Meeting Notice

1111 Broadway, Suite 800, Oakland, CA 94607 • PH: (510) 208-7400 • www.AlamedaCTC.org

I-580 Express Lane Policy Committee

Monday, September 9, 2013, 9:30 a.m.
1111 Broadway, Suite 800
Oakland, CA 94607

Mission Statement

The mission of the Alameda County Transportation Commission (Alameda CTC) is to plan, fund and deliver transportation programs and projects that expand access and improve mobility to foster a vibrant and livable Alameda County.

Public Comments

Public comments are limited to 3 minutes. Items not on the agenda are covered during the Public Comment section of the meeting, and items specific to an agenda item are covered during that agenda item discussion. If you wish to make a comment, fill out a speaker card, hand it to the clerk of the Commission, and wait until the chair calls your name. When you are summoned, come to the microphone and give your name and comment.

Reminder

Please turn off your cell phones during the meeting. Please do not wear scented products so individuals with environmental sensitivities may attend the meeting.

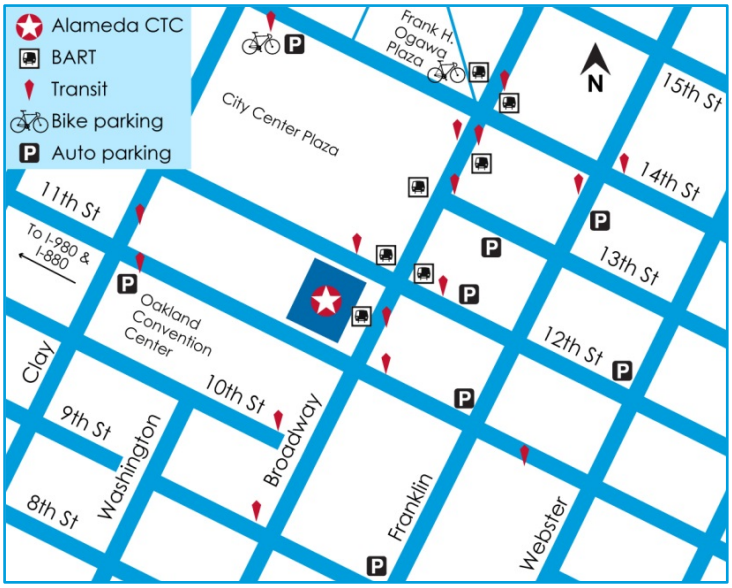
Glossary of Acronyms

A glossary that includes frequently used acronyms is available on the Alameda CTC website at www.AlamedaCTC.org/app_pages/view/8081.

Location Map

Alameda CTC
1111 Broadway, Suite 800
Oakland, CA 94607

Alameda CTC is accessible by multiple transportation modes. The office is conveniently located near the 12th Street/City Center BART station and many AC Transit bus lines. Bicycle parking is available on the street and in the BART station as well as in electronic lockers at 14th Street and Broadway near Frank Ogawa Plaza (requires purchase of key card from bikelink.org).



Garage parking is located beneath City Center, accessible via entrances on 14th Street between 1300 Clay Street and 505 14th Street buildings, or via 11th Street just past Clay Street.
To plan your trip to Alameda CTC visit www.511.org.

Accessibility

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Meeting Schedule

The Alameda CTC meeting calendar lists all public meetings and is available at www.AlamedaCTC.org/events/upcoming/now.

Paperless Policy

On March 28, 2013, the Alameda CTC Commission approved the implementation of paperless meeting packet distribution. Hard copies are available by request only. Agendas and all accompanying staff reports are available electronically on the Alameda CTC website at www.AlamedaCTC.org/events/month/now.

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I-580 Express Lane Policy Committee Meeting Agenda
Monday, September 9, 2013, 9:30 a.m.

1111 Broadway, Suite 800, Oakland, CA 94607 • PH: (510) 208-7400 • www.AlamedaCTC.org

Chair: Mayor John Marchand, City of Livermore
Vice Chair: Supervisor Nate Miley, Alameda County District 4
Commissioners: Scott Haggerty, Tim Sbranti, Jerry Thorne
Staff Liaison: Stewart D. Ng
Executive Director: Arthur L. Dao
Clerk: Vanessa Lee

Next Meeting: October 14, 2013

All items on the agenda are subject to action and/or change by the Commission.

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ALAMEDA County Transportation Commission

1111 Broadway, Suite 800, Oakland, CA 94607 • PH: (510) 208-7400 • www.AlamedaCTC.org

Memorandum

A.3

DATE:	August 26, 2013
SUBJECT:	I-580 Express Lane Projects Workshop: Concept of Operations Review
RECOMMENDATION:	Provide input on key concepts that define the development of the I-580 Express Lanes.

Summary

Development and implementation of the I-580 Express Lanes ("Project") is underway from Hacienda Drive to Greenville Road in the eastbound direction, and from Greenville Road to San Ramon Road/Foothill Road in the westbound direction. The Project will expand commuter choices and maximize efficiency of this highly congested corridor by employing new technologies, such as dynamic pricing. The Project is ahead of most other regional express lanes under development in the Bay Area (in the I-80, I-680, I-880, SR 237 and US 101/SR 85 corridors), as part of an overall 550-mile express lane network.

Several design, operations, enforcement and educational decisions must be made to ensure consistency with other Bay Area express lanes. This would facilitate the Public's understanding, acceptance, and utilization of express lanes within the regional network. Staff is implementing series of workshops with the Commissioners to inform design and operational decisions and seek input on key policy issues. In the July 8th workshop, staff provided an overview of overarching design and policy issues. The September workshop will focus on the following:

- Automated toll violation enforcement and related toll ordinance and legislation needs
- Federal MAP-21 (Moving Ahead for Progress in the 21st Century) requirements for toll operation
- Draft Caltrans Deputy Directive No. 43, policy guidelines for managed lane implementation
- Public outreach strategies, and
- Responses to inquiries by Commissioners at the July workshop.

This memo is an informational item that describes each discussion items in detail.

Background

The I-580 corridor has consistently been rated as one of the top three congested freeway segments within the San Francisco Bay Area region. As the next step in strategic investments in this corridor, the Alameda CTC is implementing express lanes in both the east and westbound directions. The express lanes will include the implementation of an Electronic Toll System (ETS) to collect revenue generated by single-occupant users of the express lanes.

The express lane concept is an innovative transportation solution that utilizes technology to optimize the existing corridor capacity to provide traffic congestion relief.

Express lanes provide the following benefits:

- Expands travel choices by allowing solo drivers to use the underutilized capacity in the High Occupancy Vehicle (HOV) lane for a fee when time saving is of value,
- Optimizes the existing corridor capacity and improves efficiency of the corridor,
- Provides travel reliability, and
- Creates a revenue source to pay for future corridor improvements, including closing gaps in the HOV network, transit investments and other improvements to increase connectivity.

The draft Concept of Operations plan developed for the Project is consistent with industry protocols and describes implementation of new and improved technologies to address congestion relief. Because the express lane implementation is still a relatively new concept, staff began providing periodic updates to the I-580 Policy Committee about the key concepts, beginning in November 2012. At the July 2013 I-580 Workshop, staff discussed the overarching concepts of Project implementation including: express lane access design (near continuous access), toll pricing strategies (zone tolling), system design, including automated toll violation enforcement and associated toll ordinance and legislation needs (for requiring HOV users to carry switchable transponders); operating organizational structure and agency coordination, and planned public education and outreach strategies.

