(4). Whether the trip was fulfilled.

(5). Reason the trip was unfulfilled, if applicable.

(6). The vehicle's VIN.

(7). Whether the vehicle is a Plug-in Hybrid Electric Vehicle (PHEV), Battery Electric Vehicle (BEV), Fuel Cell Electric Vehicle (FCEV), or something else.

(8). Whether the vehicle is a Wheelchair Accessible Vehicle (WAV).

(9). Vehicle occupancy, excluding employees of or contractors for the company ("Passengers").

(10). The time and date at which the vehicle accepted a ride.

(11). The time and date at which the vehicle picked up the passenger.

(12). The time and date at which the vehicle dropped off the passenger.

(13). Vehicle miles traveled while the vehicle is neither carrying passengers nor en route to picking up a passenger ("Period 1 VMT").

(14). Vehicle miles traveled between the point where the vehicle was when it accepted a trip to the point where it picked up the passenger ("Period 2 VMT").

(15). Vehicle miles traveled between the pick-up point and the drop-off point ("Period 3 VMT").

(16). The number of passengers multiplied by the number of miles traveled with those passengers in the car ("Passenger Miles Traveled").

(17). Electric Vehicle Miles Traveled ("eVMT").

(18). The census tract in which the passenger was picked up.

(19). The census tract in which the passenger was dropped off.

(20). The zip code in which the passenger was picked up.

(21). The zip code in which the passenger was dropped off.

(22). Whether the passenger requested a WAV.

(23). Whether the passenger requested or authorized a shared ride.

(24). Whether the trip was a shared ride.

(25). Whether the ride was fared.

ii. For each month in the reporting period:

(1). The total amount of time vehicles waited between ending one passenger trip and initiating the next passenger trip, expressed as a monthly total in hours.

(2). The sum of all vehicles' Period 1 VMT.

(3). The sum of all vehicles' Period 2 VMT.

(4). The sum of all vehicles' Period 3 VMT.

(5). The sum of all vehicles' ZEV VMT.

(6). The total number of passengers transported, excluding employees of or contractors for the company.

(7). The sum of all vehicles' Passenger Miles Traveled.

(8). For each census tract in company's operational design domain (ODD), the total number of trips that began (*i.e.*, picked up a customer) in that census tract.

(9). For each census tract in company's ODD, the total number of trips that ended (*i.e.,* dropped off a customer) in that census tract.

(10). Total number of WAV in service at the end of the reporting period.

(11). Total number of WAV rides requested.

(12). Total number of WAV rides requested but unfulfilled because no WAV was available.

(13). Total number of WAV rides accepted and fulfilled.

(14). For each electric-vehicle charger used by one of the company's battery electric vehicle or plug-in hybrid electric vehicle:

a) The charger's location, by census tract.

b) The power level of the charger.

c) The type of charger (privately owned by company, residential, workplace, public, etc).

d) Load serving entity (*i.e.,* utility) serving the charger and its electric rate.

e) The time, day, and duration of each charge.

iii. For the entire quarter:

(1). Total number of complaints, separated into buckets based on a template developed by CPED.

(2). Total number of incidents, separated into buckets based on a template developed by CPED.

(3). Total payouts to parties involved in incidents, if known.

iv. Narrative responses to the following questions:

(1). Is your AV service open to the general public? If not, who is eligible to participate?

(2). What accessibility services does your service provide? Include a description of activities to accommodate customers who use wheelchairs or are otherwise movement impaired; are blind or have other visual impairments; and any other accessible services you provide.

(3). How have you engaged with accessibility advocates to inform your operations?

(4). Describe any new accessibility services you expect to provide in the near term.

(5). What actions have you taken to ensure your AV operations reduce greenhouse gas emissions and air quality hazards in California?

(6). Describe any new activities you to expect to take in the near term to reduce greenhouse gas emissions and air quality hazards.

(7). How have your operations provided service to low-income communities; disadvantaged communities; and communities that are rural,

speak a primary language other than English, or are otherwise hard to reach?

(8). How have you engaged with advocates for those communities to inform your operations?

(9). Describe any new services you plan to add in the near term that will expand service to those communities.

v. Any claimed confidentiality of the quarterly reports shall be governed by GO 66-D. If any permit-holder seeks to claim confidential treatment of their quarterly reports, the permit-holder shall:

(1). Identify each page, section, or field, or any portion thereof, that it wishes to be treated as confidential.

(2). Specify the basis for the Commission to provide confidential treatment with specific citation to an applicable provision of the California Public Records Act. A citation or general marking of confidentiality, such as "General Order-66-D" and/or "Pub. Util. Code § 583," without additional justification is insufficient to meet the burden of proof.

(3). If the permit holder cites Government Code § 6255(a) (the public interest balancing test) as the basis to withhold the document from public release, then the permit-holder must demonstrate with granular specificity on the facts of the particular information why the public interest served by not disclosing the record clearly outweighs the public interest served by disclosure of the record. A private economic interest is an inadequate interest to claim in lieu of a public interest.

(4). If the permit holder cites Government Code § 6254(k) (which allows information to be

withheld when disclosure is prohibited by federal or state law), it must cite the applicable statutory provision and explain why the specific statutory provision applies to the particular information.

(5). If the permit holder claims that the release of its quarterly report(s), or any part thereof, will place it an unfair business disadvantage, the permit-holder's competitor(s) must be identified and the unfair business disadvantage must be explained in detail.

