

STAFF REPORT

SUBJECT: Memorandum of Understanding with the City of Dublin for the Transit Signal Priority Upgrade Project (Express Bus Phase 2 Project)

FROM: Christy Wegener, Director of Planning and Operations

DATE: August 28, 2017

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**Action Requested**

Approve an MOU with the City of Dublin for use of Tri-Valley Transportation Council funds for the Transit Signal Priority upgrade and expansion project and forward to Board for approval.

**Background**

In March, staff briefed the Projects and Services Committee on the Transit Signal Priority (TSP) upgrade and expansion project (Attachment 1). The project, which will upgrade the TSP network to GPS-based technology and expand to new locations in Pleasanton and Livermore, is a critical element in ensuring that the Rapid bus routes operate quickly through the Tri-Valley and remain travel-time competitive with the single-occupant vehicle. On July 17, 2017, staff requested an appropriation of \$1.14M in Tri-Valley Transportation Council (TVTC) funds for this project, which was approved contingent on the City of Dublin and LAVTA signing an MOU detailing how the funds will be managed. The TVTC Resolution approving the project (TVTC Resolution #2017-07) is included as Attachment 2.

**Discussion**

The City of Dublin is a signatory agency to TVTC and is the project sponsor for the TSP upgrade project/Express Bus Phase 2. Accordingly, an MOU detailing how the TVTC funds will be requested and passed through to LAVTA in order to execute this project has been developed (Attachment 3). The MOU is scheduled to be presented to the Dublin City Council for approval on September 11th. After execution of the MOU by both parties, staff will move forward with finalizing the details of a contract for project management services, and will return to the Committee and Board for approval of that contract in September/October.

**Recommendation**

Staff recommends the Committee approve the MOU with the City of Dublin and forward to Board for approval.

Attachments

- 1 – March 2017 TSP Staff Report

- 2 – TVTC Resolution #2017-07
- 3 – MOU with the City of Dublin
- 4 – Resolution # 29-2017

## LIVERMORE AMADOR VALLEY TRANSIT AUTHORITY

## STAFF REPORT

SUBJECT: Traffic Signal Priority Upgrade

FROM: Christy Wegener, Director of Planning and Operations

DATE: March 27, 2017

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**Action Requested**

None – Information Only

**Background**

This is a briefing of a project to upgrade the Transit Signal Priority to GPS-enabled technology.

**Discussion**

As a part of the 2011 Rapid plan and deployment, Transit Signal Priority (TSP) was introduced into the Wheels bus network along the Rapid corridor in Livermore, Pleasanton, and Dublin. The TSP technology implemented as a part of the Rapid deployment utilized infrared (IR) optical technology from Global Traffic Technology (GTT) Opticom, which interfaced with the Emergency Vehicle Priority (EVP) sensors/emitters utilized by the Tri-Valley cities for emergency vehicles. TSP software was also installed by the Tri-Valley city traffic engineers.

The TSP implemented for the Rapid deployment allowed buses to extend green lights or shorten red lights when approaching the signals. A buffer of 8-10 minutes was put in place to prevent bus-bunching. Because of the near-side placement of certain bus stops, a provision was implemented to cancel the TSP “call” to the signal when the bus door is open, preventing unnecessary signal timing changes when passengers are boarding or alighting the vehicle. Included in the TSP plan were two queue jump lanes for the Rapid line, one located at westbound Stanley and Murrieta, and one located at westbound Dublin and Dougherty. Queue jump signals allow the bus to receive a special bus-only signal and travel through the intersection ahead of the queue of cars.

Reports from the TSP software indicate that the system appears to be working as calls are made and granted; however, no reports are available to indicate whether the bus actually makes it through the intersection when extended greens or shortened reds are granted. Accordingly, it is hard to determine what impact TSP has on the overall travel time of the buses.

Since the Rapid project was implemented in 2011, the TSP technology commercially available has improved both with accuracy of bus-to-intersection controller signals, but also reports. The newest TSP products are embedded with GPS-technology that offers improved functionality; additionally, the newest models have improved software that only turns the GPS “on” when the buses run late, but keep the TSP “off” when the buses are on-time or bunching. The new technology is installed in parallel to the optical IR technology utilized for EVP. The newest technology removes the need for buffer in-between TSP calls, can more accurately measure the travel time improvement of the buses, and provides more accurate queue jump signals. Transit properties that have implemented the GPS-based technology typically see an improvement in operations immediately. Both San Francisco Muni and AC Transit have recently upgraded their TSP systems.