In the upcoming months, staff will provide detailed information on a series of topics and will request feedback from the Commissioners on policy issues to keep project development moving forward. Attachment A includes list of planned focused topics for discussion at the September and October 2013 meetings.

At the September 2013 meeting, staff will provide responses to Commissioners' inquiries from the July workshop and include focused discussions on the toll violation enforcement, associated toll ordinance and legislation needs, MAP-21 and Caltrans Deputy Directive-43 requirements, planned public education and outreach strategies, and address Commissioners inquiries. This staff memorandum includes the following topics:

- Design and Infrastructure
- Operations and Enforcement
- Policy and Legislation
- Public Education and Outreach
- Agency Coordination

1. Design and Infrastructure

Design of express lanes: In the July Workshop staff described why a near continuous (aka more open) access configuration is suitable for implementation on I-580, highlighting that within the Project limits the interchange densities are high, entrance ramps are closely spaced and the majority of those ramps are carrying large volumes of express lane eligible vehicles. See Attachment B for the Project limits and access configuration.

The locations of the single and dual-lane express lanes and types of access configuration were chosen based on traffic operational analyses conducted for the Project. The traffic demand volumes require dual-lane express lanes from Fallon Road to Vasco Road. Traffic analyses indicate that significant volume of traffic continue to exit at Vasco Road and, therefore, only a single lane express lane is warranted east of the Vasco Road interchange.

Regarding the Commissioners' comment: "has the staff studied the effect of converting the second express lane to a general purposes lane, in the vicinity of Vasco Road in the eastbound direction," staff reengaged discussions with Caltrans on traffic operations and validated that the lane configuration as currently proposed would adequately address the traffic demand and/or the traffic operational requirements. However, the staff will continue their discussions with Caltrans and provide additional details at the September workshop. In addition, staff will also provide information about Caltrans truck scale improvement project at the meeting.

Design of tolling equipment: As explained in the July Workshop, zone tolling will be implemented to support the near continuous access design implementation. Several travel zones were created within the corridor, where a flat fee will be charged for travel within a zone, based on real-time value pricing concept. Within each zone, overhead toll gantries will be placed at approximately ¾ mile intervals, which will be essential to effectively read FasTrak® transponders.

As explained in July 2013, the Dynamic Message Signs (DMSs) are expected to display two rates: the first rate is for travel within the current or immediately downstream zone and the second rate is for travel to a major destination within the corridor (determined to be the end of the line in this I-580 Corridor).

2. Operations and Enforcement

Near continuous access lanes could result in revenue leakage if not properly enforced. As discussed in July 2013, staff communicated with other toll operators in the country and actively sought cost effective solutions, and included an automated violation enforcement system for implementation on the Project. This system will include a violation enforcement system (VES) that employs license plate recognition (LPR) capabilities, (i.e. cameras which are capable of capturing the license plate images when vehicles fail to carry valid transponders). HOV users also will have to carry a transponder, as explained in subsequent sections.

The primary components of the LPR subsystem are a camera, a light source, and an image processor. Cameras and lights will be mounted on the toll gantry directly above the express lanes to capture the rear license plate for each vehicle. When a toll transponder is not read and recorded, a vehicle detector installed at the toll gantry will trigger the mechanism to capture the vehicle license plate. All images, including those that cannot successfully be processed by optical character recognition (OCR) software, will be compiled in corresponding transaction records, which ultimately will be sent to the customer service center for processing.

3. Policy and Legislation

HOV Degradation

On July 6, 2012, the Moving Ahead for Progress in 21st Century (MAP-21) was signed into law and requires state agencies to ensure that HOV facilities do not degrade when allowing other vehicles onto the HOV lane as either HOV eligible (such as the clean air vehicles) or toll paying vehicles. As outlined in Title 23 United States Code Section 166 (d)(2)(A)&(B), a minimum average operating speed of 45 mph shall be maintained for at least 90 percent of the time, over a consecutive 180-day period during the morning or evening weekday peak hour periods (or both). If the facility is degraded, certain performance monitoring, evaluation and reporting requirements will have to be met, in addition to implementing corrective action within 180 days after the facility is deemed degraded.

The dynamic pricing tool that is in development for the I-580 Express Lane facility will ensure that a minimum average speed of 45 mph is maintained during the hours of operations. If the average speeds reach below 45 mph, the dynamic model will switch the lane mode to "HOV Only" in order to prevent the toll paying users access to the lane. Caltrans may have to address the degradation issue if the facility is deemed degraded by applying one or more of the corrective actions listed below:

- Increase enforcement
- Increase Freeway Service Patrol

- Improve detection to support performance, monitoring, evaluation and annual reporting
- Implement integrated corridor management operations, including ramp metering
- Improve facility geometric/operational issues
- Convert HOV to HOV/express lane
- Add HOV/Express Lane capacity
- Add general purposes lane capacity
- Increase occupancy requirements, and
- Convert HOV/express lane to general purposes lane (last resort)

FHWA MAP-21 Interoperability

Section 1512 (b) of the federal MAP-21 requires that all toll facilities on federal-aid highways implement technologies or business practices that provide for the interoperability of electronic toll collection programs no later than July 6, 2016. This means that a transponder issued by a toll operator shall meet national operability and/or shall be read by any toll readers located on federal-aid highways throughout the United States (US). California Toll Operators Committee (CTOC), in cooperation with International Bridge, Tunnel and Turnpike Association (IBTTA), has requested Congress' leniency with the deadline for implementation.

The Project will install multi-protocol toll readers in order to read and process a toll transponder, issued by any agency in the US. Alameda CTC express lanes utilize the transponders that have been issued by Bay Area Toll Authority (BATA). Staff is working closely with CTOC and BATA to ensure that the readers to be installed on I-580 are capable of reading transponders that meet the national interoperability requirements.

Toll Ordinance

In order to assess toll violation penalties, a "Toll Ordinance" will have to be adopted under the purview of Vehicle Code Section 40250 that allows local authority including a joint powers authority, to enact such ordinance. Staff continues to explore options for addressing how the Alameda CTC will issue violation notices.

In April 2012, Los Angeles County Metropolitan Transportation Authority (LA Metro) adopted a toll ordinance for similar purposes that included:

- Lane usage requirements,
- Liability for failure to pay,
- Penalties and delinquent fees, and
- Violation processing and associated administrative processes.

HOV/occupancy violations will be processed pursuant to current Streets and Highway Code requirements, regardless of how it is administered. Since a reliable technology has yet to be developed for an automated vehicle occupancy count, manual enforcement will initially be employed on I-580 to deter occupancy violations.

Legislation needs

To facilitate the automated violation enforcement system and to distinguish between the HOV, toll paying and toll evading vehicles, each traveler in the express lanes will be required to carry a transponder. Per these requirements, the express lane technology can easily single out the toll violators. In addition, the requirements will reduce the volume of license plate imaging that would otherwise have to be processed through the OCR process. On the I-85 Express Lane in Atlanta and the I-10 and I-110 Express Lanes in Los Angeles, all vehicles are required to carry transponders.