(6). If the permit holder claims that the release of its quarterly report(s), or any part thereof, will violate a trade secret (as provided by Civil Code §§3426 through 3426.11 and Government Code §6254.7(d)), the permit holder must establish that the annual report(s) (a) contain information including a formula, pattern, compilation, program, device, method, technique, or process; (b) derives independent economic value (actual or potential) from not being generally known to the public or to other persons who can obtain economic value; and (c) are the subject of efforts that are reasonable under the circumstances to maintain their secrecy.

n. Submit these reports using a template provided by the Consumer Protection and Enforcement Division.

o. Starting April 1, 2021, submit Quarterly Data reports on the following dates: January 1, April 1, July 1, and October 1. These reporting period for each of these submissions will be September 1 to November 30, December 1 to February 28 (February 29 in leap years), March 1 to May 31, and June 1 to August 31, respectively.

p. Comply with all other applicable State and Federal regulations.

8. It is reasonable for the Commission to require Transportation Charter-Party Carrier permit-holders that wish to participate in Phase I of the deployment program for Driverless Autonomous Vehicle Passenger Service to transmit a Passenger Safety Plan that describes their policies and procedures to minimize risk for all passengers in their driverless vehicles. The Passenger Safety Plan must, at minimum, detail how the applicant will: minimize safety risks to passengers traveling in a ride operated without a driver in the vehicle; minimize safety risks to passengers traveling in a shared, driverless ride, including prevention and response to assaults and harassments; respond to unsafe scenarios outside and within the vehicle, such as hostile individuals; educate and orient passengers about the technology, experience, and safety procedures; ensure customers can safely identify, enter, and exit the AV they requested; enable passengers to contact the AV service provider during the ride and to ensure the passengers receive a timely and complete response; collect, respond to, and retain any passenger comments and complaints; and ensure the safety measures described above are accessible to and apply to all passengers, including those with limited mobility, vision impairments, or other disabilities.

9. It is reasonable for the Commission to require the Passenger Safety Plan to include the anticipated response time to passenger requests to contact the AV service provider.

10. It is reasonable for the Commission to require the Passenger Safety Plan to also include the applicant's written COVID-19 Emergency Plan as required by Resolution TL-19131. As required in Resolution TL-19131, the permit-holders must follow the CDC guidelines and the CDPH Guidance on preventing the

transmission of COVID-19, and any revisions and/or updates to those guidelines, as practicable.

11. It is reasonable for the Commission's Consumer Protection and Enforcement Division staff to plan to hold a workshop on passenger service provided by participants within one year following the issuance of this decision.

12. It is reasonable for the Commission to require that a Transportation Charter-Party Carrier permit-holder offering Driverless Autonomous Vehicle Passenger Service shall be suspended immediately from the deployment program upon suspension or revocation of their testing permit by the California Department of Motor Vehicles and not reinstated until the Department of Motor Vehicles has reinstated the testing permit.

13. It is reasonable for the Commission to require that, starting April 1, 2021, participants in both the drivered and driverless AV pilot programs submit their quarterly data reports on the following dates: January 1, April 1, July 1, and October 1. These reporting period for each of these submissions will be September 1 to November 30, December 1 to February 28 (February 29 in leap years), March 1 to May 31, and June 1 to August 31, respectively.

14. It is reasonable for the Commission to require that participants in the Commission's AV Pilot Programs must now report the following information as part of their Quarterly Pilot Data Reports:

a. Total number of WAV rides requested.
b. Total number of WAV rides requested but unfulfilled because no WAV was available.
c. Total number of WAV rides requested but unfulfilled because the vehicle operator declined the request.
d. Total number of WAV rides accepted and fulfilled.

15. It is reasonable for the Commission to determine that participants in the Commission's AV Pilot Programs are no longer required to report the following information as part of their Quarterly Pilot Data Reports:

a. Total number of accessible rides requested per quarter that are fulfilled.
b. Total number of accessible rides requested per quarter that are unfulfilled because of a lack of accessible vehicles.
c. Total number of accessible rides requested per quarter that are declined by the driver.

16. It is reasonable for the Commission to, except for the changes described above, maintain the same data reporting requirements for the AV pilot programs.

17. It is reasonable for the Commission to require that an entity seeking to participate in Phase I of the driverless deployment program shall submit to the Director of CPED an application for a permit in the form of a Tier 3 Advice Letter. The application process should be modeled on the General Rules of GO 96-B. GO 96-B provides a procedural vehicle by which an entity seeks a Commission order that the requested relief is consistent with Commission policy and applicable law. The permit application will demonstrate compliance with G.O. 157-E; be in conformance with all service requirements in GO 96-B using all of the Transportation Network Company rulemakings service lists; include all the information required by this Decision, particularly the Passenger Safety Plan as specified in Ordering Paragraph 8; the DMV deployment permit; and an expanded data reporting plan. CPED staff will review each application and prepare a draft resolution recommending appropriate disposition of each application for a Commission resolution. All appeals of resolutions shall take the form of an application for rehearing pursuant to GO 96-B.

18. It is reasonable for the Commission to require that entities may apply to offer driverless service with or without shared rides. If an entity applies to offer driverless service without shared rides, its Passenger Safety Plan need not describe how it will minimize safety risks to passengers traveling in shared, driverless rides.