When the Rapid line (Route 30R) was realigned in August 2016, and when the old Route 10 became “Rapidized,” an opportunity arose to revisit the TSP plan. The new 10R has TSP throughout Livermore, but there is no TSP along Santa Rita Road, which is a key corridor that has been identified for increased ridership. Staff has reached out to the City of Pleasanton staff to discuss implementing TSP on Santa Rita Road, and staff was amenable to piloting the technology at three intersections on Santa Rita Road (Mohr, Valley, and Stoneridge).

Staff is proposing to upgrade the entire TSP network in the Tri-Valley to a GPS-based system, and staff has identified a local funding source that would fund the system-wide upgrade.

### **Budget Considerations**

The Strategic Expenditure Plan (SEP) for the Tri-Valley Transportation Council (TVTC) includes a project (Project A-11, Attachment 1) to implement, enhance, and expand “Rapid” BRT service throughout the Tri-Valley. Project A-11 describes enhancements such as upgraded bus shelters, turn-outs/bulb-outs, off-vehicle fare collection, as well as enhanced TSP as elements eligible for funding. Total available funding is \$1.1 million. Funding a TSP upgrade would be well within the scope of the project.

### **Next Steps**

Staff has reached out to Kimley-Horn, LAVTA’s on-call engineering firm, to discuss the project. Staff expects to request funding from TVTC in early FY2018 to fund the upgrade. Staff will return to the Committee in early 2018 with a recommendation for a contract award.

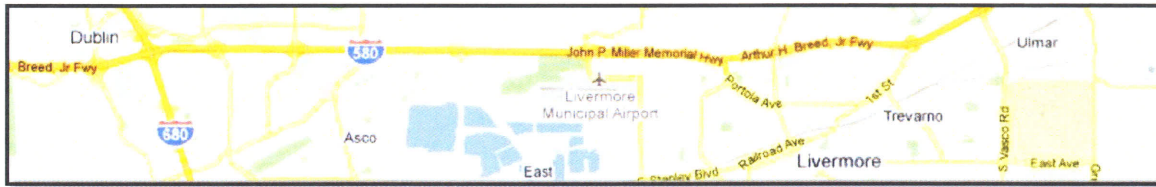
### **Recommendation**

None – Information only

### **Attachments**

1 – TVTC SEP Project A-11

## A-11. EXPRESS BUS/BUS RAPID TRANSIT (BRT) – PHASE 2



### TVTC PROJECT SPONSOR

City of Dublin

### LEAD AGENCY

Livermore Amador Valley Transit Authority (LAVTA)

### OTHER INVOLVED PARTIES

City of Livermore, City of Pleasanton

### PROJECT DESCRIPTION *(UPDATED FALL 2015)*

Project A-11 is Phase 2 of the Express Bus/BRT, which consists of two phases. The express bus route associated with Phase 1 of the project has been operating since January 2011.

Phase 2 includes upgrades to and expansion of the initial Rapid Project, as well as some project refinements, updates, and maintenance/replacement of original project elements and equipment based on evaluation of the existing components and conditions at the time of funding. The transit system priorities include the following elements:

- A technologically advanced transit system
- A multi-modal transportation system that supports the local economy
- Prioritized regional transfers and connections
- Reliability and efficiency that maximizes value to taxpayers and the community

Phase 2 will consist of five key potential elements (based upon conditions at time of funding):

1. **Advanced Technology** – Design and installation of advanced technologies and road features allowing rapid transit to operate quickly and efficiently, and help to mitigate delay in dwell times, boardings, and travel times. Some of the advanced technologies and road features that LAVTA is considering for Phase 2 are: transit signal priority, enhanced stations, queue jumps, environmentally friendly coaches and advanced onboard technology, advanced fare collection systems, level boarding, dedicated travel lanes, and better integrated park and ride facilities and transit centers. Element 1 is currently budgeted at \$2 Million.
2. **North/South Express Bus/Rapid Service** – In keeping with the Alameda Countywide Transit Plan, and in order to provide a strong foundation for LAVTA's System, I-680 service expansion, North/South Express Bus/BRT service, and other Express/Rapid service options, will be explored and considered. Element 2 is currently budgeted at \$6.5 Million.
3. **Dublin Extension** – Continued study and planning will be done on how best to integrate the planned extension of Dublin Boulevard and the planned Livermore BART Extension into LAVTA's Express Bus/BRT service. Element 3 is currently budgeted at \$6.5 Million.