With switchable transponders, the HOV users will have the ability to self-declare the number of occupants in the vehicle by setting the occupant count as "1," "2," or "3." The toll readers will be equipped to recognize this feature and assess the fees, based on the adopted toll policy/business rules. Currently, the HOV users are allowed to travel for free in the express lane facilities. Current HOV eligibility on I-580 is two or more (2+). Other regional agencies are contemplating employing switchable transponders when they open other Bay Area Express Lane network projects. See sample picture of switchable transponder in Attachment C.

The Vehicle Code section 149.5 (b) stipulates that unrestricted access to the Alameda County express lanes by HOV vehicles shall be available at all times. Therefore, legislative efforts are necessary to clarify the Vehicle Code and require HOV users to carry transponders while accessing the express lane facility. LA Metro and other toll operators in the region will have to pursue similar legislation in order to enforce the toll transponder requirement for all users. Staff has been coordinating with other entities to collectively pursue legislation. Additional information will be provided at the meeting.

Caltrans Deputy Directive No. 43

In June 2013, Caltrans circulated a draft Deputy Directive No.43 (DD-43) for local agency review that was prepared for managed lane facilities. The following are the main comments prepared by staff and sent to Caltrans:

- Oversight costs should be at no cost to the locals
- The intent of Caltrans's plan to seek new authority for managed lanes and any impact that may have on current authority, including the authority in Alameda County through the approval of Assembly Bill (AB) 2032.
- Revenue sharing and funding for the maintenance and operation of adjacent general purposes lanes.

Caltrans is expected to incorporate the comments received to date and issue a final DD-43 by October 2013. Staff will share the DD-43 and provide additional information once the deputy directive is complete.

4. Public Education and Outreach

As described in the July 2013 Workshop, staff is working towards completing a public education and marketing plan by the end of this calendar year, utilizing an existing consultant contract. Goals of the plan are to: advance education of the Project benefits, provide information on how to use or access the new facility and on-going public education to support the use and understanding of this new commute choice. Targeted audiences will include: HOV users, current FasTrak® users and other potential express lane users, communities along the corridor, businesses, elected officials and stakeholders in east Alameda and San Joaquin Counties.

The I-580 Express Lanes and associated physical and technological features such as the continuous access, zone-based dynamic toll pricing, toll messaging, FasTrak® requirements, toll evasion violation processes, and customer service center operations are relatively new to commuters, and, therefore, will require early customer education and marketing strategies. Staff expects to release a request for proposal in late 2013/early 2014 and select a consultant team for implementing the public education marketing strategies. Implementation of the public education and marketing strategies are expected to commence in July 2014, well in advance of the planned opening of the facility in the fall of 2015, and extend at minimum six months beyond the opening date. Staff is working with other regional entities to effectively coordinate public information message materials and efforts.

5. Agency Coordination

Staff has been coordinating the project development efforts with other congestion management agencies such as the Santa Clara Valley Transportation Authority (VTA), Contra Costa Transportation Authority (CCTA) and the Solano Transportation Authority (STA); the MTC/BATA and collaborating with the California Toll Operators Committee (CTOC), California Department of Transportation (Caltrans), and FHWA. In addition, staff routinely communicates with other toll operators such as the LA Metro, Orange County Transportation Authority (OCTA) and the Minnesota Department of Transportation to share information and validate concepts developed for the project.

Fiscal Impact: There is no fiscal impact.

Attachments

A: List of Express Lane items for discussion in upcoming meetings

B: Project limits and access configuration

C: Automated violation enforcement: Pictures of VES system and switchable transponder

Staff Contact

Stewart Ng, Deputy Director of Programming and Projects

Kanda Raj, Project Controls Team

A: List of Express Lane items for discussion in upcoming meetings

I580 PC/I680 Sunol JPA Meeting Date	**List of Items**
July 8, 2013 (Completed)	1. Design and Infrastructure a. Lane Design for Access b. Equipment and lane design to support pricing strategies and messaging 2. Operations and Enforcement: Concept of Operations, including Enforcement 3. Policy Overview: Legislation and Ordinance 4. Public Education and Marketing Strategies 5. Agency Coordination
September 9, 2013	1. Design and Infrastructure (Responses to inquiries) 2. Operations and Enforcement (Focused discussion on enforcement) 3. Policy and Legislation a. HOV Degradation b. FHWA MAP-21 Interoperability c. Toll Ordinance d. Legislation {clean up Vehicle Code 149.5(b)} e. Caltrans Deputy Directive-43 4. Public Education and Marketing Strategies 5. Agency Coordination
October 14, 2013	1. Operations a. Revenue Study Results b. HOV Eligibility (2+, 3+, etc.) c. Hours of Operation 2. Policy: Tolling Polices and Business Rules 3. Environmental Justice 4. Public Education and Marketing Strategies

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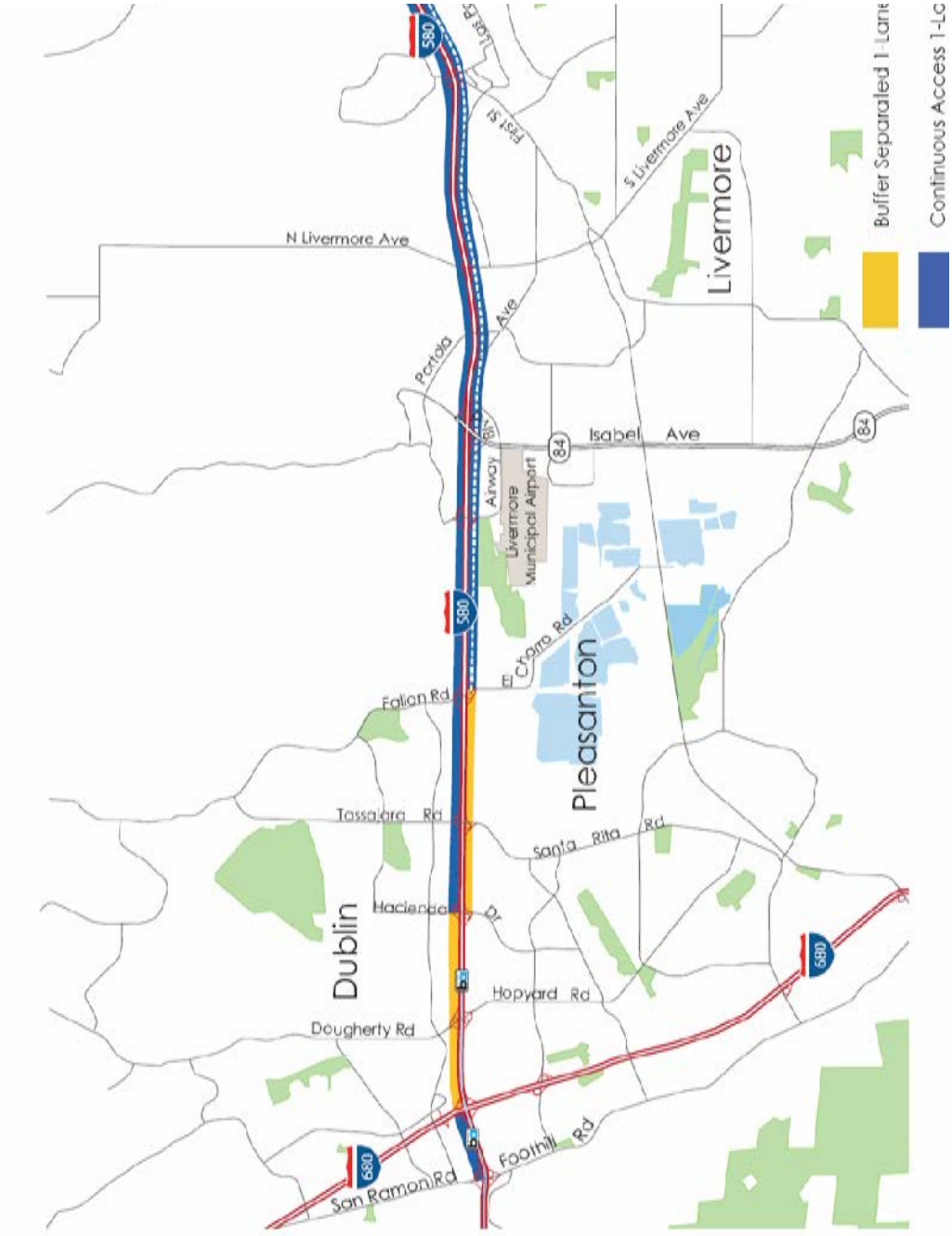
B: I-580 Project Limits and Access Configuration