19. It is reasonable for the Commission to require that an entity authorized to participate in Phase I of the driverless deployment program subsequently wishes to provide shared rides using driverless AVs, the request shall be made in the form of an Advice Letter that revises the carrier's Passenger Safety Plan to include the required content related to shared rides. CPED staff will review each Advice Letter and prepare a draft resolution recommending appropriate disposition on the revised Passenger Safety Plan to provide shared rides for a Commission decision. Relatedly, if an entity authorized to participate in Phase I of the driverless deployment program intends to change its operations in a way that would materially affect the approaches outlined in its Passenger Safety Plan, that entity should provide the Director of CPED with an updated Passenger Safety Plan by way of a Tier 2 Advice Letter.

20. It is reasonable for the Commission to initiate Phase II in a subsequent proceeding or stage to evaluate the data collected in Phase I no later than three years from initiation of Phase I. The Phase I deployment programs will initiate upon approval of the first amended drivered AV deployment permit or approval of the first advice letter authorizing driverless AV deployment, whichever is first.

21. Because today's order and the modified AV regulations do not have any direct physical impact on the environment and will not result in any reasonably

foreseeable indirect change the decision and regulations do not constitute a CEQA project.

22. The Commission has no obligation pursuant to CEQA to review the environmental impact of today's order and the modified AV regulations because they do not constitute a CEQA project.

O R D E R

IT IS ORDERED that:

1. The Commission creates Phase I of a drivered Autonomous Vehicle (AV) deployment program under which the Commission authorizes entities that hold a Charter-Party Carrier Class "P" permit or "A" certificate to add autonomous vehicles to their passenger carrier equipment statement, where that permit-holder also holds a California Department of Motor Vehicles AV Deployment Permit and wishes to offer Drivered AV Passenger Service in California.

2. The Commission creates Phase I of a driverless Autonomous Vehicle (AV) deployment program under which the Commission authorizes entities that hold a Charter-Party Carrier Class "P" permit or "A" certificate to add autonomous vehicles to their passenger carrier equipment statement, where that permit-holder also holds a California Department of Motor Vehicles AV Deployment Permit and wishes to offer Driverless AV Passenger Service in California.

3. Participants in Phase I of the drivered and driverless Autonomous Vehicle deployment programs may accept monetary compensation for rides in autonomous vehicles.

4. Participants in Phase I of the Drivered and Driverless Autonomous Vehicles Deployment Programs may accept rides from more than one chartering party (*i.e.*, fare-splitting and "shared rides" are permitted).

5. The requirements applicable to Transportation Charter-Party Carrier permit-holders participating in the deployment program for Drivered Autonomous Vehicle Passenger Service shall include but are not limited to:

a. Hold and comply with all standard terms and conditions of the California Public Utilities Commission's Transportation Charter-Party Carrier permit; including ensuring that remote operators comply with all terms and conditions applicable to drivers;

b. Hold a California Department Motor Vehicles Autonomous Vehicle Deployment Permit and certify that the entity is in compliance with all Department Motor Vehicles regulations;

c. Maintain insurance for the Autonomous Vehicle offered for Drivered Autonomous Vehicle Passenger Service in compliance with Department of Motor Vehicles regulations;

d. Conduct vehicle inspections and maintenance consistent with the requirements of the Transportation Charter-Party Carrier permit;

e. Enroll all drivers in the Department of Motor Vehicles Employer Pull Notice Program;

f. Show proof of compliance with Department of Motor Vehicles regulations addressing Autonomous Vehicle driver training and certification;

g. Attest that one of the entity's vehicles that represents the vehicle and technology characterizing the fleet to be offered for the service for a minimum of 30 days on roads in California following the entity's receipt of the Department of Motor Vehicles Autonomous Vehicle Deployment Permit, and include in the attestation:

    i. The start date of actual operations on California roads,

ii. The times of day and number of hours per day in operation during the 30-day period,

iii. A statement and map of the Operational Design Domain as stated on the entity's Department of Motor Vehicles Autonomous Vehicle Deployment Permit,

iv. A statement that the vehicle's 30 days of operations were conducted in the specific Operational Design Domain in which the applicant intends to pilot them for passenger service.

h. Transmit simultaneously to the Commission all reports required by Department of Motor Vehicles regulations, including the process in the event of a collision, law enforcement interaction plan, collision reporting, disclosure to the passenger regarding collection and use of personal information, and annual Autonomous Vehicle disengagement reports;

i. File with the Commission a plan for how the Transportation Charter-Party Carrier permit-holder will provide notice to the passenger that they are receiving Drivered Autonomous Vehicle Passenger Service, and how the passenger will affirmatively consent to or decline the service;

j. Provide to the passenger a photo of the vehicle that will provide the service during the offer/consent exchange;

k. Transmit to the Commission quarterly reports of data about the operation of their vehicles providing Drivered AV Passenger Service. The data to be reported shall include the following:

i. For each trip:

(1). The time and date the trip was requested.

(2). The census tract in which the customer submitted the trip request.

(3). The zip code in which the customer submitted the trip request.

(4). Whether the trip was fulfilled.

(5). Reason the trip was unfulfilled, if applicable.

(6). The vehicle's VIN.

(7). Whether the vehicle is a Plug-in Hybrid Electric Vehicle (PHEV), Battery Electric Vehicle (BEV), Fuel Cell Electric Vehicle (FCEV), or something else.

(8). Whether the vehicle is a Wheelchair Accessible Vehicle (WAV).