4. **Pleasanton Alignment** – Complete “Rapidization,” of the Livermore to Pleasanton alignment will be evaluated, with advanced technology and improved service elements planned for the south side of I-580, and possible connection to the existing Rapid service. Element 4 is currently budgeted at \$1.5 Million.
5. **Park and Ride Lots** – In working with local cities and Alameda County, LAVTA will consider improved park and ride elements to support bus, biking, and walking access in the Tri-Valley, and to improve the accessibility of transportation alternatives that would ease congestion on I-580. These options might include: construction of new lots, smart signage, improved bicycle storage, increased pedestrian accessibility and safety, enhanced multi-modal elements on coaches, and increased or revised bus service to rail stations and regional transit connections. Element 5 is currently budgeted at \$2 Million.

## STATUS

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Phase 1 is fully completed and operational, as of January 2011.

Phase 2 is in the research, design, and planning stage. In August 2016, LAVTA realigned the Express Bus/BRT Route (Route 30R) to serve Las Positas College, and transformed existing Route 10 into an Express Bus/BRT (Route 10R) operating through Pleasanton to BART. The transformation of Route 10 into Route 10R was the first step in implementation of the Phase 2 Pleasanton Alignment. LAVTA intends to implement additional items from Phase 2 (Advanced Technology) to both Routes 10R and 30R in 2017, which includes upgrading the traffic signal priority onboard the buses and at key intersections along both Rapid routes.

## PHASING AND SCHEDULE

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Costs for Phase 2 have been updated to reflect current pricing for the project elements listed above. Phase 2 Scope of work, schedule, and full funding parameters are not known at this time.

## COST ESTIMATE AND FUNDING SOURCES

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### Phase 2:

<b>Cost (Millions, 2015)</b>	<b>\$18.50</b>
Funding (Millions, 2015)	
TVTDF	\$1.14
<b>Total Funding (Millions, 2015)</b>	<b>\$1.14</b>
<b>Total Funding Shortfall (Millions, 2015)</b>	<b>\$17.36</b>

**TRI-VALLEY TRANSPORTATION COUNCIL  
RESOLUTION NO. 2017-07**

**A RESOLUTION OF THE TRI-VALLEY TRANSPORTATION COUNCIL  
APPROPRIATING \$1,140,000 IN TRI-VALLEY TRANSPORTATION  
DEVELOPMENT FEE (TVTDF) FUNDS FOR THE PURPOSES OF FUNDING  
ADVANCED TECHNOLOGY EXPRESS BUS/BRT PHASE 2**

**WHEREAS**, in 1995, the Tri-Valley Transportation Council (TVTC) adopted the "Tri-Valley Transportation Plan/Action Plan (TVTP/AP) for Routes of Regional Significance; and

**WHEREAS**, the TVTP/AP identified 11 specific transportation improvements to be given high priority for funding; and

**WHEREAS**, in 1998, the TVTC, and entered into a Joint Exercise Powers of Agreement (JEPA) to provide authority to collect a Tri-Valley Transportation Development Fee (TVTDF) to collect impact fees for the traffic mitigation to be applied to the 11 high priority projects; and

**WHEREAS**, in 1999, the TVTC prepared and approved a Strategic Expenditure Plan (SEP), which guides the expenditure of revenue collected from TVTDF; and

**WHEREAS**, the SEP identifies priorities, project sponsors, and funding for TVTDF projects; and

**WHEREAS**, in 2004, the TVTC adopted an update to the SEP that reflected an update to the regional and sub-regional transportation outlook for the Tri-Valley; and

**WHEREAS**, in 2011, the TVTC prepared and approved the 2011 TVTDF Funding Plan that provides guidance for expenditure of the TVTDF on 22 projects (List A and List B) including Express Bus/BRT Phase 2 (Project A-11); and

**WHEREAS**, in 2017, the TVTC prepared and approved an update of the 2011 SEP, and provided a funding plan for the remaining projects; and

**WHEREAS**, the 2017 update of the SEP programmed \$1.00 million in fiscal year 17/18 and \$0.140 million in fiscal year 16/17 for a total of \$1.140 million to Express Bus/BRT Phase 2 (Project A-11); and

**WHEREAS**, the City of Dublin ("Dublin") a signatory agency to the 1991 Joint Powers Agreement governing the TVTC and is the TVTC-member sponsor Agency for the purposes of administering the appropriation of TVTD Fees to the Express Bus/BRT Phase 2 Project; and

