



City of Chula Vista

Staff Report

File#: 17-0176, **Item#:** 8.

CONSIDERATION OF DECLARING SUPPORT FOR THE RESEARCH AND DEVELOPMENT OF AN AUTONOMOUS VEHICLE (AV) PROVING GROUND IN THE CITY OF CHULA VISTA

RESOLUTION NO. 2017-102 OF THE CITY COUNCIL OF THE CITY OF CHULA VISTA DECLARING THE CITY'S SUPPORT FOR THE RESEARCH AND DEVELOPMENT OF AN AUTONOMOUS VEHICLE PROVING GROUND IN THE CITY OF CHULA VISTA

RECOMMENDED ACTION

Council accept the report and adopt the resolution.

SUMMARY

The concept of Autonomous Vehicles (AV) has been around for decades. However, technology was not in place to turn these ideas and concepts into reality. Today, technology is evolving at such a great pace that newer vehicles, equipped with AV components, are hitting the U.S. market every day. As a result, on January 19, 2017, the United States Department of Transportation (USDOT) designated ten pilot sites as approved proving grounds to encourage the testing of AV technologies. Given the City of Chula Vista's commitment to Smart City Initiatives and its ongoing efforts to the deployment of state-of-the art transportation systems, the City of Chula Vista, in partnership with the San Diego Associations of Governments (SANDAG) and the California Department of Transportation (CALTRANS), was selected as one of the ten approved AV proving grounds in the nation.

ENVIRONMENTAL REVIEW

Environmental Notice

The Project qualifies for a Categorical Exemption pursuant to the California Environmental Quality Act State Guidelines Section 15306 Class 6 (Information Collection) and/or Section 15301 Class 1 (Existing Facilities).

Environmental Determination

The Director of Development Services has reviewed the proposed project for compliance with the California Environmental Quality Act (CEQA) and has determined that the project qualifies for a Categorical Exemption pursuant to State CEQA Guidelines Section 15306 Class 6 (Information Collection) and/or Section 15301 Class 1 (Existing Facilities). Thus, no further environmental review is required.

BOARD/COMMISSION RECOMMENDATION

AV's will be presented as an informational item at an upcoming Safety Commission meeting.

DISCUSSION

Background

This resolution formally declares that the City of Chula Vista welcomes the research and development of an Autonomous Vehicle (AV) proving ground on the streets, roads, and facilities over which the City has jurisdiction in accordance with applicable laws.

AV concepts have been around since the late 1930's with more substantial efforts by the car manufacturers coming in the 1950's and 1960's where video cameras and remote controls were introduced to control test vehicles. By the late 1980's, versions of the "autonomous" vehicle became more advanced with the use of multiple sensors, cameras, and microprocessors. Today, many auto manufacturers provide advanced parking guidance and collision avoidance systems on their mid to high end models. This type of technology is considered to be part of an "automated" vehicle since all of these vehicles have a driver that can take over control of the vehicle to correct the path of travel and/or to apply the brakes.

The next step up from the "automated" vehicle is the "autonomous" vehicle. In an autonomous vehicle, the vehicle is capable of operating without human input. This type of vehicle does not have a wheel or pedals. Autonomous vehicles typically use lasers, radar, GPS, and/or video to detect their surroundings and navigate without human control or monitoring. Vehicle to vehicle (V2V) and vehicle to infrastructure (V2I) communications are also present. This type of vehicle is not yet permitted on the road except under very strict controls in a test environment.

Although not yet approved for use on public roads, major auto manufacturers like Ford, Lexus (Toyota), Audi (Volkswagen Group), and Tesla continue to work on their AV technologies with the plan of having AV's to market in the next 2 to 5 years. In addition, companies like Google, Uber, Lyft, and Apple are also testing their own AV's and developing technology that can be used on AV's and/or other advanced systems. Note that in the United States, the Federal Automated Vehicles Policy provides guidance to the AV manufacturers on the safe pre-deployment design, development, and testing of these vehicles prior to commercial sale or operation on public roads.

Given the advancement of the AV and our strong emphasis on the use of technology to provide a better quality of life, the City of Chula Vista, in partnership with CALTRANS District 11, and SANDAG submitted for and was approved by USDOT as an AV pilot site proving ground. The City of Chula Vista received approval by the USDOT for testing on its streets, roads, and other facilities. CALTRANS District 11 received approval for testing of AV's on its Express Lanes on the I-15. In addition, the toll-road section of the SR 125, currently operated by SANDAG, was also submitted as a possible testing site in our area. Note that all three partners are able to make their facilities available for AV testing, pending the approval of the necessary State AV regulations, by January 1, 2018 as required by the USDOT. This is a very exciting opportunity for the region, as a whole, since we could be one of the birthplaces of the AV's that we will be seeing on the roads in the coming years.