(9). Vehicle occupancy, excluding employees of or contractors for the company ("Passengers").

(10). The time and date at which the vehicle accepted a ride.

(11). The time and date at which the vehicle picked up the passenger.

(12). The time and date at which the vehicle dropped off the passenger.

(13). Vehicle miles traveled while the vehicle is neither carrying passengers nor en route to picking up a passenger (Period 1 VMT).

(14). Vehicle miles traveled between the point where the vehicle was when it accepted a trip to the point where it picked up the passenger (Period 2 VMT).

(15). Vehicle miles traveled between the pick-up point and the drop-off point (Period 3 VMT).

(16). Electric Vehicle Miles Traveled ("eVMT").

(17). The number of passengers multiplied by the number of miles traveled with those passengers in the car (Passenger Miles Traveled).

(18). The census tract in which the passenger was picked up.

(19). The census tract in which the passenger was dropped off.

(20). The zip code in which the passenger was picked up.

(21). The zip code in which the passenger was dropped off.

(22). Whether the passenger requested a WAV.

(23). Whether the passenger requested or authorized a shared ride.

(24). Whether the trip was a shared ride.

(25). Whether the passenger was charged a fare for the trip.

ii. For each month in the reporting period:

(1). The total amount of time vehicles waited between ending one passenger trip and initiating the next passenger trip, expressed as a monthly total in hours.

(2). The sum of all vehicles' Period 1 VMT.

(3). The sum of all vehicles' Period 2 VMT.

(4). The sum of all vehicles' Period 3 VMT.

(5). The sum of all vehicles' ZEV VMT.

(6). The total number of passengers transported in passenger service.

(7). The sum of all vehicles' Passenger Miles Traveled.

(8). For each census tract in company's operational design domain (ODD), the total number of trips that began (*i.e.,* picked up a customer) in that census tract.

(9). For each census tract in company's ODD, the total number of trips that ended (*i.e.,* dropped off a customer) in that census tract.

(10). Total number of WAVs in service as of the date that the report is due.

(11). Total number of WAV rides requested.

(12). Total number of WAV rides requested but unfulfilled because no WAV was available.

(13). Total number of WAV rides accepted and fulfilled.

iii. For the entire reporting period:

(1). Total number of complaints, separated into buckets based on a template developed by the Consumer Protection and Enforcement Division (CPED).

(2). Total number of incidents, separated into buckets based on a template developed by CPED.

(3). Total payouts to parties involved in incidents, if known.

(4). For each electric-vehicle charger used by one of the company's battery electric vehicle or plug-in hybrid electric vehicle:

a) The charger's location, by census tract.

b) The power level of the charger.

c) The type of charger (privately owned by company, residential, workplace, public, etc).

d) Load serving entity (*i.e.*, utility) serving the charger and its electric rate.

e) The time, day, and duration of each charge.

iv. Narrative responses to the following questions:

(1). Is your AV service open to the general public? If not, who is eligible to participate?

(2). What accessibility services does your service provide? Include a description of activities to accommodate customers who use wheelchairs or are otherwise movement impaired; are blind or have other visual impairments; and any other accessible services you provide.

(3). How have you engaged with accessibility advocates to inform your operations?

(4). Describe any new accessibility services you expect to provide in the near term.

(5). What actions have you taken to ensure your AV operations reduce greenhouse gas emissions and air quality hazards in California?

(6). Describe any new activities you to expect to take in the near term to reduce greenhouse gas emissions and air quality hazards.

(7). How have your operations provided service to low-income communities; disadvantaged communities; and communities that are rural, speak a primary language other than English, or are otherwise hard to reach?

(8). How have you engaged with advocates for those communities to inform your operations?

(9). Describe any new services you plan to add in the near term that will expand service to those communities.

v. Any claimed confidentiality of the quarterly reports shall be governed by General Order 66-D.

vi. If any permit holder seeks to claim confidential treatment of their quarterly reports, the permit holder must:

(1). Identify each page, section, or field, or any portion thereof, that it wishes to be treated as confidential.

(2). Specify the basis for the Commission to provide confidential treatment with specific citation to an applicable provision of the California Public Records Act. A citation or general marking of confidentiality, such as "General Order 66-D" and/or "Pub. Util. Code § 583," without additional justification is insufficient to meet the burden of proof.

(3). If the permit holder cites Government Code § 6255(a) (the public interest balancing test) as the basis to withhold the document from public release, then the permit-holder must demonstrate with granular specificity on the facts of the particular information why the public interest served by not disclosing the record clearly outweighs the public interest served by disclosure of the record. A private economic interest is an inadequate interest to claim in lieu of a public interest.

(4). If the permit holder cites Government Code § 6254(k) (which allows information to be withheld when disclosure is prohibited by federal or state law), it must cite the applicable statutory provision and explain why the specific statutory provision applies to the particular information.

(5). If the permit holder claims that the release of its quarterly report(s), or any part thereof, will place it an unfair business disadvantage, the permit-holder's competitor(s) must be identified and the unfair business disadvantage must be explained in detail.