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C: Automated violation enforcement: Pictures of VES system and switchable transponder

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A. Joint Meeting with I-580 Express Lane Policy Committee

A.1 Convene meeting with I-580 Express Lane Policy Committee

A.2 Roll Call to Confirm Quorum

A.3 I-580 Express Lane Projects Workshop: Concept of Operations Review

Art Dao introduced the I-580 Express Lane Projects team. Kanda Raj reviewed the project purpose, the benefits it would bring to the I-580 Corridor, which continues to be rated as one of the most congested corridor in the Bay Area, and the infrastructure design. The overview highlighted policy, outreach and agency coordination. Kanda also reviewed the design and implementation of electronic toll collection system and enforcement, including automated toll violation enforcement.

Ramsey Hissen covered design and infrastructure including near continuous access, project limits and access configuration, zone tolling and pricing strategy, how the prices will be published on dynamic message signage, and toll gantry locations and spacing. Tess Lengyel discussed policy and legislation specifically regarding a toll ordinance for enacting automated toll violation enforcement and legislation needs for requiring all express lane users to carry transponders, including the HOV users. She reviewed public outreach and education strategies to communicate the project benefits, ways to access and use the facility, new technologies and the physical changes ahead.

Commissioner Haggerty inquired whether the staff had studied the effect of converting the second express lane to a general purposes lane, in the vicinity of Vasco Road in the eastbound direction. Ramsey stated that staff had studied the transition and traffic flow and had also worked with Caltrans when completed a traffic analysis. Art Dao also stated that staff had considered lane balancing concepts and reviewed maximum cost benefits in relation to operational needs of the corridor. Staff agreed to review the geometric changes and provide additional information in an upcoming workshop.

Commissioner Harrison wanted to know the design changes staff is proposing, in light of recent copper theft. Ramsey stated that staff has looked into various security mechanisms to deter theft, including welding and burying the pull boxes to limit access.

Commissioner Haggerty requested more detail on the express lane communications system. Kanda stated that similar to the I-680 Express Lane operations, all field data from the I-580 project will be hosted in one place, the toll data center from where it could be distributed to others, including BATA for processing toll transactions. Commissioner Haggerty requested staff not to turn over the system operation responsibilities to BATA prior to conversations at the Commissioners' level.

Commissioner Miley express his doubts regarding the effectiveness of the express lanes and encouraged staff to make sure that the project will address traffic congestion.

This Item was for information only.

A.5 Recess Joint Meeting

1. **Public Comment**
   There were no public comments.

2. **Consent Calendar**
   - **2.1. June 10, 2013 I-580 PC Meeting Minutes**
   - **2.2. I-580 Corridor High Occupancy Vehicle Lane Projects (PN 724.4/724.5): Monthly Progress Report**
   - **2.3. I-580 Express (HOT) Lane Projects (PN 720.4/724.1): Monthly Progress Report**

   Commissioner Thorne motioned to approve the Consent Calendar. Commission Miley seconded the motion. The motion passed unanimously.

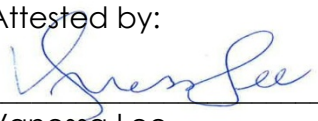
3. **Committee Member Reports (Verbal)**
   There were no committee member reports.

4. **Staff Reports (Verbal)**
   Art Dao stated that the workshop was the first of several workshops that staff would be bringing to both committees to update the Commission on the status of the express lanes.

5. **Adjournment/ Next Meeting**
   The meeting adjourned at 10:45a.m. The next meeting is:

   Date/Time: Monday, September 9, 2013 @10:00 a.m.
   Location: Alameda CTC Offices, 1111 Broadway, Suite 800, Oakland, CA 94607

Attested by:



Vanessa Lee,
Clerk of the Commission

DATE:	August 26, 2013
SUBJECT:	I-580 Corridor High Occupancy Vehicle Lane Projects (PN 720.5 / 724.4 / 724.5): Monthly Progress Report
RECOMMENDATION:	Receive a monthly status update on the I-580 Corridor High Occupancy Vehicle Lane Projects.

Summary

The Alameda CTC is currently sponsoring the I-580 Corridor High Occupancy Vehicle (HOV) Lane Projects along the I-580 corridor in the Tri-Valley. This monthly progress report is intended to provide a status update of the various projects currently underway in the corridor. This item is for information only.

Background

The Alameda CTC is the sponsor for the I-580 Corridor High Occupancy Vehicle (HOV) Lane Projects which include an HOV lane in the Eastbound and Westbound directions between Pleasanton and Livermore. The projects provide increased capacity, safety and efficiency for commuters and freight along the primary trade corridor connecting the Bay Area with the Central Valley. In its role as project sponsor, the Alameda CTC has been working in partnership with Caltrans, the Metropolitan Transportation Commission (MTC), Alameda County, and the cities of Livermore, Dublin, and Pleasanton to deliver the projects.

The I-580 Corridor HOV Lane Projects will be completed with the construction of three final projects in the Livermore Valley (two westbound HOV segments and one eastbound auxiliary lanes project). All of these projects are currently in construction and are being administered by Caltrans. Construction activity began in March 2013 and the project partners held a groundbreaking ceremony on June 13, 2013.

Attached for the Committee's review are the June 2013 progress reports for the I-580 Eastbound HOV Lane Project and the I-580 Westbound HOV Lane Project.

Fiscal Impact: There is no fiscal impact.

Attachments

A: I-580 Eastbound HOV Lane Project Monthly Progress Report (PN 720.5)

B: I-580 Westbound HOV Lane Project Monthly Progress Report (PN 724.4/724.5)

C: I-580 Corridor HOV Lane Projects – Location Map

Staff Contact

Stewart Ng, Deputy Director of Programming and Projects

Stefan Garcia, Project Controls Team

ATTACHMENT A
I-580 Eastbound HOV Lane Project (PN 720.5)
Monthly Progress Report
Through August 1, 2013

PROJECT DESCRIPTION

The Eastbound I-580 HOV Lane Project is completing one final construction segment:

- **SEGMENT 3 –** Auxiliary (AUX) Lanes between Hacienda Drive and Greenville Road. Project scope includes:
  - Construction of auxiliary lanes from Isabel Avenue to First Street;
  - Pavement width necessary for a double express / high occupancy toll (HOT) lane facility;
  - Final lift of asphalt concrete (AC) pavement and striping for entire eastbound project limits from Hacienda Drive to Portola Avenue;
  - The soundwall that was deleted from the I-580/Isabel Avenue Interchange Project; and,
  - The widening of two bridges at Arroyo Las Positas in the eastbound direction.

