

Waymo LLC 1600 Amphitheatre Pkwy Mountain View, CA

January 19, 2024

#### ADVICE LETTER 0002 (Tier 2)

TO THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

In accordance with Decision (D.) 20-11-046 (as modified by D.21-05-017) (the "Deployment Decision") and the *CPUC Autonomous Vehicle (AV) Drivered and Driverless Pilot and Phase I Deployment Programs Application Instructions and Requirements (Version 1.0)* ("Application Instructions"), Waymo LLC ("Waymo") (TCP0038152A) hereby submits this Advice Letter 0002.

#### <u>PURPOSE</u>

By this advice letter, Waymo seeks California Public Utilities Commission ("CPUC" or "Commission") approval of Waymo's updated Passenger Safety Plan (January 2024), in connection with Waymo's expanded operational design domain ("ODD") for deployment<sup>1</sup> approved by the Department of Motor Vehicles (DMV) on January 11, 2024.<sup>2</sup> As amended, Waymo's DMV Deployment ODD authorizes Waymo to expand deployment operations in portions of the Los Angeles area and additional portions of the San Francisco Peninsula.

Per the Deployment Decision, "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."<sup>3</sup> Waymo intends to thoughtfully expand passenger carrier service provided to the public under our CPUC Phase I Driverless Autonomous Vehicle (AV) Deployment Permit and has revised our CPUC Passenger Safety Plan to reflect this planned expansion and make other timely updates, as described more fully below. We respectfully request the timely disposition of this advice letter by the Commission's Consumer Protection and Enforcement Division (CPED), pursuant to General Order (GO) 96-B and the authorities referenced above.

<sup>&</sup>lt;sup>1</sup> A Statement and Map of Waymo's January 11, 2024 DMV-approved ODD for deployment operations is appended hereto as <u>Attachment A</u>.

<sup>&</sup>lt;sup>2</sup> DMV Letter of Deployment Amendment Approval, dated January 11, 2024, is appended hereto as <u>Attachment B</u>.

<sup>&</sup>lt;sup>3</sup> The Deployment Decision, Ordering Paragraph 20.

#### **INTRODUCTION**

Waymo is an autonomous driving technology company with a mission to make it safe and easy for people and things to get where they're going. At Waymo, we aim to reduce traffic injuries and fatalities by driving safely and responsibly, while providing a comfortable and consistent transportation experience to our riders. Safety is at the core of Waymo's mission - it's the reason we began our pioneering AV research and development as the Google Self-Driving Car Project, 15 years ago. Waymo's safety publications include *Waymo's Safety Methodologies and Safety Readiness Determinations* (Oct. 2020), which outlines our approach to determining readiness for safe deployment, whereby we engineer safety into our autonomous driving technology, from concept, architecture, requirements, and implementation, to verification, validation, and operations. More about Waymo's safety record and practices can be found at <u>waymo.com/safety</u>, including *Comparison of Waymo Rider-Only Crash Data to Human Benchmarks at 7.1 Million Miles* (December 2023), which presents Waymo's safety performance over 7 million miles of fully autonomous (driverless) operation.

Waymo's unmatched experience in developing autonomous vehicle technology for passenger carrier service includes tens of millions of autonomous miles driven on public roads, and tens of billions of miles of simulated driving. From Waymo's industry-leading autonomous vehicle research and testing, Waymo has developed and deployed a commercial ride-hailing service, Waymo One<sup>™</sup>. Our Waymo One service is powered by the Waymo Driver,<sup>™</sup> our automated driving system ("ADS"). Waymo's fully autonomous fleet is currently made up of the battery-electric Jaguar I-PACE vehicle platform, and our ride-hailing experience is supported by our user-friendly Waymo One mobile app, available on both iOS and Android platforms.

Each day, thousands of people are riding in Waymo AVs, at all times of day, with no human behind the wheel. They're using our Waymo One service to get to work, take their kids to school, run errands, get to the airport, and get home safely after a night out, tens of thousands of times per week. To date, Waymo has provided over <u>one million driverless rides</u> to the public across our California and Arizona service areas, and we're excited to expand our Waymo One service to bring our transformative technology and service to more Californians.

#### WAYMO ONE - CALIFORNIA LICENSING AND OPERATIONS

Headquartered in California, Waymo has held CPUC operating authority dating back to July 2019, as one of California's first passenger carriers permitted to transport members of the public in autonomous vehicles.<sup>4</sup> Currently, Waymo holds CPUC operating authority as an AV charter party carrier of passengers (TCP) and participates in the Commission's AV Programs (Drivered and Driverless Pilot; Phase I Drivered and Driverless Deployment), operating our Waymo One passenger carrier service under the jurisdiction of the CPUC.<sup>5</sup>

<sup>&</sup>lt;sup>4</sup> Pursuant to Waymo's Drivered AV Pilot permit, granted July 2019.

<sup>&</sup>lt;sup>5</sup> The CPUC approved Waymo to participate in each of these programs in July 2019, February 2022, November 2022, and August 2023, respectively.

Since receiving our first CPUC permit in 2019, we have incrementally expanded our public service to provide our AV passenger carrier experience to more Californians. Waymo has now been providing driverless rides to members of the public in San Francisco for more than a year, having received our CPUC Driverless Pilot Permit in November 2022. With the Commission's approval of Waymo's Phase I Driverless Deployment Permit in August 2023, we have welcomed more San Franciscans to ride with us. We are thoughtfully growing our San Francisco fleet in order to provide a comfortable and consistent experience that meets our riders' expectations and our own high bar for safety and convenience. As of the date of this submission, Waymo is now providing tens of thousands of fared rides per week to members of the public in San Francisco. Waymo is also already providing free rides in the Los Angeles area on a smaller scale under our existing CPUC pilot authority.<sup>6</sup> We are immensely grateful to our riders, the community, and our public sector partners for their feedback, collaboration, and ongoing dialogue as we work to deliver a more sustainable, accessible, and equitable service that has cascading benefits for the neighborhoods in which we operate. We are committed to continuing to learn and improve our service, prioritizing passenger and public safety as demonstrated by Waymo's January 2024 Passenger Safety Plan Update described further below, as we work to build an enjoyable and safe AV experience.

Waymo has long-been engaged in outreach in the Greater Los Angeles and San Francisco Peninsula areas. Our engagement has extended to over 100 community groups and more than two dozen local governments. In addition, we have trained nearly 3,000 first responders within these geographic areas on our technology. We've shared information about our plans to expand our service with local leaders, community groups and residents. Additionally, this engagement has been educational for Waymo, in helping us to understand regional and community transportation priorities.

On January 11, 2024, the California DMV approved an expansion to Waymo's DMV Deployment Permit, authorizing Waymo to charge fares and collect fees for AV deployment operations in the Los Angeles area and additional portions of the San Francisco Peninsula. With this most recent DMV deployment authorization, together with the benefit of our deep experience in our California and Arizona service areas, Waymo now intends to expand our participation in the Commission's Phase I Driverless Autonomous Vehicle (AV) Deployment Program, consistent with Waymo's DMV-approved Deployment Permit.

#### WAYMO ADVICE LETTER 0002

By this advice letter, Waymo seeks CPED's approval of the January 2024 Update of Waymo's Passenger Safety Plan, in connection with Waymo's expanded ODD for deployment operations approved by the DMV on January 11, 2024. As amended, Waymo's DMV Deployment ODD authorizes Waymo to expand deployment operations in portions of the Los Angeles area and additional portions of the San Francisco Peninsula. Waymo's planned future expansion of

<sup>&</sup>lt;sup>6</sup> See e.g. https://waymo.com/tour/

passenger carrier service, together with other updates and revisions to reflect Waymo's robust approach to passenger safety, are reflected in our January 2024 Update (<u>Attachment C</u>).