(6). If the permit holder claims that the release of its quarterly report(s), or any part thereof, will violate a trade secret (as provided by Civil Code §§ 3426 through 3426.11 and Government Code § 6254.7(d)), the permit-holder must establish that the annual report(s) (a) contain information including a formula, pattern, compilation, program, device, method, technique, or process; (b) derives independent economic value (actual or potential) from not being generally known to the public or to other persons who can obtain economic value; and (c) are the subject of efforts that are reasonable under the circumstances to maintain their secrecy.

l. Submit these reports using a template provided by the Consumer Protection and Enforcement Division.

m. Starting April 1, 2021, submit Quarterly Data reports on the following dates: January 1, April 1, July 1, and October 1. These reporting period for each of these submissions will be September 1 to November 30, December 1 to February 28 (February 29 in leap years), March 1 to May 31, and June 1 to August 31, respectively.

n. Comply with all other applicable State and Federal regulations.

6. A Transportation Charter-Party Carrier permit holder offering Drivered Autonomous Vehicle Passenger Service shall be suspended immediately from the Phase I deployment program upon suspension or revocation of their deployment permit by the California Department of Motor Vehicles and not reinstated until the Department of Motor Vehicles has reinstated the deployment permit.

7. Permit-holders participating in Phase I of the driverless AV deployment program shall:

a. Hold and comply with all standard terms and conditions of the California Public Utilities Commission's Transportation Charter-Party Carrier permit; including ensuring that remote operators capable of performing the dynamic driving task comply with all terms and conditions applicable to drivers;

b. Hold a California Department Motor Vehicles Autonomous Vehicle Deployment Permit and certify that the entity is in compliance with all Department of Motor Vehicles regulations;

c. Maintain insurance for the Autonomous Vehicle offered for Driverless Autonomous Vehicle Passenger Service in compliance with Department of Motor Vehicles regulations;

d. Conduct vehicle inspections and maintenance consistent with the requirements of the Transportation Charter-Party Carrier permit;

e. Enroll all remote operators that are capable of performing dynamic driving task in the Department of Motor Vehicles' Employer Pull Notice Program;

f. Attest that one of the entity's vehicles that represents the vehicle and technology characterizing the fleet to be offered for the service for a minimum of 30 days on roads in California following the entity's receipt of the Department of Motor Vehicles Autonomous Vehicle Deployment Permit, and include in the attestation:

   i. The start date of actual operations on California roads,

   ii. The geographic location of the operations in California,

   iii. Times of day and number of hours per day in operation during the 30-day period,

   iv. A statement and map of the Operational Design Domain as stated on the entity's Department of Motor Vehicles test permit,

v. A statement that the vehicle's 30 days of operations were conducted in the specific Operational Design Domain in which the applicant intends to pilot them for passenger service.

g. Transmit simultaneously to the Commission all reports required by Department of Motor Vehicles regulations, including the process in the event of a collision, law enforcement interaction plan, collision reporting, disclosure to the passenger regarding collection and use of personal information, and annual Autonomous Vehicle disengagement reports;

h. File with the Commission a plan for how the Transportation Charter-Party Carrier permit-holder will provide notice to the passenger that they are receiving Driverless Autonomous Vehicle Passenger Service, and how the passenger will affirmatively consent to or decline the service;

i. Provide to the passenger a photo of the vehicle that will provide the service during the offer/consent exchange;

j. Not offer or provide passenger service operations at airports without the express authorization of the relevant airport authority;

k. Ensure that the service is available only to be chartered by adults 18 years and older, and provide proof of such assurance to the Commission with their Transportation Charter-Party Carrier permit application and upon request anytime thereafter;

l. Record all communications from the passenger in the vehicle with the remote operator while Driverless Autonomous Vehicle Passenger Service was being provided and retain the recording for one year from the date of the recording. Any and all such recordings must be provided to the Commission upon request. The claimed confidentiality of the recording or recordings shall be governed by General Order (GO) 66-D;

m. Transmit to the Commission quarterly reports of data about the operation of their vehicles providing Driverless AV Passenger Service. The data to be reported shall include the following:

i. For each trip:

(1). The time and date the trip was requested.

(2). The census tract in which the customer submitted the trip request.

(3). Whether the trip was fulfilled

(4). Reason the trip was unfulfilled, if applicable.

(5). The vehicle's VIN.

(6). Whether the vehicle is a Plug-in Hybrid Electric Vehicle (PHEV), Battery Electric Vehicle (BEV), Fuel Cell Electric Vehicle (FCEV), or something else.

(7). Whether the Vehicle is a Wheelchair Accessible Vehicle (WAV).

(8). Vehicle occupancy, excluding employees of or contractors for the company (passengers).

(9). The time at which the vehicle accepted a ride.

(10). The time at which the vehicle picked up the passenger.

(11). The time at which the vehicle dropped off the passenger.

(12). Vehicle miles traveled while the vehicle is neither carrying passengers nor en route to picking up a passenger (Period 1 VMT).

(13). Vehicle miles traveled between the point where the vehicle was when it accepted a trip to the point where it picked up the passenger (Period 2 VMT).

(14). Vehicle miles traveled between the pick-up point and the drop-off point (Period 3 VMT).

(15). The number of passengers multiplied by the number of miles traveled with those passengers in the car (Passenger Miles Traveled).

(16). Electric Vehicle Miles Traveled ("eVMT").

(17). The census tract in which the passenger was picked up.

(18). The census tract in which the passenger was dropped off.

(19). The zip code in which the passenger was picked up.

(20). The zip code in which the passenger was dropped off.

(21). Whether the passenger requested a WAV.

(22). Whether the passenger requested or authorized a shared ride.

(23). Whether the trip was a shared ride.