**WHEREAS**, the Livermore Amador Valley Transit Authority (“LAVTA”) is the Lead Agency for the implementation of Express Bus/BRT Phase 2 Project; and

**WHEREAS**, Dublin and LAVTA will enter into a Memorandum of Understanding (2017 MOU), which outlines how the funds will flow from TVTC through the City of Dublin to LAVTA, who will be managing the Express Bus/BRT Phase 2 Project; and

**WHEREAS**, sufficient revenue in the Joint TVTDF Fee Account is available for the FY 17/18 drawdown of \$1,140,000 for the Express Bus/BRT Phase 2 Project.

**NOW THEREFORE BE IT RESOLVED THAT** the Tri-Valley Transportation Council adopts:

1. The Tri-Valley Transportation Council authorizes an appropriation from the Tri-Valley Transportation Development Fee Account for the Express Bus/BRT Phase 2 TSP Upgrade (Project No. A-11) of \$1,140,000, as programmed in the Strategic Expenditure Plan for fiscal years 2017/18 and 16/17, subject to Dublin and LAVTA’s approval and execution of the 2017 MOU. Funds are to be dispersed in accordance with the TVTC Strategic Expenditure Plan.
2. Upon confirmation of Dublin and LAVTA’s approval and execution of the 2017 MOU, the Tri-Valley Transportation Council authorizes the TVTC Treasurer to transmit \$1,140,000 in funds in the Tri-Valley Transportation Development Fee Account to the City of Dublin, which will, in turn, pass the funds through to the Livermore Amador Valley Transit Authority, the party responsible for the management and construction of the Express Bus/BRT Phase 2 Project.
3. The Tri-Valley Transportation Council authorizes any related action to further the intent of this Resolution.

**PASSED, APPROVED, AND ADOPTED** at the meeting of July 17, 2017 by the following votes:

**AYES:** 6 (Spedowfski, Perkins, Biddle, Stepper, Haggerty, Anderson)

**NOES:** 0

**ABSENT:** 1 (Olson)

**ABSTAIN:** 0





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Steven Spedowski, Chair  
Tri-Valley Transportation Council

**ATTEST:**



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Debbie Bell, TVTC Administrative Staff

**MEMORANDUM OF UNDERSTANDING BETWEEN THE CITY OF DUBLIN  
AND THE LIVERMORE AMADOR VALLEY TRANSIT AUTHORITY FOR THE  
IMPLEMENTATION OF EXPRESS BUS/RAPID BUS TRANSIT PHASE 2 PROJECT**

This Memorandum of Understanding (MOU) is entered into as of September \_\_\_\_\_, 2017 between the City of Dublin, a municipal corporation (DUBLIN) and the Livermore Amador Valley Transit Authority, a joint powers authority (LAVTA).

**RECITALS**

- A. WHEREAS, DUBLIN, as one of the members of the Tri-Valley Transportation Council (“TVTC”) is a signatory to the Joint Exercise of Powers Agreement pertaining to the Tri-Valley Transportation Development Fee (TVTDF) for Traffic Mitigation; and
- B. WHEREAS, DUBLIN has cooperatively participated in the development and adoption of the TVTC Strategic Expenditure Plan (SEP) and the TVTDF Funding Plan, which provide guidance for expenditure of the TVTDF on 22 projects (List A and List B); and
- C. WHEREAS, the Express Bus/BRT Phase 2 Project (“PROJECT”) is one of the “List A” projects in the SEP (project A-11); and
- D. WHEREAS, DUBLIN serves as the TVTC Project Sponsor of the PROJECT identified in the TVTC SEP 2017 Update; and
- E. WHEREAS, LAVTA is the lead agency responsible for management and implementation of the PROJECT; and
- F. WHEREAS, the PROJECT is listed in the TVTC SEP 2017 update with \$1.14 million from TVTDF in fiscal years 2016/17 and 2017/18; and
- G. WHEREAS, using TVTDF funds, LAVTA wishes to fund part of the PROJECT construction in accordance with the terms and conditions set forth herein; and
- H. WHEREAS, as a member of the TVTC, DUBLIN intends to ensure that funds set aside for PROJECT in the TVTDF Funding Plan are appropriated as expeditiously as feasible for the PROJECT;

I. NOW, THEREFORE, in consideration of the promises herein, the parties agree as follows:

SECTION I

DUBLIN AGREEES:

- A. To initiate a request from the TVTC for the disbursement of TVTDF funds in the amount of \$1.14 million in accordance with the TVTDF funding plan.
- B. To, upon receipt of the funds from the TVTC, pass the funds through to LAVTA, the party responsible for the management and construction of the PROJECT.