Per the Deployment Decision, Waymo's Passenger Safety Plan describes our driverless autonomous vehicle technology and service, and provides an overview of the policies and procedures we use to minimize passenger safety risks. Waymo's January 2024 Update demonstrates our continued commitment to enhancing passenger safety and addresses the elements highlighted by the Deployment Decision.<sup>7</sup> Waymo's January 2024 Passenger Safety Plan includes the following key updates:<sup>8</sup>

- Section I. Our Mission & Section III. Moving People with Waymo One: Brings up to date the
  description of Waymo's now fifteen years of deep experience and operational milestones,
  including that Waymo: (1) is providing driverless rides (on an unfared basis) in our expanded
  DMV-approved deployment ODD (e.g., Los Angeles) and (2) has now provided over one
  million driverless rides to public riders across our California and Arizona passenger carrier
  service areas, including to and from Phoenix Sky Harbor International Airport.
- Section III. Moving People with Waymo One: Describes the DMV-approved ODD for deployment, effective as of January 11, 2024 (expanded geographic territory and weather conditions).
- Section IV. Rider Education: Updates the summary of how Waymo educates riders about our technology and service before and after Waymo account onboarding.
- Section VIII. COVID-19 Response Plan: Changes made in conformance with applicable health and safety guidance.
- *Throughout:* Notes new safety features that Waymo has implemented to further enhance passenger safety, such as lighting by puddle lamps to illuminate the ground during passenger pick-up and dropoff, and the ability for Waymo's Remote Assistance team to play audio messages through the Waymo AV's external speakers to communicate the Waymo AV's intent to other road users, as specified.
- *Throughout:* Provides an updated description of Waymo's robust passenger-safety oriented public engagement efforts.
- *Throughout*: Provides updated images of the Waymo One mobile app display and in-car screens, illustrating key passenger safety alerts and features, including automated visual seat belt reminders displayed on the in-car screens.

<sup>&</sup>lt;sup>7</sup> Resolution TL-19144, at 10 (discussion in connection with approving Waymo's December 2022 Passenger Safety Plan).

<sup>&</sup>lt;sup>8</sup> Please note that this list is not exhaustive of all revisions but highlights key updates, including advancements and refinements that Waymo has made since the last-updated Passenger Safety Plan (December 2022). Revisions have been made throughout to update, clarify, improve readability, and conform the Passenger Safety Plan to Waymo's current relevant passenger safety policies and practices.

#### EFFECTIVE DATE

Pursuant to Section 7.3.5 of GO 96-B, and Ordering Paragraph 20 of the Deployment Decision, Waymo respectfully requests that this Tier 2 advice letter be made effective immediately upon CPED approval.

#### PROTESTS AND RESPONSES

Any person (including individuals, groups, or organizations) may submit a response or a protest to an advice letter (General Order 96-B, Section 7.4). When submitting a response or a protest, please include the carrier's name (Waymo LLC) and the advice letter number (0002) in the subject line. A protest shall contain the following information: specification of the advice letter protested; grounds for the protest; supporting factual information or legal argument; name, telephone number, postal address, and (where appropriate) e-mail address of the protestant; and statement that the protest was sent to the carrier no later than the day on which the protest was submitted to the reviewing Industry Division (General Order 96-B, Section 3.11). A response or protest must be submitted within twenty (20) days of the date the advice letter was served and must be served on the carrier (Waymo LLC) on the same day.

Responses and protests must be submitted to:

Terra Curtis, Director California Public Utilities Commission Consumer Protection and Enforcement Division 505 Van Ness Avenue San Francisco, CA 94102-3214 <u>terra.curtis@cpuc.ca.gov</u>

and to

#### AVPrograms@cpuc.ca.gov

On the same day the response or protest is submitted to the Commission, the respondent or protestant shall email a copy to Waymo to the attention of Mari Davidson at the following address:

#### waymo-regulatory-permits@google.com

#### NOTICE OF SERVICE

In accordance with Section 4 of General Order 96-B, and D.20-11-046 (as modified by D.21-05-017), a copy of this advice letter is being sent electronically to the parties on the service lists for R.12-12-011, R.19-02-012, and R.21-11-014. Address changes to these service

lists should be directed to the Commission's Process Office at (415) 703-2021 or at Process\_Office@cpuc.ca.gov.

Respectfully,

Docusigned by: Daniel C. Smith

Daniel C. Smith Assistant General Counsel, Regulatory and Compliance Waymo LLC 1600 Amphitheatre Parkway Mountain View, CA 94043

#### **INDEX OF ATTACHMENTS**

Α	Statement and Map of DMV-Approved Operational Design Domain - Driverless Deployment (January 11, 2024)
В	Waymo DMV Deployment Permit (2024 Amendment Approval Letter)
С	Passenger Safety Plan - CPUC Driverless Autonomous Vehicle Deployment Program (January 2024)

## ATTACHMENT A

## Statement and Map of Operational Design Domain - Driverless Deployment

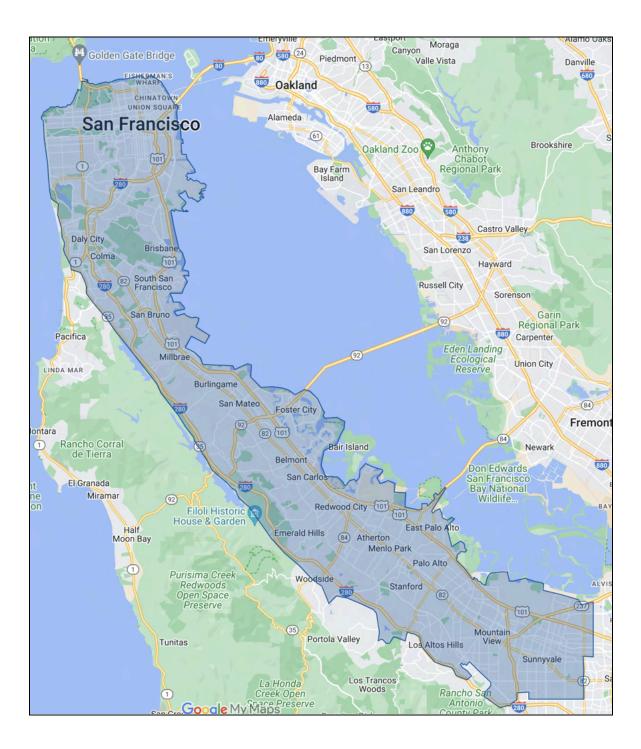
Waymo's ODD<sup>9</sup> for deployment operations in the driverless configuration, as most recently approved by the California Department of Motor Vehicles on January 11, 2024,<sup>10</sup> is as follows:

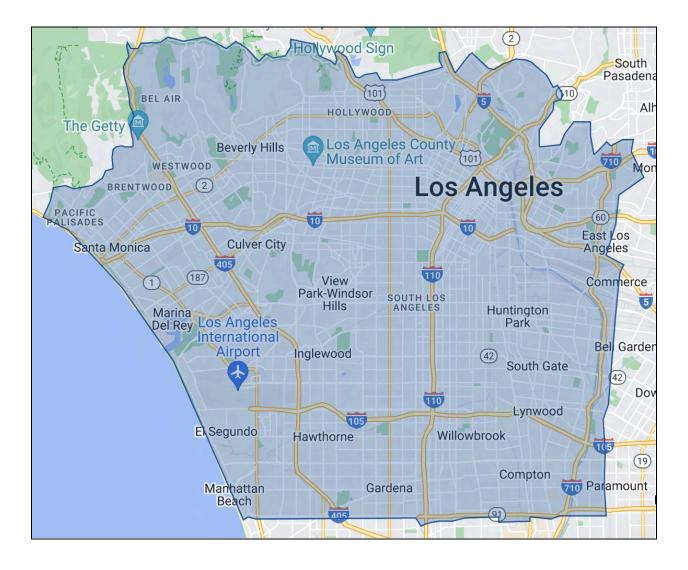
Roadway Type	<ul> <li>The intended operational design domain of Waymo's vehicles will include the following roadway types:</li> <li>Freeways, highways, city streets, rural roads, and other roadways.</li> <li>Parking lots.</li> </ul>
Speed Range	The intended operational design domain of Waymo's vehicles will include roadways with posted speed limits up to 65 miles per hour.
Inclement Weather	<ul> <li>The intended operational design domain for operation in autonomous mode will include the following inclement weather situations:</li> <li>Rain</li> <li>Fog</li> </ul>
Time of Day	The intended operational design domain for operation in autonomous mode will include all times of day and night.
Types of Operation	<ul> <li>Waymo autonomous passenger vehicles may transport the following categories of passengers (who may pay a fare): <ul> <li>Members of the public;</li> <li>Waymo or Alphabet employees and their guests; and/or</li> <li>Waymo or Alphabet contractors or agents.</li> </ul> </li> <li>Waymo's autonomous passenger vehicles may also transport goods for a fee in a commercial delivery service.</li> </ul>

<sup>&</sup>lt;sup>9</sup> Pursuant to 13 CCR Section 227.02(j), the operational design domain ("ODD") is "the specific operating domain(s) in which an automated function or system is designed to properly operate, including but not limited to geographic area, roadway type, speed range, environmental conditions (weather, daytime/nighttime, etc.), and other domain constraints."