(24). Whether the ride was fared.

ii. For each month in the reporting period:

(1). The total amount of time vehicles waited between ending one passenger trip and initiating the next passenger trip, expressed as a monthly total in hours.

(2). The sum of all vehicles' Period 1 VMT.

(3). The sum of all vehicles' Period 2 VMT.

(4). The sum of all vehicles' Period 3 VMT.

(5). The sum of all vehicles' ZEV VMT.

(6). The total number of passengers transported, excluding employees of or contractors for the company.

(7). The sum of all vehicles' Passenger Miles Traveled.

(8). For each census tract in company's operational design domain (ODD), the total number of trips that began (*i.e.*, picked up a customer) in that census tract.

(9). For each census tract in company's ODD, the total number of trips that ended (*i.e.,* dropped off a customer) in that census tract.

(10). Total number of Wheelchair Accessible Vehicles (WAV) in service at the end of the reporting period.

(11). Total number of WAV rides requested.

(12). Total number of WAV rides requested but unfulfilled because no WAV was available.

(13). Total number of WAV rides accepted and fulfilled.

(14). For each electric-vehicle charger used by one of the company's battery electric vehicle or plug-in hybrid electric vehicle:

a) The charger's location, by census tract.

b) The power level of the charger.

c) The type of charger (privately owned by company, residential, workplace, public, etc).

d) Load serving entity (*i.e.,* utility) serving the charger and its electric rate.

e) The time, day, and duration of each charge.

iii. For the entire quarter:

(1). Total number of complaints, separated into buckets based on a template developed by the Consumer Protection and Enforcement Division (CPED).

(2). Total number of incidents, separated into buckets based on a template developed by CPED.
(3). Total payouts to parties involved in incidents, if known.

iv. Narrative responses to the following questions:

(1). Is your AV service open to the general public? If not, who is eligible to participate?

(2). What accessibility services does your service provide? Include a description of activities to accommodate customers who use wheelchairs or are otherwise movement impaired; are blind or have other visual impairments; and any other accessible services you provide.

(3). How have you engaged with accessibility advocates to inform your operations?

(4). Describe any new accessibility services you expect to provide in the near term.

(5). What actions have you taken to ensure your AV operations reduce greenhouse gas emissions and air quality hazards in California?

(6). Describe any new activities you to expect to take in the near term to reduce greenhouse gas emissions and air quality hazards.

(7). How have your operations provided service to low-income communities; disadvantaged communities; and communities that are rural, speak a primary language other than English, or are otherwise hard to reach?

(8). How have you engaged with advocates for those communities to inform your operations?

(9). Describe any new services you plan to add in the near term that will expand service to those communities.

v. Any claimed confidentiality of the quarterly reports shall be governed by GO 66-D. If any permit-holder seeks to claim confidential treatment of their quarterly reports, the permit-holder must:

(1). Identify each page, section, or field, or any portion thereof, that it wishes to be treated as confidential.

(2). Specify the basis for the Commission to provide confidential treatment with specific citation to an applicable provision of the California Public Records Act. A citation or general marking of confidentiality, such as "General Order 66-D"and/or "Pub. Util. Code § 583," without additional justification is insufficient to meet the burden of proof.

(3). If the permit holder cites Government Code § 6255(a) (the public interest balancing test) as the basis to withhold the document from public release, then the permit-holder must demonstrate with granular specificity on the facts of the particular information why the public interest served by not disclosing the record clearly outweighs the public interest served by disclosure of the record. A private economic interest is an inadequate interest to claim in lieu of a public interest.

(4). If the permit holder cites Government Code § 6254(k) (which allows information to be withheld when disclosure is prohibited by federal or state law), it must cite the applicable statutory provision and explain why the specific statutory provision applies to the particular information.

(5). If the permit holder claims that the release of its quarterly report(s), or any part thereof, will place it an unfair business disadvantage, the permit-holder's competitor(s) must be identified and the

unfair business disadvantage must be explained in detail.

(6). If the permit holder claims that the release of its quarterly report(s), or any part thereof, will violate a trade secret (as provided by Civil Code §§3426 through 3426.11 and Government Code §6254.7(d), the permit holder must establish that the annual report(s) (a) contain information including a formula, pattern, compilation, program, device, method, technique, or process; (b) derives independent economic value (actual or potential) from not being generally known to the public or to other persons who can obtain economic value; and (c) are the subject of efforts that are reasonable under the circumstances to maintain their secrecy.

n. Submit these reports using a template provided by the Consumer Protection and Enforcement Division.

o. Starting April 1, 2021, submit Quarterly Data reports on the following dates: January 1, April 1, July 1, and October 1. These reporting period for each of these submissions will be September 1 to November 30, December 1 to February 28 (February 29 in leap years), March 1 to May 31, and June 1 to August 31, respectively.

p. Comply with all other applicable State and Federal regulations.

8. Transportation Charter-Party Carrier permit-holders that wish to participate in Phase I of the deployment program for Driverless Autonomous Vehicle Passenger Service must transmit a Passenger Safety Plan that describes their policies and procedures to minimize risk for all passengers in their driverless vehicles. The Passenger Safety Plan must, at minimum, detail how the applicant will: minimize safety risks to passengers traveling in a ride operated without a driver in the vehicle; minimize safety risks to passengers traveling in a

shared, driverless ride, including prevention and response to assaults and harassments; respond to unsafe scenarios outside and within the vehicle, such as hostile individuals; educate and orient passengers about the technology, experience, and safety procedures; ensure customers can safely identify, enter, and exit the AV they requested; enable passengers to contact the AV service provider during the ride and to ensure the passengers receive a timely and complete response; collect, respond to, and retain any passenger comments and complaints; and ensure the safety measures described above are accessible to and apply to all passengers, including those with limited mobility, vision impairments, or other disabilities.

