



City of Emeryville

CALIFORNIA

MEMORANDUM

DATE: February 20, 2018

TO: Carolyn Lehr, City Manager

FROM: Andrew Clough, Acting Public Works Director

SUBJECT: Resolution Of The City Council Of The City Of Emeryville Authorizing The City Manager To File An Application For Innovative Deployments to Enhance Arterials (IDEA) Program Funding Assigned To The Metropolitan Transportation Commission, Committing Any Necessary Matching Funds, And Assuring Completion Of The City's Proposed IDEA Project

RECOMMENDATION

Staff recommends that the City Council adopt the attached resolution authorizing the City Manager to file an application for Innovative Deployments to Enhance Arterials (IDEA) program funding assigned to the Metropolitan Transportation Commission (MTC), committing any necessary matching funds, and assuring completion of the City's proposed IDEA project.

BACKGROUND

In August 2017, MTC initially invited eligible Bay Area public agencies to submit applications for consideration under a new regional initiative called "Innovative Deployments to Enhance Arterials" (IDEA). The new grant program aims to use \$13 million in federal funds to help cities, counties and transit agencies improve the operation of major arterial roadways and to make these roadways more ready for connected and automated vehicle technologies.

The Bay Area has over 33,000 directional miles of arterials and local streets, and approximately 11,000 traffic signals. Many of the region's major arterials carry heavy traffic and experience significant congestion during weekday peak periods. This can lead to loss of productive time, unreliable travel for cars and buses, and increased safety issues for bicyclists and pedestrians.

IDEA is designed to help cities, counties and transit agencies deploy advanced technologies to enhance mobility, sustainability and safety along major arterials. Public agencies may opt to deploy mature, commercially-available technologies on their own or integrated with newer, higher-risk connected and automated vehicle technologies. Agencies also may choose to support regional readiness for future connected/automated

vehicle on arterials by deploying pilot concept projects using cutting-edge connected/automated vehicle technologies.

Grant funds will be directed towards two categories of projects: Category 1 projects deploy mature, commercially-available advanced technologies. Category 2 projects deploy connected/automated vehicle technologies.

Federal funds available through IDEA are designed to assist agencies with project implementation through capital support and consultant technical assistance. Services to be performed by the consultants will be defined by MTC, in coordination with the grant recipients.

Matching requirements

Projects funded from the IDEA Program will require at least a 15% local cash match with an additional 10% match from in-kind costs, such as staff time and incidental costs. Alameda County Transportation Committee (ACTC) has offered to provide the cash match for select local agencies that are awarded a grant as part of this program. The timing for the matching funds from ACTC may require the City of Emeryville to commit to the matching funds prior to reimbursement.

DISCUSSION

On November 17th, 2017, City Staff turned in an application to MTC for the following proposed project. MTC's Programming and Allocations Committee will release the results of which projects will be programmed and funded with the IDEA grant program on February 14th, 2018. It is anticipated that Emeryville's proposed IDEA project will be a recommended project and programmed for funding.

The proposed project is a fusion of various technology-focused transportation elements to be deployed throughout the City of Emeryville. These elements include:

Automated Traffic Signal Performance Measures (ATSPMs) (Category 1)

ATSPMs are proposed to be deployed at fifteen (15) traffic signals owned and maintained by the City of Emeryville to provide the City with a means to proactively monitor system performance metrics (i.e. corridor travel time, arrivals on red, split failures, vehicle and pedestrian delay). With deployment of ATSPMs, real-time high resolution data will be made available to the City of Emeryville to utilize in analyses of potential isolated or corridor-wide improvements (i.e. signal timing adjustments). The City will also have the ability to utilize the data collected to monitor system performance after deployment of improvements and make data driven decisions. As part of the project, existing 170 traffic signal controllers will be upgraded to 2070 controllers which is needed to support the deployment of ATSPM infrastructure.

