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I-580 EXPRESS LANE POLICY ADVISORY COMMITTEE

MEETING NOTICE Monday, November 19, 2012, 10:15 am (Please Note Revised Starting Time)

(Or immediately following I-680 SSCLJPA meeting) 1333 Broadway, Suite 300, Oakland, California 94612 (See map on last page of agenda)

Chair: Vice Chair: Members:

Staff Liaison: Executive Director: Clerk of the Commission: John Marchand Tim Sbranti Stewart D. Ng

Scott Haggerty

Mark Green

Jennifer Hosterman

Stewart D. Ng Arthur L. Dao Vanessa Lee

AGENDA

Copies of Individual Agenda Items are Available on the: Alameda CTC Website -- <u>www.AlamedaCTC.org</u>

ROLL CALL

1

2

PUBLIC COMMENT

Members of the public may address the Board during "Public Comment" on any item <u>not</u> on the agenda. Public comment on an agenda item will be heard when that item is before the Board. Only matters within the Board's jurisdictions may be addressed. Anyone wishing to comment should make their desire known by filling out a speaker card and handling it to the Secretary. Please wait until the Chair calls your name. Walk to the microphone when called; give your name, and your comments. Please be brief and limit comments to the specific subject under discussion. Please limit your comment to three minutes.

CONSENT CALENDAR	
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REGULAR MATTERS	
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	CONSENT CALENDARApproval of the Minutes of October 08, 2012 – Page 1REGULAR MATTERS1-580 Corridor High Occupancy Vehicle (HOV) Lane Projects Status Update – Page 31-580 Express (HOT) Lane Projects Status Update – Page 151-580 Express (HOT) Lane System Integration Status Update – Page 27

5 COMMITTEE MEMBER REPORTS (Verbal)

6 STAFF REPORTS (Verbal)

7 ADJOURNMENT/NEXT MEETING: November 19, 2012

Key: A- Action Item; I – Information Item

- (*) Materials will be distributed at the meeting.
- (#) All items on the agenda are subject to action and/or change by the Board.

PLEASE DO NOT WEAR SCENTED PRODUCTS SO INDIVIDUALS WITH ENVIRONMENTAL SENSITIVITIES MAY ATTEND

Alameda County Transportation Commission 1333 Broadway, Suites 220 & 300, Oakland, CA 94612 (510) 208-7400 (New Phone Number) (510) 836-2185 Fax (Suite 220) (510) 893-6489 Fax (Suite 300) www.alamedactc.org

Glossary of Acronyms

ABAG	Association of Bay Area Governments					
ACCMA	Alameda County Congestion Management Agency					
ACE	Altamont Commuter Express					
ACTA	Alameda County Transportation Authority (1986 Measure B authority)					
ACTAC	Alameda County Technical Advisory Committee					
ACTC	Alameda County Transportation Commission					
ACTIA	Alameda County Transportation Improvement Authority (2000 Measure B authority)					
ADA	Americans with Disabilities Act					
BAAQMD	Bay Area Air Quality Management District					
BART	Bay Area Rapid Transit District					
BRT	Bus Rapid Transit					
Caltrans	California Department of Transportation					
CEQA	California Environmental Quality Act					
CIP	Capital Investment Program					
CMAQ	Federal Congestion Mitigation and Air Quality					
СМР	Congestion Management Program					
CTC	California Transportation Commission					
CWTP	Countywide Transportation Plan					
EIR	Environmental Impact Report					
FHWA	Federal Highway Administration					
FTA	Federal Transit Administration					
GHG	Greenhouse Gas					
НОТ	High occupancy toll					
HOV	High occupancy vehicle					
ITIP	State Interregional Transportation Improvement Program					
LATIP	Local Area Transportation Improvement Program					
LAVTA	Livermore-Amador Valley Transportation Authority					
LOS	Level of service					

MTC	Metropolitan Transportation Commission
MTS	Metropolitan Transportation System
NEPA	National Environmental Policy Act
NOP	Notice of Preparation
PCI	Pavement Condition Index
PSR	Project Study Report
RM 2	Regional Measure 2 (Bridge toll)
RTIP	Regional Transportation Improvement Program
RTP	Regional Transportation Plan (MTC's Transportation 2035)
SAFETEA-L	LU Safe, Accountable, Flexible, Efficient Transportation Equity Act
SCS	Sustainable Community Strategy
SR	State Route
SRS	Safe Routes to Schools
STA	State Transit Assistance
STIP	State Transportation Improvement Program
STP	Federal Surface Transportation Program
ТСМ	Transportation Control Measures
TCRP	Transportation Congestion Relief Program
TDA	Transportation Development Act
TDM	Travel-Demand Management
ТЕР	Transportation Expenditure Plan
TFCA	Transportation Fund for Clean Air
TIP	Federal Transportation Improvement Program
TLC	Transportation for Livable Communities
ТМР	Traffic Management Plan
TMS	Transportation Management System
TOD	Transit-Oriented Development
TOS	Transportation Operations Systems
TVTC	Tri Valley Transportation Committee
VHD	Vehicle Hours of Delay
VMT	Vehicle miles traveled