<sup>&</sup>lt;sup>10</sup> <u>Attachment A</u> shows the ODD for Waymo's driverless deployment operations, as stated on Waymo's DMV permit. Waymo has omitted from <u>Attachment A</u> detail not relevant to Waymo's ODD for driverless deployment operations, in particular text relevant to Waymo's ODD for drivered deployment operations.

Domain Constraints	<ul> <li>The intended operational design domain will not initially allow for deployment operations under the following conditions: <ul> <li>Snow or ice accumulation on the roadway</li> <li>Off-road</li> <li>One-way mountain roadways</li> </ul> </li> <li>Controlling the operating parameters of its autonomous vehicles is a part of Waymo's dynamic operations. Waymo may choose to change the operating parameters for some or all of its vehicles at various times. For example, deployment operations may be dynamically adjusted or restricted during certain times of day, around certain road features, or in certain weather conditions.</li> <li>If an AV encounters any of these domain constraints, the ADS is designed to be capable of achieving a minimal risk condition.</li> </ul>
Geographic Area <u>Driverless</u> Configuration	Waymo seeks authorization for deployment operations in the areas depicted in the maps below. As noted in prior materials submitted in connection with Waymo's Deployment Permit, controlling the operating parameters of our AVs is part of Waymo's dynamic operational program. For the purpose of deployment operations, Waymo may dynamically adjust operating parameters, including geographic areas for testing, for some or all of its vehicles at various times.





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#### ATTACHMENT B

## Waymo CA DMV Deployment Permit Approval (January 2024 Amendment)

Waymo holds an active AV Deployment Permit, originally issued by the DMV on September 30, 2021, and most recently amended on January 11, 2024.

ALIFORNIA STATE TRANSPORTATION AGENC GAVIN NEWSOM DEPARTMENT OF MOTOR VEHICLES POLICY DIVISION Autonomous Vehicles Branch P.O. BOX 825393 SACRAMENTO, CA 94232-5393 January 11, 2024 Karen Isgrigg 1600 Amphitheatre Parkway Mountain View, CA 94043 Via Email Only Dear Karen Isgrigg, On March 27, 2023, the California Department of Motor Vehicles (DMV) received the Application for Permit to Deploy Autonomous Vehicles on Public Streets (OL 321) submitted by Waymo LLC. The application is approved, effective January 11, 2024. This letter serves as authorization for Waymo LLC's request to expand its deployment operation in the Los Angeles area and in additional portions of the Bay Area as described in the application. Waymo LLC shall not deploy vehicles with any changes specified in the California Code of Regulations Title 13, Division 1, Chapter 1, Article 3.8 § 228.10(b) until an amended application is submitted and approved by the DMV. If you have any questions, please contact me at (916) 417-1025. Sincerely, MIGUEL ACOSTA, Chief Autonomous Vehicles Branch California Relay Telephone Service for the deaf or hard of hearing from TDD Phones: 1-800-735-2929; from Voice Phones: 1-800-735-2922 A Public Service Agency POL 1 (NEW 8/2022) DMVWeb

## ATTACHMENT C

## Waymo's Passenger Safety Plan (January 2024)

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# Passenger Safety Plan CPUC Driverless Autonomous Vehicle Deployment Program January 2024



# Subject Index

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#### BECAUSE SAFETY IS URGENT<sup>™</sup>



#### I. Our Mission

Waymo's mission is to bring autonomous driving technology to the world, making it safe and easy for people and things to get where they are going. We're building *The World's Most Experienced Driver*<sup>™</sup> and we believe our technology will improve access to mobility and save thousands of lives now lost to traffic crashes.

Safety is at the core of Waymo's mission — it's why we were founded 15 years ago as the Google Self-Driving Car project. Our commitment to safety is reflected in everything we do, from our company culture, to how we design, test, and deploy our automated driving system ("ADS"), which we call the Waymo Driver<sup>™</sup>. Safety is also the hallmark of our rider experience.

Waymo's Passenger Safety Plan describes how we deliver a safe, comfortable, and delightful rider experience each and every day. The features and service enhancements highlighted in this Plan are drawn from our experience driving over tens of millions of autonomous miles on public roads and tens of billions of miles in simulation, as well as from years of meaningful engagement with safety and transportation stakeholders from public safety agencies, local governments, and research institutes; accessibility, road safety, and sustainability organizations; as well as neighborhood associations, schools, and other community groups. Our deep experience includes over one million driverless rides operated by our Waymo Driver, provided to public riders seeking a new way forward in mobility in our Arizona<sup>1</sup> and California<sup>2</sup> service areas.

<sup>&</sup>lt;sup>1</sup> Waymo's Arizona service area extends over 225 square miles of Metro Phoenix, including the Downtown area, Scottsdale, Chandler, Gilbert, Mesa, and Tempe.

<sup>&</sup>lt;sup>2</sup> Waymo is authorized to operate drivered and driverless AV passenger carrier service pursuant to the jurisdiction of the California Public Utilities Commission ("CPUC") under TCP Permit No. 38152-A in the San Francisco Bay Area and in the Los Angeles area.

## II. The Waymo Driver

Waymo's automated driving system is designed to perform the entire dynamic driving task, operating within a defined geography and set of conditions, without the need for a human driver. Our ADS includes the software, hardware, and compute that, when integrated into the vehicle, performs the entire dynamic driving task.



Fig. 1 Illustration of the Waymo Driver sensor suite<sup>3</sup>

To meet the complex demands of fully autonomous driving, Waymo has developed an array of sensors that allow our vehicle to see a detailed 3D picture of the world, both in daytime and at night, and as far as three football fields away. This multi-layered sensor suite (composed of lidar, radar, cameras, and other supplemental sensory equipment) works together seamlessly, making it capable of identifying dynamic and static objects including pedestrians, cyclists, other vehicles, traffic lights, construction cones, and other road features.

In our Waymo One service areas, we've integrated our ADS into the battery-electric Jaguar I-PACE vehicle platform. The agile Jaguar I-PACE, equipped with our ADS, provides an exceptional autonomous vehicle ("AV") passenger carrier experience in a variety of urban and suburban environments.

<sup>&</sup>lt;sup>3</sup> Please note that Waymo's website, mobile app, and other materials referenced in this Plan may be modified from time to time in consideration of new information and operational updates, and are provided here for illustrative purposes. Any Plan updates will be submitted in accordance with D.20-11-046 (as modified by D.21-05-017) and the CPUC AV Programs Application Guidance (last updated October 2021).



#### III. Moving People with Waymo One

Waymo has been working on fully autonomous driving technology in our home state of California for 15 years, learning from each step along the way as we've progressed to make our fully autonomous (driverless) Waymo One<sup>™</sup> ride-hailing service available to the public on a commercial basis. Having provided driverless rides in cities across the San Francisco Peninsula and in the greater Los Angeles area,<sup>4</sup> Waymo looks forward to welcoming more Californians to experience Waymo One.

Outside of California, Waymo already has extensive experience operating a fully autonomous transportation service for the public. Since our initial service offering in the summer of 2019, Waymo has grown our service thoughtfully, now providing tens of thousands of driverless trips each week across 225 square miles of Arizona roadways, including to and from Phoenix Sky Harbor International Airport.<sup>5</sup> We've applied learnings from our groundbreaking AV service in Arizona to our California operations— advancing the capabilities of the Waymo Driver, discovering and developing features to enhance our rider experience, and refining our operational programs.<sup>6</sup>

<sup>&</sup>lt;sup>4</sup> See https://waymo.com/tour/

<sup>&</sup>lt;sup>5</sup> https://www.skyharbor.com/ground-transportation/ride-share/

<sup>&</sup>lt;sup>6</sup> See Waymo's public road safety performance data publications, including an analysis of Waymo performance relative to human benchmarks over seven million miles of fully autonomous driving, available at: waymo.com/safety

#### A. Waymo One

Waymo One is Waymo's autonomous ride-hailing service, powered by our Waymo Driver and supported by our Waymo One mobile app. To request rides in Waymo's autonomously driven vehicles, riders download the Waymo One app to their mobile device (iOS or Android). Riders choose their destination and set a pickup location using an interactive map. Before confirming the trip, riders will see an upfront fare estimate, route overviews, and anticipated ETAs. The Waymo One app also displays useful information for the rider during their trip, including how to change destinations and reach out to Waymo for support (see Fig. 2 app display sample below).