CONSTRUCTION STATUS

Traffic Handling & Night Work

Construction activities include both day and night work. Significant work is involved in rehabilitating the existing pavement which requires closing traffic lanes; however, no complete freeway closures are anticipated. Due to heavy daytime traffic volumes, closing traffic lanes in the daytime is not feasible. For this reason, pavement rehabilitation work can only be done during nighttime hours. Night work will include setting lane closures and shifting traffic lanes (placement of k-rail and striping work), existing pavement rehabilitation work (crack and seat, slab replacement and overlay) and electrical work. Caltrans lane closure charts permit the contractor to perform this work at night between 9pm and 4am. Work behind k-rail and all bridge work is expected to occur during day time hours.

Construction Challenges

Alameda CTC staff is working in close coordination with Caltrans to implement the project within limited funding. Challenges and managed risks for this project include:

- Bird Nesting on structures and in adjacent field areas
- Completion of work in the Arroyo Las Positas in the 2013 season
- Installation of future HOT Lane components to facilitate HOT Lane completion

Completed Activities

Construction activities began in April 2013. Work completed to date includes:

- Las Positas Creek (EB and WB) completed abutments and columns
- Temporary striping and placement of safety barrier (k-rail) for Stage 1
- Install temporary creek diversion system for box culvert and bridge work
- Installation of bird exclusion measures at bridge locations
- Completion of several retaining walls

Ongoing & Upcoming Activities

Caltrans maintains a project website (http://www.dot.ca.gov/dist4/projects/i580wbhov/) and conducts public information and outreach efforts in cooperation with Alameda CTC. Ongoing and upcoming work activities include:

- Excavate and construct remaining retaining walls
- Las Positas Creek (EB and WB) falsework erection and bridge deck construction
- Widen major box culvert and modify related drainage facilities

FUNDING AND FINANCIAL STATUS

The I-580 Eastbound HOV Project is funded through federal, state and local funds.

Funding Plan at Award – SEGMENT 3

Project Phase	**Funding Source ($ x million)**						
	CMIA	RM2	TVTC	FED	SHOPP	Meas. B	Total
PA&ED		1.54	0.64				**2.18**
PS&E		1.38	0.92	0.23		0.07	**2.60**
ROW		0.20	0.06			0.33	**0.59**
Construct Cap	17.87	2.20			4.69	6.08	**30.84**
Construct Sup	2.53	1.12				1.09	**4.74**
TOTAL	**20.40**	**6.44**	**1.62**	**0.23**	**4.69**	**7.57**	**40.95**
Total Project Cost: $40.95 M							

SCHEDULE STATUS

The EB Auxiliary Lane project between Hacienda Drive and Greenville Road was advertised on July 9, 2012; bids were opened on October 5, 2012. The contract was awarded to OC Jones & Sons (with a bid 6.33% below the Engineer's Estimate) by Caltrans on November 16, 2012. Construction is planned to complete in late 2014.

Project Approval	December 2011 (A)
RTL	May 2012 (A)
CTC Vote	May 2012 (A)
Begin Construction (Award)	November 2012 (A)
End Construction	November 2014 (T)

ATTACHMENT B
I-580 Westbound HOV Lane Project (PN 724.4/724.5)
Monthly Progress Report
Through August 1, 2013

PROJECT DESCRIPTION

The Westbound I-580 HOV Lane Project includes three segments:

- **SEGMENT 1** – WB HOV Eastern Segment from Greenville Road to Isabel Avenue.
- **SEGMENT 2** – WB HOV Western Segment from Isabel Avenue to San Ramon Road.
- **SEGMENT 3** – Bridge widening at Arroyo Las Positas Creek. This work is included in the construction contract for the EB HOV Lane Project (see Attachment A).

CONSTRUCTION STATUS – SEGMENTS 1 & 2

Traffic Handling & Night Work

Construction activities include both day and night work. Significant work is involved in rehabilitating the existing pavement which requires closing traffic lanes; however, no complete freeway closures are anticipated. Due to heavy daytime traffic volumes, closing traffic lanes in the daytime is not feasible. For this reason, pavement rehabilitation work can only be done during nighttime hours. Night work will include setting lane closures and shifting traffic lanes (placement of k-rail and striping work), existing pavement rehabilitation work (crack and seat, slab replacement and overlay) and electrical work. Caltrans lane closure charts permit the contractor to perform this work at night between 9pm and 4am. Work behind k-rail and all bridge work is expected to occur during daytime hours.

Construction Challenges

Alameda CTC staff is working in close coordination with Caltrans to implement the project within limited funding. Challenges and managed risks for the project include:

SEGMENT 1 (Eastern Segment)

- Installation of future HOT Lane components to facilitate HOT Lane completion
- Additional widening of the North Livermore Avenue structure to accommodate HOT Lane width requirements
- New retaining wall to account for recent, accelerated erosion within the Arroyo Seco Creek adjacent to the widening necessary for westbound lanes
- Coordination of concurrent work with ongoing Caltrans projects in the area to reduce cost
- Bird Nesting on structures and in adjacent field areas
- Revision of pavement slab replacement locations to best correct existing conditions

SEGMENT 2 (Western Segment)

- Installation of future HOT Lane components to facilitate HOT Lane completion
- Elimination of a retaining wall to reduce project cost
- Changes to the pavement cross section to reduce project cost
- Bird Nesting on structures and in adjacent field areas

- Revision of pavement slab replacement locations to best correct existing conditions

Completed Activities

Construction activities began in March 2013. Work completed to date includes:

SEGMENT 1 (Eastern Segment)

- Foundation work for bridge widenings is complete
- Concrete pavement slab replacements are complete
- Temporary striping, shift traffic lanes and placement of safety barrier (k-rail) on outside shoulder from Greenville to Airway
- Installation of temporary creek diversion systems for bridge and box culvert (RCB) widenings

SEGMENT 2 (Western Segment)

- Stage 1 median widening from Airway to Hacienda is complete
- Temporary striping, shift traffic lanes and placement of safety barrier (k-rail) to allow for Stage 2 outside widening
- Installation of temporary creek diversion system at Tassajara Creek
- BART Barrier modifications are complete

Ongoing & Upcoming Activities

Caltrans maintains a project website (http://www.dot.ca.gov/dist4/projects/i580wbhov/) and conducts public information and outreach efforts in cooperation with Alameda CTC. Ongoing and upcoming work activities include:

SEGMENT 1 (Eastern Segment)

- Erection of falsework and bridge deck construction for bridge widenings
- Excavate and construct retaining walls and soil nail walls
- Construct major drainage facilities (e.g. double box culvert)

SEGMENT 2 (Western Segment)

- Bridge widening at Dougherty near Dublin BART station
- Precast concrete pavement slab replacements are in progress
- Stage 2 outside widening
- Erection of falsework and bridge deck construction for Tassajara Creek

FUNDING AND FINANCIAL STATUS

The I-580 Westbound HOV Lane Project is funded through federal, state and local funds available for the I-580 Corridor. The total project cost is $143.9M. The total programmed (committed) funding from federal, state and local sources is $143.9M.