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As noted earlier, AV's are not yet approved for use on public streets. However, the California Department of Motor Vehicles (DMV) has proposed the amendment and adoption of various sections in the Vehicle Code relating to AV's. On March 10, 2017, the DMV released its proposed Testing and Deployment Regulations and began its 45 day public comment period. This was followed by a public hearing in Sacramento on April 25, 2017, where the DMV gathered input on the proposed regulations. The full deployment of AV's on open public roads in the City of Chula Vista would not start until the DMV has adopted its regulations on AV's or other State and local approvals are granted for AV pilot testing purposes.

AV's are expected to create great opportunities for improvements in public safety, health care, transit, and freight. Vehicle crashes are normally the result of human error. By taking the human interaction with the vehicle out of the equation, and operating proven AV technology, there will be a very significant reduction in the number of crashes on our roads. In addition, AV's can offer the elderly, disabled, and others, a way to become more self-sufficient as they seek health care, social assistance, and/or other services. Note that through Uber and Lyft, AV's are expected to become a "subscription-based" service where individuals can take advantage of the AV's features/benefits without owning or leasing an AV. Finally, the use of AV's in the transportation of goods will reduce congestion, Greenhouse gas emissions, and also enhance safety on our roads by eliminating tired/distracted vehicle operators.

Staff recommends the City of Chula Vista Council approve this resolution to formally embrace the research and development of an AV proving ground on the City of Chula Vista's streets, roads, and facilities. This action will promote staff's continuous efforts to seek additional educational opportunities in support of the AV movement in the City and region. It will also allow staff to explore potential partnerships with vehicle manufacturers, transportation network companies, and other governmental organizations with the goal of establishing pilot programs and developing policy for the safe testing and deployment of AV technology.

Recommendations and Future Actions

To date, the majority of testing of AV's has been completed under controlled conditions in test tracks. However, in September 2016, Assemblywoman Bonilla's bill (AB 1592), took effect and allowed for small scale testing of AV's by the Contra Costa Transportation Authority (attached). This Assembly Bill permits the testing of AV's, without a driver, on public roads when meeting very specific requirements.

Currently, the DMV's proposed regulations consider the likelihood that AV testing will be taken to the next level and account for some testing on public roads. If those AV regulations are adopted, then that will set the groundwork for the type of testing that USDOT has already approved in the City of Chula Vista. However, if the proposed DMV AV regulations are not approved, then the City of Chula Vista may need to pursue a similar State approval (i.e. AB 1592) in order to legally test AV's on public roads.

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In addition, City staff, along with its partners, CALTRANS and SANDAG, is reviewing the Automated Vehicle Proving Grounds Memorandum of Agreement (MOA) between the USDOT and the City of Chula Vista, CALTRANS, and SANDAG. This MOA will create an affiliated structure where all parties agree to conduct testing and to share testing data with USDOT. The goal is for the USDOT to continue to learn about the development, capabilities, and limitations of AV's. This MOA will be brought to City Council for action at a future date.

DECISION-MAKER CONFLICT

Staff has reviewed the property holdings of the City Council members and has found no property holdings within 500 feet of the boundaries of the property which is the subject of this action. Consequently, this item does not present a disqualifying real property-related financial conflict of interest under California Code of Regulations Title 2, section 18702.2(a)(11), for purposes of the Political Reform Act (Cal. Gov't Code §87100, et seq.).

Staff is not independently aware, and has not been informed by any member, of any other fact that may constitute a basis for a decision maker conflict of interest in this matter.

LINK TO STRATEGIC GOALS

The City's Strategic Plan has five major goals: Operational Excellence, Economic Vitality, Healthy Community, Strong and Secure Neighborhoods and a Connected Community. The Autonomous Vehicles resolution supports the Economic Vitality goal, as it increases the appeal and marketability of Chula Vista as a technology hub. This resolution also supports other major goals in the Strategic Plan since AV's will enhance safety on our roads by eliminating the human factor in crashes; providing more accessibility to health care centers, and using advanced technology to positively affect the operation of the City's transportation system.

CURRENT YEAR FISCAL IMPACT

Passage of this resolution will not have any direct fiscal impact on the City.

ONGOING FISCAL IMPACT

There will be no direct fiscal impact on the City.

ATTACHMENTS

1. USDOT Approval of San Diego Region as an AV Pilot Proving Ground
2. Federal Automated Vehicles Policy
3. DMV's Autonomous Vehicles Notice of Proposed Action
4. Assembly Bill No. 1592, Bonilla. Autonomous Vehicles: Pilot Project.

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