Riders also may tailor their Waymo One app and trip experience to their accessibility needs, as described in more detail in Part XI.A. *Accessibility* below.

In our Arizona service area, riders may rides immediately after request downloading the app and successfully creating an account with Waymo. In our California service areas, Waymo may utilize a waitlist as a way to manage limited service capacity while we grow to meet rider demand. At the present time, Waymo is not offering riders the option to arrange a driverless ride shared by more than one chartering party. Waymo's rider programs will grow and change over time.

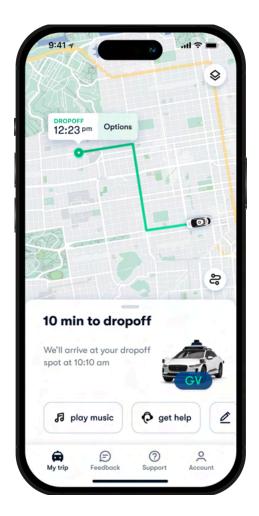


Fig. 2 Waymo One mobile app display with mid-trip information and options

## B. Waymo's California Driverless Service ODD

Waymo provides CPUC-authorized driverless passenger carrier service exclusively within the operational design domain ("ODD") authorized by the California Department of Motor Vehicles ("DMV") for driverless testing (CPUC pilot) and deployment. Driverless passenger carrier operations are conducted under a variety of weather conditions (e.g. rain, fog, and hail), on roadways with speed limits up to and including 65 MPH, at all times of day and night.<sup>7</sup> Waymo's pilot and deployment geographic ODDs cover parts of:

- The San Francisco Peninsula, including all or portions of the following municipalities: San Francisco (excluding Treasure Island), Colma, San Bruno, Brisbane, South San Francisco, Millbrae, Burlingame, Hillsborough, San Mateo (City), San Mateo (County), Foster City, Belmont, San Carlos, Redwood City, Atherton, Menlo Park, Woodside, East Palo Alto, Santa Clara (County), Portola Valley, Mountain View, Palo Alto, Los Altos, Los Altos Hills, and Sunnyvale; and
- The Los Angeles area, including all or portions of the following municipalities: Beverly Hills, Los Angeles (City), Los Angeles (County), West Hollywood, Culver City, Santa Monica, Hawthorne, El Segundo, Inglewood, Gardena, Vernon, Compton, Commerce, Maywood, Huntington Park, Bell, Cudahy, Bell Gardens, South Gate, Lynwood, Paramount, Long Beach, Carson, Torrance, Lawndale, Redondo Beach, and Manhattan Beach.

Waymo's ADS is designed so each vehicle does not operate outside of its approved ODD. For example, our riders cannot select a destination outside of our approved geography, and our software will not create a route that travels outside of our geo-fenced area. The Waymo Driver also can detect changes in ODD-relevant conditions and adjust its behavior accordingly (e.g. by slowing down in heavy rain or fog). Furthermore, the Waymo AV is designed to come to a safe stop when conditions outside the ODD are present (e.g. snow or ice accumulation on the roadway).<sup>8</sup>

We also design our vehicles to be capable of complying with federal, state, and local laws within our geographic areas of operation. Through our internal programs and

<sup>&</sup>lt;sup>7</sup> Maps and descriptions of Waymo's DMV-authorized ODDs are contained in Waymo's Law Enforcement Interaction Protocol for the Jaguar I-PACE, which ODD may be modified from time to time pursuant to 13 CCR 227.30.

<sup>&</sup>lt;sup>8</sup> See Part IV.C. *Every Waymo Ride (Pulling Over and Safely Exiting)* for more on how the Waymo Driver identifies a safe location to pull over, including in the process of achieving a "minimal risk condition."

processes, we identify applicable legal requirements relevant to safe driving and build those requirements into our system. Before our vehicles drive in a new area, our team works to understand the nuances of driving in that locale, and we update our software so our vehicles are capable of operating safely and appropriately.

Waymo is pioneering fully autonomous driving technology to move people and things from A to B, anytime, anywhere, and in all conditions. As our service capacity and system capabilities grow, we will bring our technology to more communities.



## IV. <u>Rider Education</u>

Our automated driving technology is cutting edge, but how we talk about it isn't complicated. Our rider-oriented communications educate our riders about how our technology and services work, what they can expect in riding with us, and what precautions and processes we have in place to transport them safely and comfortably.

## A. Public Engagement

Before signing up to ride with Waymo, potential riders may be introduced to our service through various media and methods. Waymo also seeks to reach beyond our potential customers to the broader public, to familiarize people with the Waymo AV's capabilities.

• <u>Waymo's Website</u>. Waymo maintains a website with useful information about Waymo's service, experience, and safety information. For example, Waymo's website hosts our blog, which provides updates on Waymo's service and technology. Our website also links to our published safety papers (waymo.com/safety), our law

enforcement interaction plans (waymo.com/firstresponders), and other informative resources. Key resources are provided in Spanish, Filipino, and Chinese (traditional and simplified) as illustrated in the two sample images below (see Figures 3 and 4).

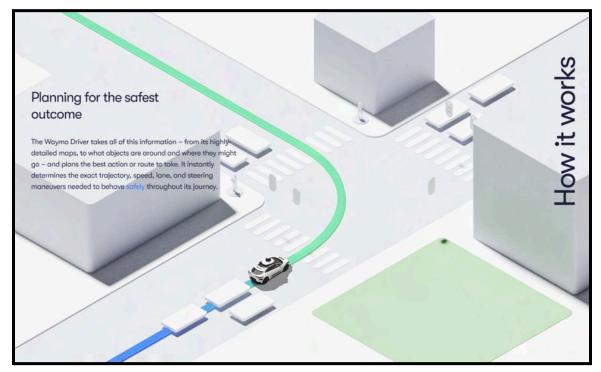


Fig. 3 "How it works" slide story at https://waymo.com/waymo-driver/ (English)

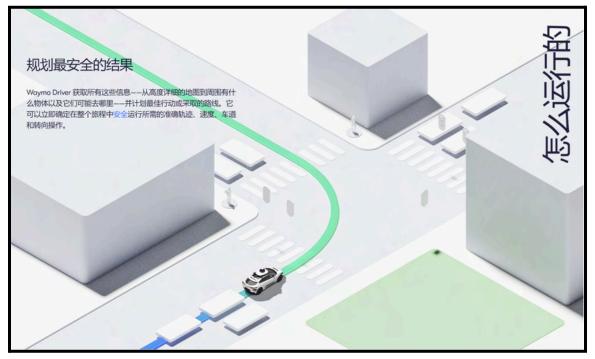


Fig. 4 "How it works" slide story at <a href="https://waymo.com/waymo-driver/">https://waymo.com/waymo-driver/</a> (Chinese - simplified)

• <u>Waymo's Community Engagement</u>. Waymo supports local and national nonprofits through event sponsorships, charitable delivery, tailored rider experiences, volunteerism, educational opportunities, and more. Waymo works in partnership with local and national safety, disability, equity, mobility, and senior organizations to engage and educate the public about how AV technology works and the public benefits it may unlock. We invite nonprofit partners to participate in user experience research studies to ensure Waymo is listening to and learning from a diverse set of communities so we are better equipped to serve the unique needs of all riders. Please see waymo.com/community for more information.



Fig. 5 Waymo at the 2023 Bike MS: Waves to Wine fundraising race event

Waymo also hosts informational events in the communities in which we operate. These events help us to inform, and be informed by, our neighbors and local organizations. We typically include a static showcase of our ADS-equipped Jaguar I-PACE vehicle, with Waymo representatives available to answer questions and share their experiences. We may also set up interactive displays at events that describe Waymo's technology, Waymo's mission, and Waymo's vision for the future. For certain events, we've also employed digital content, video tutorials, and other media to educate about our sensor suite. These informational events are a user-friendly way to introduce Waymo's state-of-the-art technology to the public.