Transit signal priority (TSP) (Category 1)

The City of Emeryville, in partnership with AC Transit and Emery-Go-Round, is proposing to expand upon its existing TSP system by deploying new and upgraded TSP infrastructure at signalized intersections along project corridors utilized by AC Transit and Emery-Go-Round buses. TSP is a low-cost, mature operational strategy that facilitates the movement of transit buses through signalized intersections to improve transit reliability. Intersections that already have legacy infrared (IR) phase selectors will be upgraded to Opticom multimode phase selectors, and new multimode phase selectors will be procured and installed at locations that currently do not have existing TSP equipment. New Opticom GPS vehicle equipment will be procured for AC Transit and Emery-Go-Round for installation on buses that utilize the project corridors. The City may request support from its on-call traffic engineering consultant to provide technical support in updating the TSP settings and timing parameters for the traffic signals on the project corridors. By collaborating together, the City and both transit operators will achieve comprehensive benefits for users of all modes along the City roadways.

Bicycle Signal Prioritization (Category 2)

Bicycle Signal Prioritization is proposed to be deployed at City owned and maintained traffic signals by utilizing an innovative mobile application that is developed to communicate with the traffic signal controllers and provide detection functionality. The bike application is an innovative, cost-effective, GPS-based advanced bicycle detection solution. The mobile application installed on cyclists' smartphones can be independent of existing agency signal systems and includes an interface that allows a call to be placed to the local controller by sending a secure wireless message from the app to a cloud server. This solution is completely software based and leverages modern technologies without any field construction and works with standard communication protocols (e.g., AB3418, NTCIP). As part of the project, roadway signs and pavement markings to support bicycle signal prioritization would be developed and installed. The City may also request support from its on-call traffic engineering consultant to provide technical assistance.

Project Partnerships

With many of the proposed elements of the IDEA project benefitting transit operators within Emeryville, City Staff reached out to Alameda County Transit and Emery Go-Round to scope out the project and have them sign on to partner onto this project. Each transit operator was able to request GPS equipment to be installed on their existing busses to help communicate with the proposed transit signal priority infrastructure to be installed with this project. The transit operators will need to provide their own respective matching funds for all equipment that will be installed on their busses.

FISCAL IMPACT

The proposed project application asks for \$784,313 in funding with a required total estimated local cash match of about \$164,888 (15% requirement) and in-kind match of \$150,050 (10% requirement), for a total project value of \$1.1 Million. Alameda CTC is

expected to fund the City's portion of the 15% local cash match, while AC Transit and ETMA will fund their respective required matches.

The in-kind match was estimated in the application to be above the 10% required by this grant program, which was done to create a stronger application using MTC's scoring guidelines. The in-kind matching funds will be drawn from existing transportation accounts with sufficient funds from the Public Works Department including:

- Measure B/BB Local Streets and Roads Funds
- General Capital Fund
 - On-Call Traffic Engineering Services
 - On-Call Traffic Signal Maintenance

STAFF COMMUNICATION WITH THE PUBLIC

City Staff has discussed this issue at these times:

1. City Council Study Session – Transportation Projects: Prioritize Potential Capital Projects And Consider ACTC And SB 1 Funding Opportunities on December 19, 2017.

CONCLUSION

Staff recommends that the City Council adopt the attached resolution authorizing the City Manager to file an application for Innovative Deployments to Enhance Arterials (IDEA) program funding assigned to the Metropolitan Transportation Commission (MTC), committing any necessary matching funds, and assuring completion of the City's proposed IDEA project.

PREPARED BY: Ryan O'Connell, Senior Civil Engineer, Public Works

APPROVED AND FORWARDED TO THE EMERYVILLE CITY COUNCIL



Carolyn Lehr, City Manager

ATTACHMENTS

1. Resolution
2. Exhibit A – IDEA Grant Program Guidelines
3. Exhibit B – City of Emeryville's IDEA Grant Application