Funding Plan – SEGMENT 1 (Eastern Segment)

Project Phase	Funding Source ($ x million)							
	CMIA	RM2	TCRP	FED	SHOPP	Meas. B	TVTC	Total
Scoping		0.53	0.04					**0.57**
PA&ED		4.38						**4.38**
PS&E		2.29	0.11	0.15		1.69	0.42	**4.65**
ROW		1.16				0.04	0.00	**1.19**
Utilities		0.32						**0.32**
Const Cap	35.34		5.92	6.19	13.54	1.60		**62.59**
Const. Sup	6.52		1.59			1.08		**9.19**
Total	**41.86**	**8.68**	**7.66**	**6.34**	**13.54**	**4.40**	**0.42**	**82.89**
Total Project Cost: $82.9M								

Funding Plan – SEGMENT 2 (Western Segment)

Project Phase	Funding Source ($ x million)							
	CMIA	RM2	TCRP	FED	SHOPP	Meas. B	TVTC	Total
Scoping		0.35	0.02					**0.38**
PA&ED		2.92						**2.92**
PS&E		1.53	0.07	0.10		1.12	0.28	**3.10**
ROW		0.77				0.02		**0.80**
Utilities		0.21						**0.21**
Const Cap	33.73		2.49		9.61	0.10	0.30	**46.23**
Const. Sup	6.75					0.58		**7.33**
Total	**40.48**	**5.79**	**2.58**	**0.10**	**9.61**	**1.83**	**0.58**	**60.97**
Total Project Cost: $61 M								

SCHEDULE STATUS

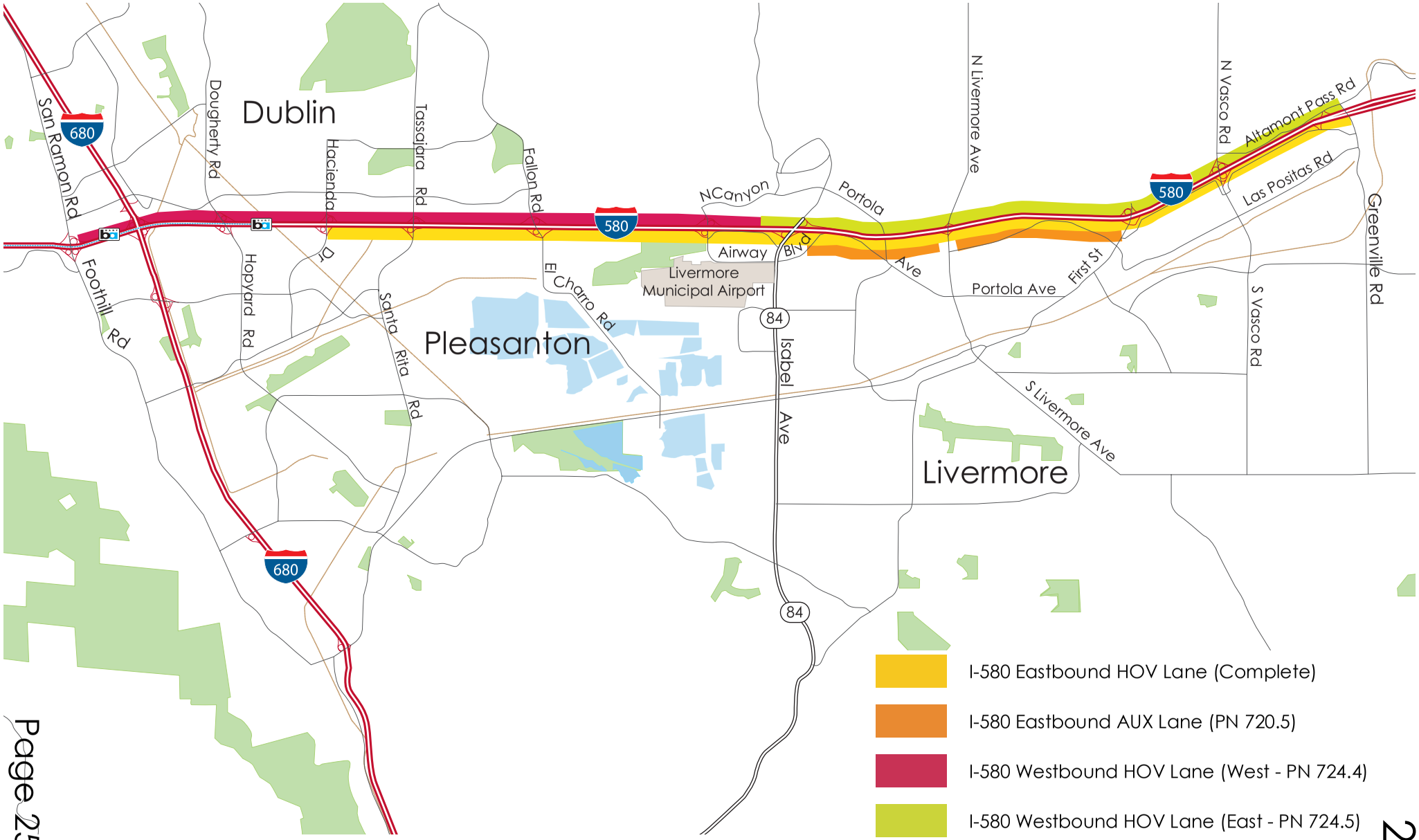
SEGMENT 1 (Eastern Segment):
The WB HOV Eastern Segment from Greenville Road to Isabel Avenue was advertised on July 16, 2012; bids were opened on September 19, 2012. The contract was awarded to Ghilotti Construction Company, Inc. (with a bid 16.33% below Engineer's Estimate) by Caltrans on November 20, 2012. Construction is planned to complete in late 2014.

Project Approval	January 2010 (A)
RTL	May 2012 (A)
CTC Vote	May 2012 (A)
Begin Construction (Award)	November 2012 (A)
End Construction	November 2014 (T)

SEGMENT 2 (Western Segment):
The WB HOV Western Segment from Isabel Avenue to San Ramon Road was advertised on June 25, 2012 and bids were opened on August 29, 2012. The contract was awarded to DeSilva Gates Construction (with a bid 23.32% below Engineer's Estimate) by Caltrans on October 29, 2012. Construction is planned to complete in late 2014.

Project Approval	January 2010 (A)
RTL	April 2012 (A)
CTC Vote	April 2012 (A)
Begin Construction (Award)	October 2012 (A)
End Construction	November 2014 (T)

I-580 Corridor HOV Lane Projects - Location map



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DATE:	August 26, 2013
SUBJECT:	I-580 Express Lane Projects (PN 720.4 / 724.1): Monthly Progress Report
RECOMMENDATION:	Receive a monthly status update on the I-580 Express (HOT) Lane Projects.

Summary

The Eastbound I-580 Express High Occupancy Toll (HOT) Lane Project will convert the newly constructed eastbound High Occupancy Vehicle Lane (HOV) lane, from Hacienda Drive to Greenville Road, to a double express lane facility. The I-580 Westbound Express (HOT) Lane Project will convert the westbound HOV lane (currently under construction) to a single express lane facility from west of Greenville Road to west of the San Ramon Road/Foothill Road Overcrossing in Dublin/Pleasanton.