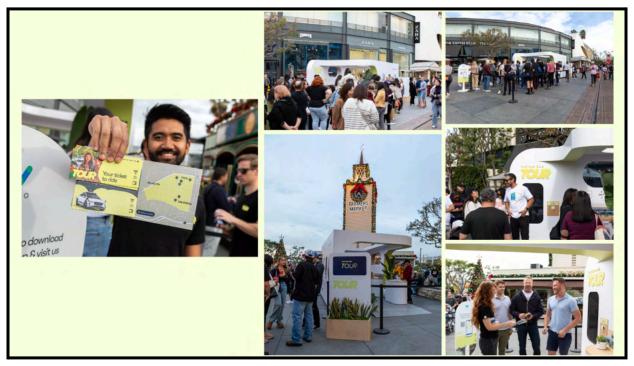


Fig. 6 Waymo Los Angeles Tour Pop-ups, late 2023 and early 2024

## B. Getting Started with Waymo

Waymo's onboarding process provides our prospective riders with a variety of resources about the Waymo trip experience. We provide details on what riders can expect from their Waymo One vehicles and an overview of our safety features. Those seeking to take driverless trips in our California service areas have the opportunity to review our terms of service and privacy policy in the process of setting up a Waymo One account. Onboarding<sup>9</sup> also includes notice to account holders that they will be receiving driverless AV service provided by Waymo under the Commission's Àjurisdiction, and account holders acknowledge and agree to receive such service as part of creating a Waymo account. Account holders will also be required to confirm that they are at least 18 years of age, which is a requirement to ride with Waymo (riders under 18 must be accompanied by an adult account holder) in California.

<sup>&</sup>lt;sup>9</sup> Waymo account onboarding may change and streamline over time as our Waymo One service expands to serve more riders, but essential notices and acknowledgments will remain.

Key actions taken in the onboarding flow are memorialized in communications sent to the account holder by email. For example, they receive confirmations regarding their participation in Waymo One rider programs, as well as useful information about how to request their first autonomous ride using the Waymo One mobile app.

Riders have 24/7 access to FAQs and articles hosted in the Waymo One mobile app and through the Waymo One (online) Help Center. Waymo's Help Center provides text and video resources describing the rider experience and familiarizing riders with our cars and mobile app display (see Figure 7 example below showing riders how to start their ride with a reminder to use seat belts). Riders can also learn more about how the Waymo One app keeps them apprised of their vehicle's arrival status, how to enable or change accessibility settings, vehicle seating capacity, how to access the trunk, and many other practical tips intended to optimize their experience.

# Get going

When you're ready to go, tap the **START RIDE** button in the car, or your app. Don't forget to buckle up!

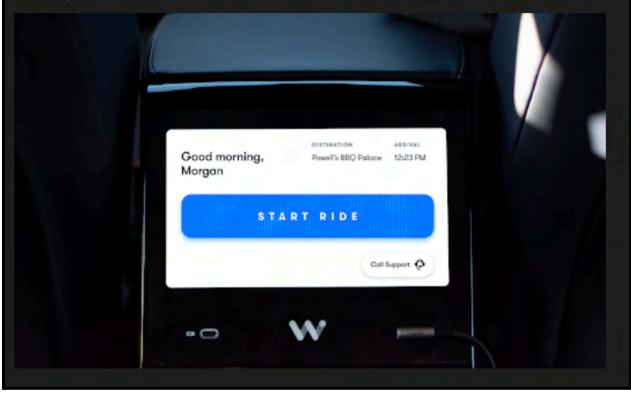


Fig. 7 Help Center sample from "Your first ride" article



### C. Every Waymo Ride

Each time a rider hails a Waymo AV, we have an opportunity to educate about how our service can safely serve them. Together, the Waymo One app and the features we integrate into the in-car experience help our riders understand how our fully autonomous vehicles operate. We enhance rider safety and comfort through timely and relevant communications (e.g. alerting riders exiting the Waymo AV to a fast-approaching vehicle; reminders to gather personal belongings) and with an ever-expanding suite of safety features and functionalities (e.g. exterior puddle lamp illumination outside doors at rider pick-up and dropoff). These communications and features include the following:

• <u>Seat Belt Reminders</u>. Buckling up saves lives, and Waymo has developed multiple ways of keeping seat belts top of mind for our riders. In our driverless vehicles, riders will be reminded to buckle their seat belt through in-vehicle screen notifications (e.g. our rider safety video and in-vehicle screen alert shown in Figure 8 below), and other media (e.g. Waymo's seat-back safety card). Riders also receive automated visual and/or audio alerts if the vehicle's sensors detect unbuckled seat belts.



• <u>COVID-19 Prevention</u>. We require our riders to follow current COVID-19 health and safety guidance issued by relevant local, state, and federal authorities, as directed by Commission Resolution TL-19131. Information and instructions are communicated to our riders in accordance with Waymo's COVID-19 Response Plan, which is provided in Part VIII below.

• <u>Setting and Changing Pickups and Dropoffs</u>. We want our riders to enjoy a smooth trip experience and sometimes that means they'll want to adjust their pickup or dropoff location. Riders can do so in the Waymo One app, even after having arrived at the original destination so long as they have not yet opened the door to exit. Detailed instructions for creating and editing a trip are available to riders in our app and also in the Waymo One Help Center. Figure 9 below illustrates this functionality in the Waymo One app.

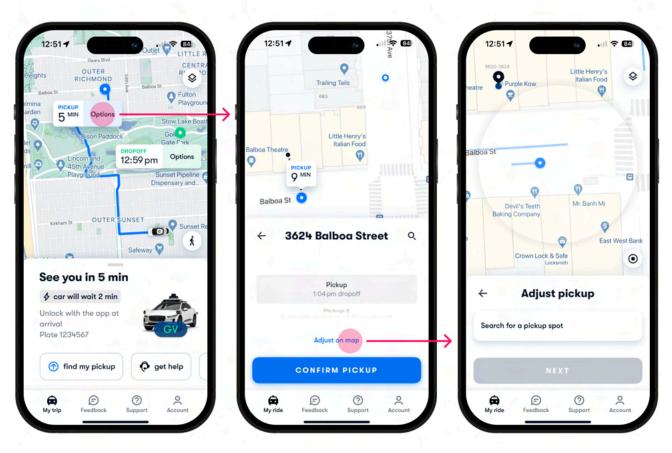


Fig. 9 In-app displays demonstrating location adjustment

• <u>Identifying and Boarding the Vehicle</u>. For each trip, the rider is shown an image of the vehicle model in the app. Each Waymo AV is easily identifiable by the automated driving system's roof assembly and front fender additions, which bear Waymo's distinctive blue ring, and the Waymo name on the sides of the vehicle and TCP number.



Fig. 10 Vehicle Identification (Hardware, Name, TCP)

To make it easier for riders to find and board their unique vehicle in driverless operation, Waymo AVs have a vehicle identification feature that displays two (2) letters and a color unique to the hailing rider on the AV's main ADS sensor module. Riders can select the letter and color combination for each trip in the app, or the display will default to the rider's first and last initials. This feature is displayed on the vehicle when the AV arrives at the pickup location and is ready for the rider to board.



Fig. 11 Vehicle Identification (Initials Display)

The Waymo app also allows riders to prompt their Waymo AV to emit a distinctive chime sound or to honk the vehicle's horn (see Part VI.A *Accessibility* for more about this feature). This functionality helps riders identify and find their way to their vehicle using sound.

Having arrived at the vehicle, the rider will receive additional cues that they have located the correct car, including door unlock and handle release triggered by the rider unlocking the vehicle in-app, and a distinctive welcome chime that will play a greeting using the rider's first name once the door is opened.

Waymo also enhances the safety of the boarding process for the benefit of our riders and other road users by displaying a boarding icon on the rear-facing side of the main ADS sensor module. This boarding icon turns on once the vehicle comes to a stop at the pickup location and is waiting for the rider to arrive, indicating to other road users that the vehicle is stopped for a rider to board.