9. Transportation Charter-Party Carriers' Passenger Safety Plans must include the applicant's anticipated response time to passenger requests to contact the AV service provider.

10. Transportation Charter-Party Carriers' Passenger Safety Plans must include the applicant's written COVID-19 Emergency Plan as required by Resolution TL-19131. As required in Resolution TL-19131, the permit-holders must follow the CDC guidelines and the CDPH Guidance on preventing the transmission of COVID-19, and any revisions and/or updates to those guidelines, as practicable.

11. An entity seeking to participate in Phase I of the driverless deployment program shall submit to the Director of the Consumer Protection and Enforcement Division an application in the form of a Tier 3 Advice Letter for a permit to operate a driverless AV (Permit Application) in the manner set forth in Ordering Paragraph 18.

12. The Commission's Consumer Protection and Enforcement Division staff is authorized to hold a workshop on passenger service provided by participants within one year following the issuance of this decision.

13. A Transportation Charter-Party Carrier permitholder offering Driverless Autonomous Vehicle Passenger Service shall be suspended immediately from the deployment program upon suspension or revocation of their testing permit by the California Department of Motor Vehicles and not reinstated until the Department of Motor Vehicles has reinstated the testing permit.

14. Starting April 1, 2021, participants in both the drivered and driverless AV pilot programs must submit their quarterly data reports on the following dates: January 1, April 1, July 1, and October 1. These reporting period for each of these submissions will be September 1 to November 30, December 1 to February 28 (February 29 in leap years), March 1 to May 31, and June 1 to August 31, respectively.

15. Participants in the Commission's AV Pilot Programs must now report the following information as part of their quarterly pilot data reports:

a. Total number of Wheelchair Accessible Vehicle (WAV) rides requested.
b. Total number of WAV rides requested but unfulfilled because no WAV was available.
c. Total number of WAV rides requested but unfulfilled because the vehicle operator declined the request.
d. Total number of WAV rides accepted and fulfilled.

16. Participants in the Commission's AV Pilot Programs are no longer required to report following information as part of their Quarterly Pilot Data Reports:

a. Total number of accessible rides requested per quarter that are fulfilled.
b. Total number of accessible rides requested per quarter that are unfulfilled because of a lack of accessible vehicles.
c. Total number of accessible rides requested per quarter that are declined by the driver.

17. Except for the changes above, the contents of the quarterly data reports required for the AV pilot programs remain the same.

18. An entity seeking to participate in Phase I of the driverless deployment program shall submit to the Director of Consumer Protection and Enforcement Division (CPED) an application for a permit in the form of a Tier 3 Advice Letter. The application process should be modeled on the General Rules of General Order (GO) 96-B. GO 96-B provides a procedural vehicle by which an entity seeks a Commission order that the requested relief is consistent with Commission policy and applicable law. The permit application will demonstrate compliance with G.O. 157-E; be in conformance with all service requirements in GO 96-B using all of the Transportation Network Company rulemakings service lists; include all the information required by this Decision, particularly the Passenger Safety Plan as specified in Ordering Paragraph 8; the DMV deployment permit; and an expanded data reporting plan. CPED staff will review each application and prepare a draft resolution recommending appropriate disposition of each application for a Commission resolution. All appeals of resolutions shall take the form of an application for rehearing pursuant to GO 96-B. Entities seeking to appeal the resolution of an advice letter to participate in the driverless deployment program shall follow the requirements under section 8 of GO 96-B—Application for Rehearing and

Petition for Modification of Resolution; Request for extension. Such appeals will be reviewed by the Commission's Legal Division.

19. Entities may apply to offer driverless service in Phase I of the driverless deployment program with or without shared rides. If an entity applies to offer driverless service in Phase I without shared rides, its Passenger Safety Plan need not describe how it will minimize safety risks to passengers traveling in shared, driverless rides.

20. If an entity authorized to participate in Phase I of the driverless deployment program subsequently wishes to provide shared rides using driverless autonomous vehicles, the request shall be made in the form of a Tier 3 Advice Letter that revises the carrier's Passenger Safety Plan to include the required content related to shared rides. Consumer Protection and Enforcement Division staff will review each Advice Letter and prepare a draft resolution recommending appropriate disposition on the revised Passenger Safety Plan to provide shared rides for a Commission decision. Relatedly, if an entity authorized to participate in the driverless deployment program intends to change its operations in a way that would materially affect the approaches outlined in its Passenger Safety Plan, that entity should provide the Commission's Director of Consumer Protection and Enforcement Division with an updated Passenger Safety Plan by way of a Tier 2 Advice Letter.

21. No later than three years after initiation of Phase I, the Commission will initiate Phase II in subsequent proceeding or stage to evaluate the data collected in Phase I. The Phase I deployment programs will initiate upon approval of the first amended drivered AV deployment permit or approval of the first advice letter authorizing driverless AV deployment, whichever is first.

22. This proceeding remains open.

This order is effective today.

Dated November 19, 2020, at San Francisco, California.