A Categorical Exemption/Exclusion (CE) for the westbound direction was approved on August 2, 2013. An Initial Study/Environmental Assessment (IS/EA) for the eastbound direction is forecast for completion in December 2013. These projects are scheduled to start construction immediately after the east and west segments of the I-580 Westbound HOV Lane and I-580 Eastbound Auxiliary Lane Projects are completed in 2014. These HOV lane projects will widen the freeway to provide the width needed for the express lane projects. The I-580 Eastbound and Westbound Express Lane civil construction contract will construct the necessary infrastructure, such as signing, sign gantries for dynamic messaging and toll reading, electrical conduit for connecting power and communication sources, and striping to accommodate the express lanes. The System Integrator contractor will install the required communication equipment and software. The express lane facility will be open for use in 2015.

For detailed information on project funding, schedule and status of the Eastbound I-580 Express (HOT) Lane Project, Westbound I-580 Express (HOT) Lane Project and System Integration activities, see Attachments A, B and C of this report.

Background

Delivery Strategy

I-580 Eastbound Express (HOT) and I-580 Westbound Express (HOT) Projects will be combined into one construction project. This will reduce bid advertising and construction support costs and minimize potential conflicts with two contractors performing work within the same project limits and median of the highway.

Staff continues to work with Caltrans to add strategic express lane project elements to the existing I-580 Westbound HOV and I-580 Eastbound Auxiliary Lane construction contracts via contract change order, where feasible. The benefit of this approach is to avoid working in the environmentally sensitive area, minimize additional traffic disruptions to the traveling public and reduce or eliminate re-work. Items under consideration to be included as contract change order work include:

- Electrical Conduit – across and along I-580
- Service and controller cabinets
- Striping – stripe to final HOT configuration
- Install K-rail along median at sign locations

"Near Continuous" Access Configuration Status

Staff is currently moving forward with the concept of a "near continuous" (aka "more open") access configuration in lieu of "limited" access for the express lanes on the I-580 corridor. The "near continuous" access configuration would eliminate the two foot buffer between the express lane and the general purpose lanes except at "hot spots" or "safety zones" such as between Hacienda and Fallon Road (eastbound) and Hacienda and I-680 (westbound). The project team is working on refining the traffic operations analysis for a "near continuous" access configuration. This process has required more work and time than originally anticipated; which will result in a delay in completion of the environmental phase of the eastbound project until approximately December 2013. The construction start date will not be delayed and is scheduled to start in fall 2014.

In addition, other project revisions are underway to implement the "near continuous" access concept including revisions to the toll systems software, changes to the location of the Dynamic Message Signs (DMS) and toll gantries, updating the Concept and Operations Plan and System Engineering and Management Plan, and analyzing zone tolling requirements.

Fiscal Impact: There is no fiscal impact.

Attachments

A: I-580 Eastbound Express (HOT) Lane Project Monthly Progress Report

B: I-580 Westbound Express (HOT) Lane Project Monthly Progress Report

C: I-580 Express (HOT) Lanes System Integration Monthly Progress Report

D: I-580 Corridor Express Lane Projects – Location Map

Staff Contact

Stewart Ng, Deputy Director of Programming and Projects

Gary Sidhu, Project Controls Team

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ATTACHMENT A
I-580 Eastbound Express (HOT) Lane Project
Monthly Progress Report
Through August 31, 2013

PROJECT DESCRIPTION

The Eastbound I-580 Express (HOT) Lane Project will convert the newly constructed eastbound HOV lane, from Hacienda Drive in Dublin/Pleasanton to Greenville Road in Livermore, to a double express lane facility.

PROJECT DELIVERY STATUS

The Environmental Phase for this project is underway as follows:

- Environmental studies are complete and the Initial Study and Environmental Assessment (IS/EA) is drafted and ready to circulate pending updating for changes to address "near continuous" access alternative and Caltrans approval of the Traffic Operational Analysis Report and Draft Project Report in September 2013. The estimated date of circulation of the draft IS/EA is October 2013. A 30 day public circulation period is required in addition to a public meeting expected in November 2013.
- Staff is working to coordinate with the three I-580 HOV lane projects currently in construction (I-580 Westbound HOV - West Segment, I-580 Westbound HOV - East Segment, I-580 Eastbound HOV Segment 3 - Auxiliary Lanes) to add some express lane elements to the civil projects via contract change order (CCO).

POTENTIAL ISSUES/RISKS

- Funding – Current funding shortfall to implement "near continuous" approach. (See "Funding & Financial Status" at the end of Attachment C). Staff is pursuing a TIGER V Discretionary Grant and exploring other options to fully fund the project.
- Schedule impacts –additional project delays to the environmental phase due to refinement of traffic analysis for "near continuous" access configuration and final agreement on the Design Exceptions. The delay in environmental phase is not expected to have any effect on construction start which is scheduled to start in 2014.

SCHEDULE STATUS

I-580 Eastbound Express (HOT) Lane Project Schedule:

Project Approval	December 2013
RTL	June 2014
Begin Construction	September 2014
End Construction (Civil and System Integrator)	November 2015

RECENT ACTIVITIES

- Refining traffic studies for "near continuous" access configuration
- Submitted Contract Change Order (CCO) packages for Caltrans review
- Started development of 65% Plans, Specifications & Estimate (PS&E)
- Initiated construction cooperative agreements for CCO implementation
- Preparing ETC Contract Amendment
- Submitted Concept of Operations & System Engineering Management Plan documents to Caltrans and FHWA

UPCOMING ACTIVITIES

- Finalize Traffic Study refinements – target September 2013
- Finalize Draft Project Report – target October 2013
- Circulate the Draft IS/EA for 30 day public comment – working toward October 2013 circulation of document; dependent on completion of additional work for conversion to "near continuous" access. A public meeting will be held during the 30 day comment period
- Working toward environmental clearance and project approval by Caltrans and the Federal Highway Administration by December 2013
- Finalize CCO packages – target September 2013
- Process RM2 allocation request and execute cooperative agreements – target September 2013.
- Submit 65% PS&E to Caltrans District – target September 2013

ATTACHMENT B
I-580 Westbound Express (HOT) Lane Project
Monthly Progress Report
Through August 31, 2013

PROJECT DESCRIPTION

The I-580 Westbound (HOT) Lane Project will convert the planned westbound HOV lane to a single express lane facility from west of the Greenville Road Undercrossing in Livermore to west of the San Ramon Road / Foothill Road Overcrossing in Dublin / Pleasanton, a distance of approximately 14 miles.

PROJECT DELIVERY STATUS

- Traffic studies are complete and the Traffic Operational Analysis Report (TOAR) has been approved by Caltrans
- The environmental document; which is a Categorical Exemption (CE) has been approved
- Staff is working to coordinate with the three I-580 HOV lane projects currently in construction (I-580 Westbound HOV - West Segment, I-580 Westbound HOV - East Segment, I-580 Eastbound HOV Segment 3 - Auxiliary Lanes) to add some express lane elements to the civil projects via contract change order (CCO).

POTENTIAL ISSUES/RISKS

- Funding – there is a current funding shortfall. (See Funding & Financial Status at the end of Attachment C). Staff is pursuing a TIGER V Discretionary Grant and exploring other options to fully fund the project.