Fig. 12 Rider Boarding Notification Icon

• <u>In-Vehicle Screen Display</u>. Each Waymo AV has two in-vehicle screen displays that are for the dedicated use of the riders during their trip. The screen enables the rider to take certain actions throughout their ride, which include the following functionalities: Start Trip, Call Rider Support, Pullover, and Lock Door. The screen also displays notifications about the rider's trip that are important to know along the way, such as: ETA, destination details, and instructions in the event of a trip interruption.

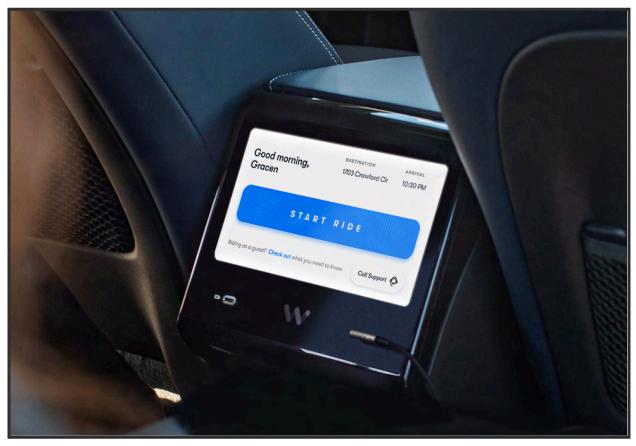


Fig. 13 In-Vehicle Screen in Jaguar I-PACE

• <u>In-Vehicle Cameras</u>. Cameras inside our driverless AVs help to ensure trips go smoothly and improve the service. Among other things, we may use cameras to check that our vehicles are clean, find lost items, provide help in case of emergency, check that in-car rules are being followed and improve products and services.

• <u>Pulling Over the Vehicle and Safely Exiting</u>. Riders may choose to exit the Waymo AV before reaching their destination by using the Pullover button. This feature is conspicuously displayed on the in-vehicle screen and in the Waymo app. Once activated, the rider will receive confirmation that a pullover has been initiated by audio and visual alerts inside the vehicle (in-vehicle screen and speakers), including a notification that the car is looking for a safe spot to pull over.

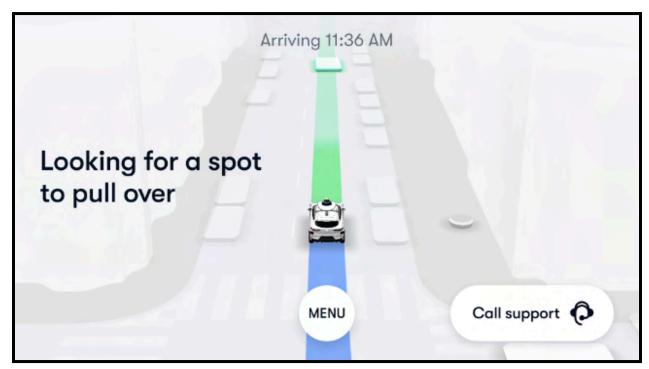


Fig. 14 Showing pullover in progress display on in-vehicle screen

When selecting and safely navigating pullover locations, Waymo prioritizes rider and road user safety. The Waymo AV factors in compliance with applicable stopping, standing, and parking laws, the quality of the rider experience, and potential community impacts (e.g. congestion). We analyze various data points to select a pullover location that balances these considerations, based on real time conditions (e.g. open curb, presence of other road users) and information from our detailed 3D maps (e.g. roadway type). We use this same holistic approach to conduct safe pullovers under circumstances that are routine (e.g. rider-requested pickups and dropoffs), as well as those that are more infrequent (e.g. events where the Waymo AV seeks to achieve a minimal risk condition).<sup>10</sup>

<sup>&</sup>lt;sup>10</sup> 13 CCR Section 227.02(i) defines "minimal risk condition" as "a low-risk operating condition that an autonomous vehicle resorts to when either the automated driving system fails or when the human driver fails to respond appropriately to a request to take over the dynamic driving task."

Once the vehicle is pulled over, it's always prudent for a rider to look out the window before opening the door — which we communicate to riders in our seat-back safety card. In addition, Waymo's dooring prevention feature provides both visual and audible notifications to alert the rider to use caution when opening the door if a cyclist, scooter, or other fast-approaching road user is detected near the door.

The Waymo AV enhances the safe interaction of our riders with other road users, including pedestrians and cyclists, by displaying a de-boarding icon on the main ADS sensor module. This display indicates to other road users that a rider is in the process of exiting the vehicle.



Fig. 15 Rider De-boarding Notification Icon

• <u>Lighting</u>. Waymo also uses lighting to enhance the rider experience, including by facilitating safe entry and exit from the vehicle with puddle lamps that illuminate the ground outside of the Waymo AV during pick-up and dropoff.

• <u>Contacting Rider Support</u>. Riders are encouraged to contact Waymo's Rider Support team for 24/7 assistance, as described more fully in Part 5 *Waymo Rider Support* below.

### V. Waymo Rider Support

Waymo's Rider Support agents are trained to aid riders through unexpected scenarios and are available 24/7 to respond to rider questions and complaints. Waymo's Rider Support team provides essential and timely customer support for our AV passenger service and will respond to outreach from riders, or initiate contact if the Waymo AV's diagnostics indicate such a need (e.g. if riders do not buckle their seat belts). Once notified, a Rider Support agent is assigned with live information about the state of the trip through our Rider Support tool.

Whether a trip is in progress, planned, or already completed, riders can reach Rider Support via phone, chat, or email through the Waymo One app. During a trip, riders may also connect with Rider Support by pressing the Rider Support button on the in-vehicle screen to communicate via the vehicle's built-in two-way communication system. All riders, including those accompanying the Waymo One account holder, can use this latter method while riding with Waymo.

To allow for optimal routing of rider requests for assistance, Waymo's in-app help functionality allows riders to select their desired method of communicating with our Rider Support team, or to request urgent assistance by dialing 911 directly from the mobile app, as displayed below.

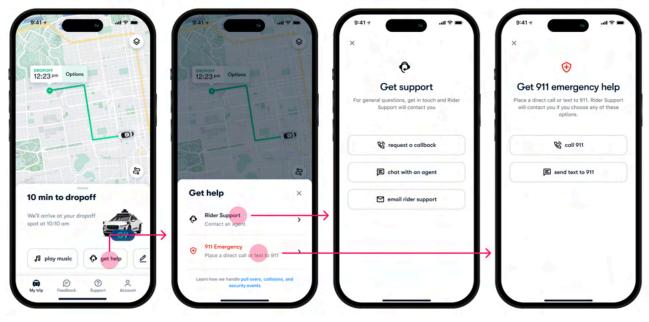


Fig. 16 In-app help functionality

Rider requests for contact communicated by calls and chats are typically answered within 60 seconds. Inquiries sent by email to Rider Support are acknowledged within 24 hours. Agents make every effort to resolve concerns or issues raised by a rider during the initial communication and are supported by an escalation lead. Where further investigation is needed, agents escalate to our cross-functional team for further consultation and resolution. Escalations are meant to help resolve specific concerns, and also to flag learnings from these contacts for future service improvements.

Every Rider Support contact generates a case record, which is categorized according to the nature of the issue raised (e.g. problem with Waymo account setup; request for Waymo service area expansion; additional time needed for pickup; promotions question; etc.). This process of categorization enables Waymo to provide uniform and consistent support to our riders, and allows us to monitor trends in rider reach-outs to identify opportunities for future service improvements. Case records are maintained in accordance with Section 6.01 of the Commission's General Order 157-E.



In addition, anyone (riders, as well as non-riders) can reach out to Waymo using our "Contact Us" form available on our website (waymo.com/contact). Communications received through this form are timely reviewed by our cross-functional community support team, with requests for assistance routed to Rider Support for an initial follow-up with the individual within 24 hours.

Waymo's Rider Support team plays an important role in providing a safe and reliable Waymo One experience. We staff our Rider Support team based on service levels, so as Waymo One and our ridership grow, we adjust our team capacity accordingly to continue to meet and exceed our riders' expectations.

## VI. Responding to Adverse Events

Waymo prepares for events that interrupt a trip or present a safety risk for a rider. We have designed our driverless service to reduce the risk of these events and respond when they occur, as described below.

