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Autonomous Vehicles Strategic Framework

Draft Vision and Guiding Principles

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INTRODUCTION

Autonomous vehicles have the potential to transform our transportation system and communities. Solving individual mobility needs, improving roadway safety and moving goods throughout the state sustainably and efficiently are among potential benefits. The deployment of autonomous vehicles may also transform manufacturing, maintenance, and service business models to create new jobs and industries for the California workforce.

California has been a leader in preparing for this emerging technology, including research and analysis on the possible applications and impacts of autonomous vehicles, creation of testing and deployment regulations, and the development of the [“Automated Vehicle Principles for Healthy and Sustainable Communities”](#) authored by many California state agencies in 2018. Building on those previous efforts, an interagency workgroup has been collaborating to create a statewide vision for how autonomous vehicles should be best integrated into our daily lives. These discussions have focused on the underlying policy objectives needed to thoughtfully maximize the promised benefits of autonomous vehicles and mitigate the potential negative effects on the transportation system, jobs, housing, climate, and public health.

The enclosed DRAFT Vision Statement and Guiding Principles are intended to provide a framework under which California will define policies, strategies and actions to guide the development and integration of autonomous vehicles into our communities. They are also intended to complement other state efforts and maximize alignment with California’s existing goals for mobility, safety, job quality, equity, health, environment, land use, and quality of life.

Given the emerging nature of autonomous vehicle technology, the Vision and Guiding Principles are designed to be of an overarching nature, so they may remain constant through any changes to economic outlooks, population shifts, or specific timeframes. They also broadly take into consideration possible use of the technology, including passenger service, fleet operations and goods movement, including ports, agriculture, and last-mile delivery services.

This document represents an important step in California’s efforts to best position our state and residents to reap the positive benefits of this emerging technology.

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VISION

The State of California will leverage innovation to safely deploy and maximize the potential public benefits of zero-emission autonomous vehicles for mobility, safety, job quality, equity, health, environment, land use, and quality of life.

GUIDING PRINCIPLES

Environment: Deploy zero-emission autonomous vehicles in a manner that minimizes emissions and vehicle miles traveled, promotes smart growth, and maintains natural and working lands.

In California, the transportation sector accounts for half of our greenhouse gas (GHG) emissions and improving air quality continues to be a challenge in large portions of the state. Reduction of toxic tail-pipe emissions and overall vehicle miles traveled (VMT) are both essential to meeting our climate and health-based air quality mandates.

Creating policies that encourage autonomous vehicles be deployed as zero emission vehicles, and that they be part of shared, right-sized fleets that encourage pooling, will be important in both reducing VMT and encouraging cleaner vehicles. Additionally, it will be critical to encourage broader land use strategies that support healthy natural and working lands, and efficient land use and housing that includes housing near transit hubs, as well as addressing the special transportation needs of rural communities in a manner that improves access to destinations and goods without inducing sprawl.

Equity: Improve affordable and convenient access to destinations, goods, and services through autonomous vehicle deployment, particularly to reduce or eliminate systemic inequities for all communities throughout California.

Historically, transportation improvements have disproportionately benefitted certain segments of the population. Far too often, transportation decisions quite literally erected barriers, divided communities, and amplified racial and socioeconomic inequalities, particularly in our Black and Brown neighborhoods, and tribal communities.

As we prepare for the greater deployment of autonomous vehicles, we must strive to create policies and plans that maximize the ability of the transportation system as a whole to provide safe and convenient access to

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opportunities, prioritize and protect Californians facing the greatest inequities, engage communities during the decision-making process, and minimize environmental impact--while also reducing burdens related to transportation access and cost for disadvantaged and/or low-income populations, the State's tribal communities, and people of color.

Inclusive Design: Increase autonomous vehicles' benefits for all road users in California through universally accessible design and routes.