SECTION II

LAVTA AGREES:

- A. To receive TVTC pass-through funds from DUBLIN in the amount of \$1.14 million.
- B. To oversee the construction of the PROJECT, in accordance with LAVTA policy.

SECTION III

IT IS MUTUALLY AGREED:

- A. This MOU constitutes the entire agreement between the parties regarding the subject matter hereof and any oral discussions or written or oral agreements with respect thereto preceding the effective date of this MOU are superseded hereby. No amendment, alteration, or variation of the terms of the MOU shall be valid unless made in writing and signed by the parties hereto, and no oral understanding or agreement not incorporated herein shall be binding on any of the parties hereto.
- B. DUBLIN and LAVTA each render their services under this MOU as independent agencies. None of the agents or employees of either shall be deemed agents or employees of the other.
- C. Any notice given under this MOU shall be in writing and shall be deemed given if delivered personally or mailed by registered or certified mail or commercial overnight courier, return receipt or confirmation of delivery requested, or by facsimile transmission with voice confirmation of receipt, the parties at the following addresses (or at such other address for a party as shall be specified by like notice):

If to DUBLIN:

Obaid Khan, P.E.

Public Works  
100 Civic Plaza, Dublin ca 94568  
[Obaid.khan@dublin.ca.gov](mailto:Obaid.khan@dublin.ca.gov)  
Fax:925-829-9248

If to LAVTA:

Christy Wegener  
1362 Rutan Court, Suite 100  
Livermore, CA 94551  
[cwegener@lavta.org](mailto:cwegener@lavta.org)  
Fax: 925-443-1375

THIS AGREEMENT executed the date and year first above written.

LIVERMORE AMADOR VALLEY  
TRANSPORTATION AUTHORITY

CITY OF DUBLIN

\_\_\_\_\_  
Michael Tree, Executive Director

\_\_\_\_\_  
Christopher L. Foss, City Manager

ATTEST:

\_\_\_\_\_  
Caroline Soto, City Clerk

APPROVED AS TO FORM:

APPROVED AS TO FORM:

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Michael Conneran  
Legal Counsel to LAVTA

\_\_\_\_\_  
John Bakker, City Attorney

**RESOLUTION NO. 29-2017**

**A RESOLUTION OF THE BOARD OF DIRECTORS  
OF THE LIVERMORE AMADOR VALLEY TRANSIT AUTHORITY  
APPROVING A MEMORANDUM OF UNDERSTANDING WITH THE CITY OF  
DUBLIN FOR THE IMPLEMENTATION OF EXPRESS BUS/RAPID BUS  
TRANSIT PHASE 2 PROJECT**

**WHEREAS**, the Livermore Amador Valley Transit Authority (LAVTA) is the Lead Agency for the implementation of Express Bus/BRT Phase 2 Project identified in the Tri-Valley Transportation Council (TVTC) Strategic Expenditure Plan (SEP); and

**WHEREAS**, the City of Dublin (Dublin) a signatory agency to the 1991 Joint Powers Agreement governing the TVTC and is the TVTC-member sponsor Agency for the purposes of administering the appropriation of Tri-Valley Transportation Developer Fees (TVTD) funds to the Express Bus/BRT Phase 2 Project; and

**WHEREAS**, at their July 17, 2017 meeting, the TVTC authorized an appropriation of TVTD funds for the Express Bus/Rapid Bus Transit Phase 2 Project, contingent on LAVTA and the City of Dublin signing a Memorandum of Understanding (MOU) that details how the TVTD funds will be requested and passed through for the project; and

**WHEREAS**, LAVTA and Dublin staff have cooperatively finalized the MOU for the project.

**NOW, THEREFORE, BE IT RESOLVED** by the Board of Directors of the Livermore/Amador Valley Transit Authority that the Executive Director may enter into a MOU with the City of Dublin for this project.

**PASSED AND ADOPTED** this 11th day of September 2017

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Karla Brown, Chair

**ATTEST:**

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Michael Tree, Executive Director

**APPROVED AS TO FORM:**

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Michael Conneran, Legal Counsel