**A. Trip Interruptions.** In the event that the Waymo AV's onboard software detects a potential collision or other trip interruption, Waymo's Remote Assistance and Rider Support teams will be immediately notified. Waymo's Remote Assistance team will review the scene using camera feeds from the AV and other signals to determine what's causing the interruption, and to assist the ADS to resolve it, if possible.<sup>11</sup>

In many cases, the Waymo AV receives assistance from Remote Assistance quickly - in a matter of seconds - and navigates through the situation to get our rider on their way without any noticeable delay. In cases where this communication takes longer, Waymo's Remote Assistance team is able to select and play audio messages from our external speakers to help road users around the AV to understand what the Waymo AV intends to do. For example, the current set of messages include, *"I'm planning to move but need more space. Can you back up please?"* and *"I can't move at the moment but help is on the way. Thank you for your patience."* These external audio messages are designed to minimize the impact of trip interruptions and enhance the safe operation of the Waymo AV.

Waymo's Remote Assistance team is also available to communicate directly with on-scene first responders through the Waymo AV's in-car speakers, including to authorize transitioning the Waymo AV to manual mode, if needed. Rider Support checks on the status of the riders and, in the case of a collision or other such event, will inquire as to whether there are injuries or circumstances requiring emergency medical assistance. If so, Rider Support will contact 911 emergency services. Where the Waymo AV is not able to continue driving autonomously, Waymo's Roadside Assistance team will be promptly dispatched to the scene. As may be required under the circumstances, Waymo's Roadside Assistance team may communicate with law enforcement and other parties, assist in the exchange of vehicle information (e.g. insurance), coordinate vehicle retrieval, and assist riders in reaching their intended destination.

<sup>&</sup>lt;sup>11</sup> Our Remote Assistance Team does not operate our AVs remotely. Instead, if necessary under the circumstances, the team provides information that the AV uses in performing the dynamic driving task.

**B.** Assaults and Harassment. We work to make every Waymo AV a safe place to be. Engaging in harassing or threatening behavior while using our service (whether aimed at other riders, road users, or a member of the Waymo team) is strictly prohibited. If Rider Support is alerted to or observes potentially criminal behavior during an active trip in our driverless service, Rider Support will end the trip to allow the vehicle to pull over at a safe location, and will call 911. Waymo will review any such event for potential deactivation of the offending rider's Waymo account and will cooperate with any related law enforcement request.

**C. Rider Medical Events.** Waymo anticipates that a rider may experience a medical event (e.g. intoxication that renders a rider unresponsive or other health issue). If Rider Support is alerted to the event either through the in-car screen or mobile app buttons, or observes an apparent medical event occurring with a rider, agents are trained to quickly assist including by contacting 911 to dispatch emergency services to the location of the Waymo vehicle.

**D. Unsafe Scenarios Outside of the Vehicle.** Waymo's tens of millions of miles of driving experience on public roads — over ten million of them done fully autonomously with no one behind the wheel across our Arizona and California service areas — has given us firsthand familiarity with a broad range of potential unsafe scenarios that can arise outside of a vehicle. We also anticipate unsafe scenarios using structured hazard analysis methods. Unsafe scenarios include, but are not limited to, physical security events by hostile individuals (e.g. an attack on the vehicle), spontaneous, unsanctioned road closures (e.g. for an unplanned protest), as well as fire and natural disasters. In addition to supporting our riders with the 24/7 availability of Rider Support and 911 emergency services (described in Part V. *Waymo Rider Support* above), the Waymo ADS and operational processes described herein were developed with such scenarios in mind, in order to safeguard those in and around the Waymo AV.

The first means of protecting against risks associated with unsafe conditions is to avoid them wherever possible. Waymo minimizes the likelihood of being involved in such situations by redirecting vehicles away from areas as we learn of hazards. For example, if one vehicle encounters an unplanned road closure, the rest of the fleet can be routed around the affected area. Waymo also employs other avoidance approaches, which include the proactive use of external threat analysis solutions to avoid known areas of concern (e.g. planned protests) and partnerships with select public safety agencies to receive rapid notice of first responder avoidance areas. In the event the Waymo AV encounters an unsafe scenario, the vehicle's core driving functionality can help protect against the risk of physical harm. For example, the Waymo AV is designed to detect emergency scenes at a distance, giving the vehicle adequate time and space to safely maneuver away from a scene, including by performing a multi-point turn. Waymo vehicles also can detect crowds of pedestrians and vehicles gathered in the roadway to protect against a collision. In addition, the Waymo AV can signal for support from Waymo teams trained in incident response procedures to quickly address a triggering event, including requesting law enforcement assistance. These and other key capabilities have been designed to prioritize the safety of our Waymo One riders and the broader public.

Waymo works with law enforcement and other first responders in the areas in which we operate. Our dedicated team of experienced public safety executives have over 120 years of combined experience as first responders.<sup>12</sup> Waymo prioritizes proactively conducting regular in-person training sessions detailing best practices for safe interactions with the Waymo AV, including how to quickly reach Waymo in the case of an emergency event. Waymo also seeks first responder input regarding AV operations in individual jurisdictions and has incorporated suggestions from first responders into our operations.<sup>13</sup>

**E. Vehicle Tampering.** Waymo instructs riders not to touch the Waymo AV's sensors (e.g. lidar), vehicle controls (e.g. gear shift), or driving mechanisms (e.g. steering wheel). Upon detection that the AV's external sensors have been manipulated, Waymo's security controls will prompt the vehicle to achieve a minimal risk condition — for external tampering, that would typically mean the vehicle was already stationary and would remain so. If internal tampering is detected during a trip, Rider Support will be alerted. Depending on the nature of the event, Rider Support may end the trip, and the rider may have their Waymo account deactivated or be reported to law enforcement authorities.

**F. Items Left Behind.** Riders who inadvertently leave items behind in a driverless AV may reach out to Rider Support (see Part V *Waymo Rider Support* above) to have the item retrieved and brought to a Waymo facility for rider pickup.

<sup>&</sup>lt;sup>12</sup> See https://waymo.com/firstresponders/

<sup>&</sup>lt;sup>13</sup> See Waymo's Law Enforcement Interaction Protocol for the Jaguar I-PACE vehicle.

## VII. Safe & Inclusive Service

## A. Accessibility

Improving mobility access is core to Waymo's mission as a company, and we are dedicated to improving personal independence and access to transportation through the broad deployment of our technology. To better understand rider needs, including riders with disabilities, we conduct targeted research studies and collect feedback on an ongoing basis, including from the trips we provide to members of the public. Waymo actively engages individuals and organizations spanning a breadth of access issues to better understand ways to improve accessibility for our riders, including through the Waymo Accessibility Network described further below.

• **Engagement.** Waymo's work to develop mobility solutions that work for riders of all abilities is accomplished in collaboration and learning with the disability community. We partner with organizations that advocate on behalf of different constituencies lacking adequate mobility options, including as part of the *Waymo Community* public education initiative described in Part IV.A. *Public Engagement* above. Participating organizations include: San Francisco-based LightHouse for the Blind and Visually Impaired, one of the largest and most established comprehensive blindness organizations in North America; Independent Living Resource Center of San Francisco; Self-Help for the Elderly; Support for Families of Children with Disabilities; Curry Senior Center; National Federation of the Blind; Los Angeles-based Integrated Community Collaborative; Easterseals Southern California; Best Buddies; Epilepsy Foundation and more.

In October 2022, Waymo launched the <u>Waymo Accessibility Network</u> to partner directly with organizations that support people of all ages living with physical, visual, cognitive, and sensory disabilities. The network was created to formalize and scale Waymo's longstanding collaboration with disability advocates, and facilitates the sharing of valuable feedback and perspectives with Waymo's product and user experience teams to shape the future of transportation.

Local road safety and disability advocacy organizations have been among the first community members to take rides with Waymo in Los Angeles. Waymo has engaged with disability organizations including Easterseals Southern California; Integrated Community Collaborative; Braille Institute; local chapters and affiliates of Best Buddies and the Epilepsy Foundation; Alzheimer's Association California Southland Chapter and more. Waymo also continues to work directly with disability nonprofits to welcome their members into our ridership. Organizations that we engage with include: the Northern California Spinal Cord Injury Foundation (NorCal SCI); Independent Living Resource Center SF; and United Spinal Bay Area.