MARYBEL BATJER
President
LIANE M. RANDOLPH
MARTHA GUZMAN ACEVES
CLIFFORD RECHTSCHAFFEN
GENEVIEVE SHIROMA
Commissioners

APPENDIX A

Data Collection and Program Goals

Underlying Data	Safety	Accessibility	Equity	Environment	Industry dev.
Trip-Request Level Data					
The time and date the trip was requested.		*Prerequisite for detailed analysis*			
The census tract in which the customer submitted the trip request.		*Prerequisite for detailed analysis*			
The zip code in which the customer submitted the trip request.		*Prerequisite for detailed analysis*			
Whether the trip was fulfilled.		*Prerequisite for detailed analysis*			
Reason the trip was unfulfilled, if applicable.		*Prerequisite for detailed analysis*			
Vehicle VIN.		*Prerequisite for detailed analysis*			
Vehicle Fuel Type (Whether the vehicle is a Plug-in Hybrid Electric Vehicle (PHEV), Battery Electric Vehicle (BEV), Fuel Cell Electric Vehicle (FCEV), Internal Combustion Engine Vehicle (ICE) or something else.)				**x**	
Whether the vehicle is a Wheelchair Accesible Vehicle.		**x**			
Vehicle occupancy, excluding employees of or contractors for the company ("Passengers").	**x**		**x**	**x**	
The time and date at which the vehicle accepted a ride.			**x**	**x**	
The time and date at which the vehicle picked up the passenger.			**x**	**x**	
The time and date at which the vehicle dropped off the passenger.			**x**	**x**	

Underlying Data	Safety	Accessibility	Equity	Environment	Industry dev.
Trip-Request Level Data					
Vehicle miles traveled since the last trip while the vehicle is neither carrying passengers nor en route to picking up a passenger (“Period 1 VMT”).				x	
Vehicle miles traveled between the point where the vehicle was when it accepted a trip to the point where it picked up the passenger (“Period 2 VMT”).				x	
Vehicle miles traveled between the pick-up point and the drop-off point (“Period 3 VMT”).				x	
Electric Vehicle Miles Traveled ("eVMT")				x	
The number of passengers multiplied by the number of miles traveled with those passengers in the car (“Passenger Miles Traveled”).				x	
The census tract in which the passenger was picked up.			x	x	
The census tract in which the passenger was dropped off.			x	x	
The zip code in which the passenger was picked up.			x	x	
The zip code in which the passenger was dropped off.			x	x	
Whether the passenger requested a Wheelchair Accessible Vehicle (WAV).		x			
Whether the passenger requested or authorized a shared ride.				x	
Whether the trip was a shared ride.				x	x
Whether the ride was fared.					x

Underlying Data	Safety	Accessibility	Equity	Environment	Industry dev.
Monthly Data					
The total number of trips.				x	x
The total amount of time vehicles waited between ending one passenger trip and initiating the next passenger trip, expressed as a monthly total in hours.				x	
The sum of all vehicles' Period 1 VMT.				x	
The sum of all vehicles' Period 2 VMT.				x	
The sum of all vehicles' Period 3 VMT.				x	
The sum of all vehicles' ZEV VMT.			x	x	
The total number of passengers transported, excluding employees of or contractors for the company.				x	
The sum of all vehicles' Passenger Miles Traveled.				x	x
For each census tract in company's operational design domain (ODD), the total number of trips that began (i.e., picked up a customer) in that census tract.			x	x	
For each census tract in company's ODD, the total number of trips that ended (i.e., dropped off a customer) in that census tract.			x	x	
Total number of Wheelchair Accessible Vehicles in service as of the date that the report is due.		x			
Total number of WAV rides requested.		x			
Total number of WAV rides requested but unfulfilled because no WAV was available.		x			
Total number of WAV rides accepted and fulfilled.		x			

Underlying Data	Safety	Accessibility	Equity	Environment	Industry dev.
Data for Entire Reporting Period					
Total number of complaints, bucketed by type.	x				
Total number of incidents, bucketed by type.	x				
Total payouts to parties involved in incidents, if known.	x				
Data for Entire Reporting Period from Companies That Use PHEVs and BEVs					
For each charger:					
Location by census tract.				x	
Power level of charger.				x	
Type of charger (privately owned by company, residential, workplace, public, etc).				x	
Load serving entity (i.e., utility)serving the charger and its electric rate.				x	
Charging session data including time, day and duration of charge.				x	

Underlying Data	Safety	Accessibility	Equity	Environment	Industry dev.
Narrative Responses:					
Is your AV service open to the general public? If not, who is eligible to participate?		x			
What accessibility services does your service provide? Include a description of activities to accommodate customers who use wheelchairs or are otherwise movement impaired; are blind or have other visual impairments; and any other accessible services you provide.		x			
How have you engaged with accessibility advocates to inform your operations?		x			
Describe any new accessibility services you expect to provide in the near term.		x			
What actions have you taken to ensure your AV operations reduce greenhouse gas emissions and air quality hazards in California?				x	
Describe any new activities you to expect to take in the near term to reduce greenhouse gas emissions and air quality hazards.				x	
How have your operations provided service to low-income communities; disadvantaged communities; and communities that are rural, speak a primary language other than English, or are otherwise hard to reach?			x		
How have you engaged with advocates for those communities to inform your operations?			x		
Describe any new services you plan to add in the near term that will expand service to the communities listed above.			x		

(END OF APPENDIX A)