Autonomous vehicles could transform personal mobility and provide expanded access to transportation for individuals who cannot drive or face barriers to driving. Enabling the widest range of potential users, including older adults and people with disabilities, to benefit from this technology will require an inclusive approach to autonomous vehicle planning and design. These conversations should extend beyond the design of the vehicle itself to address accessibility of physical and digital infrastructure during a passenger's "door-to-door" trip. Additionally, strategies to address potential barriers to accessing autonomous vehicles and services, including language access, technology, or payment methods, should be supported.

Partnerships: Integrate autonomous vehicles into California's economy through active collaboration, joint investment, and shared responsibility among all stakeholders in the public and private sectors.

Successful economic integration of autonomous vehicles will be a product of partnerships between innovators, investors, federal, state and local governments, tribal governments, industry leaders, labor and community stakeholders, and other interested groups. Continued conversations among partners, as well as robust, meaningful, and authentic community engagement surrounding the technological potential, societal needs, and deployment decisions of autonomous vehicles, will be imperative to making a positive impact on our communities.

Public Health and Livability: Ensure autonomous vehicles operate as an integrated part of a multi-modal system that prioritizes people and their health over vehicles, to improve public health outcomes.

Healthy communities integrate active and multimodal transportation options to enhance livability. Autonomous vehicles will become a part of the multimodal transportation system and lead to increased mobility. However, they may also induce longer trips that promote urban sprawl, which could in turn exacerbate social inequities. In order to facilitate the

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most positive autonomous vehicle outcomes throughout California, we must develop policies that ensure autonomous vehicle behavior and autonomous vehicle-supporting infrastructure works to further the comfort and safety of pedestrians, cyclists, and existing transit systems to provide an array of transportation mode options that enhance livability, help prevent injury and disease, and support positive health outcomes.

Quality Jobs: Require jobs created in the transition to autonomous vehicles be high road jobs that support California workers with decent wages and benefits, and improve the competitiveness of California's high road employers.

Autonomous vehicles have the potential to bring about many personal and societal benefits, including the expansion or creation of high road jobs in zero emission autonomous vehicle-related industries and services. High road jobs are those that pay family-sustaining wages, offer comprehensive employer-provided benefits, and value worker voice and wisdom, as well as providing job security, fair scheduling, a safe and healthy work environment, and pathways for career advancement. In addition, autonomous vehicles may lead to the modification or elimination of existing jobs, potentially displacing a portion of California's workforce. The state should proactively examine ways to ensure that those displaced workers are supported in their transition, either within or outside the autonomous vehicle sector, through upskilling and by creating a safety net for those who are delayed in finding new opportunities.

Safety: Increase the safety of all road users and the underlying transportation system through autonomous vehicle operation, design, and infrastructure investments.

California is committed to deploying strategies that enhance roadway safety and move the state towards an overall goal of eliminating traffic fatalities and serious injuries. In support of this goal, it is essential that autonomous vehicles operate in a manner that makes roads safer (and feel safer) for other motorists, autonomous vehicle passengers, pedestrians, cyclists, and other vulnerable road users.

We will explore infrastructure investments that enhance the safety, usability, and accessibility of the current transportation system and lay the groundwork for future autonomous vehicle operations. This planning should also consider the potential for autonomous vehicles to assist in emergency and disaster response and recovery activities.

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Consumer and public education on the appropriate uses, capabilities, and limitations of autonomous vehicle technology will also play a key role in encouraging the safe integration of autonomous vehicles. Both educational and enforcement efforts will have to be reevaluated as autonomous vehicles and traditional vehicles initially share the roads for years to come.

Shared Prosperity: Create an inclusive economic future that maximizes opportunities and benefits and limits negative impacts for both California's workers and the state economy due to the transition and growth of the autonomous vehicle industry.

California should build its autonomous vehicles future on the high road. That means that any decision regarding the integration of autonomous vehicles into our neighborhoods and our economy should aim to simultaneously benefit California's workers, businesses, and communities.