• Features and Service Improvements. Our work is ongoing but already has generated features and service improvements to assist and accommodate riders of all abilities. These include the following:

Honk Horn or Chime When the car is stopped at pickup, riders can press a button in the app to honk the car's horn or ring a distinctive chime sound. Riders can use the sound of the horn or chime to locate the car. Limits on the honk horn button prevent the horn from being honked too frequently and bothering bystanders.	Wheelchair Accessible Vehicles Using the Waymo app, SF riders can hail a ride in a WAV provided by a Waymo partner in a conventional (not autonomous) ADA wheelchair accessible van. Partner drivers are trained to industry-leading standards to work with disabled riders. Riders with mobility needs other than WAV can also hail these vehicles. Waymo is working to expand this offering to other service areas.	Minimize Walking Setting Riders can select a setting to minimize walking, even if a shorter walk means the car may need to take a longer route and add to their overall trip time. This setting also makes it much less likely for the car to pull over on the opposite side of the street from where the rider requested.
Screen Reader Support Our Android and iOS apps are regularly tested with Talkback and VoiceOver screen readers to ensure blind and low-vision riders can navigate them.	Assistive Audio Riders can enable a setting that provides more audio cues and information throughout the ride (e.g. why the car is yielding) which is particularly helpful for those with vision disabilities.	Vehicle ID Waymo riders can set a unique two-letter car ID and color that is displayed atop the vehicle, making it easier to distinguish their Waymo vehicle from others and confirm it's their ride.
Long Walk Warnings Before requesting a ride, riders are informed if a long walk will be required at pickup or dropoff. This allows the rider to plan accordingly. If a rider is having trouble finding or getting to the car, a rider can request that Rider Support delay the vehicle's departure.	Adaptive App Navigation Navigation wayfinding experiences assist riders with turn-by-turn Google Maps walking directions and a compass that points in the direction of the vehicle providing distance and direction (haptic cues also available on the iOS platform).	<b>Rider Support</b> Riders can connect with our Rider Support team by phone, chat, or email making assistance accessible to those with speech or hearing disabilities. Agents can help riders with wayfinding, including by looking through the car's cameras to understand the rider's environment.

Riders may adjust and tailor the accessibility settings in the Waymo One app in order to meet their needs. This includes a setting for riders in eligible service areas to request a wheelchair accessible vehicle through the Waymo One app (as described in the chart above and shown in Figure 17 below).

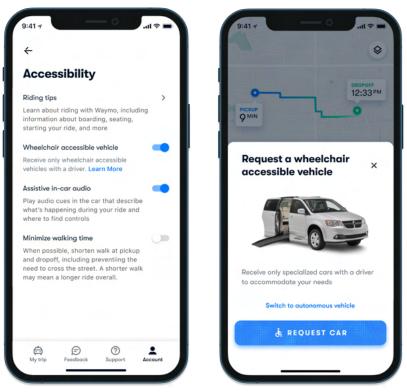


Fig. 17 In-app accessibility settings, illustrating WAV ride hailability

• Service Animals. Service animals are always welcome to ride with Waymo. There is no need to notify us or bring any paperwork for a service animal to ride with us. Riders may take extra time at boarding to secure their service animal before starting their ride.

## **B. Minor Riders**

We require Waymo account holders in California to be at least 18 years of age, but minors who are accompanied by an adult account holder are welcome to ride. If a minor requires a car seat or booster, it must be provided by the accompanying adult, as indicated in the Waymo seat-back safety card (see Part IV.C. *Every Waymo Ride* above). Riders may take extra time at boarding to install a car seat before starting their ride.

Waymo has fostered - and immensely benefited from - years-long relationships with organizations that champion road safety for youth and families. Engagement is meant to help inform our service development, and also to increase awareness of road safety issues in the communities in which we operate. Our nationally recognized partner organizations include Safe Kids Worldwide, Mothers Against Drunk Driving (MADD), Students Against Destructive Decisions (SADD), and Governors Highway Safety Association (GHSA) and more.<sup>14</sup> Examples of road safety assets we've created include (1) a public safety announcement promoting child passenger safety,<sup>15</sup> created in partnership with AAA Northern California, Nevada & Utah; and (2) a road safety and AV curriculum for high school students created in partnership with MADD and SADD and distributed to high school SADD chapters throughout the United States. For more information about Waymo's engagement in the communities in which we operate, please see waymo.com/community.



## C. Rail and Transit

Waymo AVs use detailed maps that incorporate dedicated transit lanes (e.g. bus and taxi lanes) as well as railway crossings and alignments, including those used by light and heavy rail vehicles. Our AVs are designed to respect the intended use of these roadway types and features. For example, the Waymo AV is designed to avoid driving in toll and bike lanes, where prohibited. The AV's behavior also is tailored to specific roadway features unique to rail and transit. For example, the AV is designed to avoid stopping on rail tracks, including when traversing intersections in heavy, slow-moving traffic.

Waymo conducts robust and methodical testing of our ADS, which includes assessing safety and traffic law compliance. Waymo's testing methods and approach to performance validation are detailed in our published white paper, *Waymo's* 

<sup>&</sup>lt;sup>14</sup> Serves members in Alaska, Arizona, Northern California, Montana, Nevada, Utah, and Wyoming.

<sup>&</sup>lt;sup>15</sup> https://www.waymo.community/news/how-to-keep-our-youngest-passengers-safe-on-the-road.html

*Methodologies and Safety Readiness Determinations* (October 2020).<sup>16</sup> Waymo utilizes a variety of safety methodologies, supported by three types of system-level testing (simulation, closed-course driving, and public road driving), which are in turn supplemented by various forms of component and subsystem testing. These types of testing are in constant interaction; each complements and informs the others.

With respect to rail, Waymo AVs are designed to interact with the specific types of railway crossings, railway alignments, and railway vehicles it will encounter in driverless operations in Waymo's driverless ODDs. We conduct thorough testing for specific types of railway crossings, as well as specific individual rail crossings, where appropriate. In the design and testing process, we consider how railway features and trains differ from other types of roadway features and vehicles.

<sup>&</sup>lt;sup>16</sup> Available at https://waymo.com/safety/

#### VIII. COVID-19 Response



## COVID-19 Response Plan California Ride-Hail Operations

At Waymo, the health and safety of our riders, partners, and team members is our number one priority. In response to the COVID-19 pandemic and in accordance with CPUC Resolution TL-19131 and applicable state and local law and guidance, Waymo has implemented enhanced health and safety protocols in our passenger carrier service operations, Waymo One. These protocols, which pertain to Waymo vehicles, riders, partners, and team members, are intended to help to prevent the transmission of COVID-19 as described below. Waymo actively monitors applicable guidance and will revise our protocols as may be necessary to maintain safe practices as conditions and requirements change.

## Vehicle Protocols

Waymo works to ensure that the entire Waymo One experience—our mobile app, our autonomously driven vehicle, the ride itself, and our Rider Support services—lives up to our riders' expectations. With this goal in mind, we have thoughtfully implemented enhanced protocols for vehicle maintenance and riders that prioritize health and



safety, including:

**Vehicle cleaning:** Our vehicles are cleaned regularly. Vehicles that require additional care between rides are routed to our facilities for a full cleaning.



**Vehicle ventilation:** Our vehicles have been assessed, tested, and verified to have an effective ventilation system capable of filtration and quick removal of aerosols in the cabin.

## **Rider Protocols**

Our riders are an essential partner in doing all we can to protect the Waymo community. In order to keep our Waymo One service safe and on the road getting people to where they need to go, Waymo has established the following rider protocols which are available through the Waymo One app.



**If you are sick please stay home:** If you have COVID-19, are experiencing symptoms that possibly may be COVID-19, or you've been in contact in the last 10 days with someone known to have COVID-19, please do not ride.



**Face coverings:** Riders are not currently required to wear face coverings but are encouraged to follow applicable guidance, which is subject to change.



**Keep your hands clean and minimize surface contact:** Riders may minimize surface contact by using the mobile app on their phone rather than the passenger screen or Help button in the vehicle.



**Keep the air flowing:** We encourage riders to roll the windows down slightly during your ride for added ventilation.



**Please keep us informed.** If riders have any questions or concerns, want to provide feedback, or if, within 10 days of riding with us, they test positive for COVID-19, are diagnosed with COVID-19, or start to experience COVID-19 symptoms, riders are encouraged to contact us immediately. Riders can get in touch with us at any time through the Rider Support tab in the Waymo One app.

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