SCHEDULE STATUS

I-580 Westbound Express (HOT) Lane Project Schedule:

Project Approval	August 2013
RTL	June 2014
Begin Construction	September 2014
End Construction (Civil and System Integrator)	November 2015

RECENT ACTIVITIES

- The environmental document; which is a Categorical Exemption (CE) was signed on August 2, 2013
- Traffic Operational Analysis Report (TOAR) approved by Caltrans
- Contract Change Order (CC) packages submitted for Caltrans review
- Construction Cooperative Agreement amendments or new cooperative agreements initiated to implement CCO work
- Started to develop 65% PS&E
- Initiated development of a new contract with ETC

UPCOMING ACTIVITIES

- Finalize CCO packages – target September 2013
- Submit 65% PS&E to Caltrans – target September 2013
- Process cooperative agreements – target September 2013
- Finalize High Profile Project Agreement with FHWA and Caltrans – target September 2013
- Finalize Concept of Operations document – target September

ATTACHMENT C
I-580 Express (HOT) Lanes Systems Integration
Monthly Progress Report
Through August 31, 2013

SYSTEM INTEGRATION SCOPE DESCRIPTION

The I-580 Express Lane civil contract will construct the necessary infrastructure, such as signing, sign gantries for dynamic messaging and toll reading, electrical conduit for connecting power and communication sources, and pavement striping to accommodate express lanes. The System Integrator will include tolling hardware design and software development, factory testing of design, equipment and system installation, and road geometry and toll system integration. It will also consist of field testing of the toll equipment and all subsystems including the interfaces to the BATA Regional Customer Service Center and Caltrans prior to implementing the new express lanes.

Detailed Discussion

The systems integration focuses on the most recent technologies including software, hardware and traffic detection that will be deployed to optimize the existing corridor capacity in order to effectively manage the current and forecasted traffic in the corridor. The system integrator, however, will continue to own the software while the implementing agency will pay for the use of license to allow for the usage of the toll integrator's software.

The agency and ETC staff have been working towards revising the eastbound contract to include scope for the "near continuous" access configuration and develop a new contract for the westbound direction.

The "near continuous" concept provides additional access opportunities while reducing the foot-print required for implementing a shared express/general purpose lane facility. In addition, it looks and feels similar to an HOV facility and, therefore, would expected to provide driver familiarity.

Project Geometry and Electronic Toll System Design

The latest version of the express lanes concept proposes the following:

In the eastbound I-580 direction:

- Buffer separated single-lane HOV/Express Lane will be installed from Hacienda Drive to Fallon Road
- Continuous dual-lane HOV/Express Lane will be installed from Fallon Road to west of Vasco Road
- Continuous single-lane HOV/Express Lane will be installed from west of Vasco Road to Greenville Road

In the westbound I-580 direction:

- Continuous single-lane HOV/Express Lane will be installed from Greenville Road to Hacienda Drive
- A buffer separated single-lane HOV/Express Lane will be installed from Hacienda Drive to the I-580/I-680 Interchange

Project Status

Concept of Operations/System Engineering Management & Enforcement Plans

CDM Smith staff updated the Concept of Operations (Con Ops) Plan and the System Engineering Management Pan (SEMP) to reflect the changes described above. These plans outline the engineering process, the testing process, QA/QC guidelines, toll maintenance and operations requirements, and communication network requirements. Both these documents have been submitted to Caltrans and FHWA for their review.

Software and hardware design

ETC will revise the Detailed Design Document (DDD) for the software and hardware development based on deploying a "near continuous" access express lane system. The designers will also revise the communication network and electrical power needs. ETC staff will then perform a series of factory and field tests and work with the agency staff to validate its hardware and software design, prior to opening the new express lanes facility.

Toll Pricing and Rate Publishing

As discussed in previous meetings, for practical purposes and to curtail toll violation, a zone-based toll pricing scheme likely will be implemented to effectively support the "near continuous" access configuration. The zone-based toll rates will be displayed to patrons via the DMSs. However, since the "near continuous" access approach is a new concept and first of its kind to be implemented in California, additional details for pricing and messaging will have to be analyzed and determined during the system design process, prior to finalizing the electronic toll collection and price-setting systems.

Toll Antennas, Readers and Violation Enforcement Subsystem

The toll gantries will be placed at approximately ¾ mile intervals. Closely spaced toll antennas and readers will help facilitate a "near continuous" access express lane configuration since it will lead to an effective FasTrak® transponder read. It should also support more effective toll violation enforcement.

Since it will be difficult to manually enforce toll violations, the "near continuous" access will employ an increased number of toll gantries (for readers). The agency and the consulting staff are working to develop and implement an automated toll violation enforcement system strategy. The staff is assessing if the issues related to customer privacy, toll dispute resolution, customer service and issuance of automated violation tickets can be implemented within the current California code and agency requirements or if any policy, regulation and other changes will be necessary.

The agency staff is also working to deploy a comprehensive public education/outreach program to support the implementation of a "near continuous" access configuration and the use of switchable transponders, which will be new to Bay Area toll customers.

The Golden Gate Bridge Authority implemented another payment option, payment through pay-by-plate. The user is required to open up an account to pay via their license plate. Our initial assessment indicates that this payment option is likely to encounter challenges since it will be difficult to distinguish the HOV and SOV users in an open/shared express lane facility, unless every vehicle is required to register as either an HOV or SOV vehicle. Staff will continue to evaluate and collaborate with other toll operators and report back to the committee on whether the I-580 Express Lanes will employ such payment option.

In summary, even though the "near continuous" access concept provides additional opportunities it is a relatively new concept for implementation in the region. Staff is committed to working closely with other likeminded agencies/industry experts to move forward and implement an effective electronic toll collection system strategy to effectively support a "near continuous" access express lane configuration.

RECENT ACTIVITIES

- Working with ETC on the contract amendment for eastbound to reflect "near continuous" access configuration scope. Developing a new contract with ETC for the westbound direction.
- Continue to work on "zone tolling" pricing and automated violation strategies.

UPCOMING ACTIVITIES

- Finalize ETC contract amendment for eastbound and new contract for westbound – target September 2013
- Finalize Concept of Operations and System Engineering Management Plans – target October 2013

FUNDING AND FINANCIAL STATUS

Combined Eastbound & Westbound Funding Plan for "near continuous" access

There is a $30 million funding shortfall for the combined eastbound and westbound projects. In addition to exploring other funding sources, staff has submitted an application for a $30 million TIGER V Discretionary Grant to complete the funding package.

Project Phase	Funding Source ($ x million)							
	ARRA	Federal Earmark	RM2	TVTC	TCRP Deferred	Local (Meas. B)	TBD	Total
PA&ED			1.39	2.17	0.10			3.66
PS&E	0.70		0.11	0.93	3.10			4.84
Sys. Int.	6.80			0.68	1.47		8.05	17.00
ROW				0.37				0.37
Const. Support			2.55		0.05	1.47		4.07
Construct Cap		1.00		0.63	1.28		21.65	24.56
O&M						0.18	0.30	0.48
TOTAL	**7.50**	**1.00**	**4.05**	**4.78**	**6.0**	**1.65**	**30.00**	**54.98**
Total Project Cost: $54.98 M								

I-580 Express Lane Projects Location map

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