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Lines 1,1R, 11, 12, 13, 14, 15, 18, 40, 51, 63, 72, 72M, 72R, 314, 800, 801, 802, 805, 840

Auto Access:

- Traveling South: Take 11th
 Street exit from I-980 to
 11th Street
- Traveling North: Take 11th Street/Convention Center Exit from I-980 to 11th Street
- Parking: City Center Garage – Underground Parking, (Parking entrances located on 11th or 14th Street)



I-580 Express Lane Policy Advisory Committee Meeting MINUTES OF OCTOBER 08, 2012 OAKLAND, CALIFORNIA

The meeting was convened by the Chair, Supervisor Haggerty, at 10:30am

1 ROLL CALL

A quorum was confirmed; Haggerty, Hosterman, Green, Marchand and Sbranti were all present.

2 PUBLIC COMMENT

There were no public comments.

3 CONSENT CALENDAR

3A. Approval of Minutes of September 10, 2012

Mayor Green motioned to approve this Item. Mayor Hosterman seconded the motion. The motion passed 5-0.

4 **REGULAR MATTERS**

4A. Review of the I-580 Eastbound HOV Lane Project Monthly Status Report

Stewart Ng reviewed the I-580 Eastbound HOV Lane Project Monthly Status Report. The review included a project description, an update on project funding, construction status on segments 1 & 2, and project delivery status.

This Item was for information only.

4B. Review of the I-580 Westbound HOV Lane Project Monthly Status Report

Stewart Ng reviewed the I-580 Westbound HOV Lane Project Monthly Status Report. The review included a project description, construction status on segments 1 & 2, an update on I-580 Westbound HOV Lane Project Funding Plan, and upcoming project activities.

This Item was for information only.

4C. Review of the I-580 Eastbound Express (HOT) Lane Project Monthly Status Report Stewart Ng reviewed the I-580 Eastbound Express (HOT) Lane Project Monthly Status Report. The review included a project description, an update on I-580 Eastbound HOT Lane Project Funding Plan, and a review of recent and upcoming project activities.

This Item was for information only.

4D. Review of the I-580 Westbound Express (HOT) Lane Project Monthly Status Report Stewart Ng reviewed the I-580 Westbound Express (HOT) Lane Project Monthly Status Report. The review included a general project description and overview, I-580 Westbound Express (HOT) Lane Project funding, a status on project deliver and financial statuses as well as an update and recent and upcoming activities.

This Item was for information only.

5 COMMITTEE MEMBER REPORTS

Mayor Sbranti stated that he and Mayor Hosterman attended a meeting with BART staff to discuss parking in Dublin and Pleasanton.

6 STAFF REPORTS

There were no Staff Reports.

7 ADJOURNMENT/NEXT MEETING: November 19, 2012

The meeting adjourned at 11:03am. The next meeting will be November 19, 2012.

Attested by:

Vanessa Lee Clerk of the Commission



Memorandum

DATE: November 6, 2012

TO: I-580 Express Lane Policy Advisory Committee

FROM: Stewart D. Ng, Deputy Director of Programming and Projects Gary Sidhu, Project Controls Team

SUBJECT: I-580 Corridor High Occupancy Vehicle (HOV) Lane Projects Status Update

Recommendation

This is an informational item only. No action is required.

Summary

The Alameda CTC is the sponsor for the I-580 Corridor High Occupancy Vehicle (HOV) Lane Projects, which will construct an HOV lane in both the Eastbound and Westbound directions along I-580 from Pleasanton to Livermore. The projects are designed to provide increased capacity, safety and efficiency for commuters and freight along the primary trade corridor connecting the Bay Area with the Central Valley.

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 construction contracts are being administered by Caltrans; the current status of each is as follows:

- I-580 Eastbound HOV Lane Project (Segments 1 and 2) is complete and the HOV lane was opened to traffic in 2010. The bids for Segment 3 have already been opened and this contract is expected to be awarded by end of November 2012.
- <u>The Westbound HOV Lane Project</u> will be constructed in two separate construction contracts: an eastern segment from Greenville Road to Isabel Avenue and a western segment from Isabel Avenue to Foothill/San Ramon Road. Construction bids for both the contracts have been opened. The western segment was awarded on October 29, 2012. The eastern segment is expected to be awarded by end of November 2012.

Attached for the Committee's review, are the monthly status reports for both the I-580 Eastbound HOV Lane Project and the I-580 Westbound HOV Lane Project; each report covers activities through October 31, 2012.

Discussion

I-580 Eastbound HOV Lane

The I-580 Eastbound HOV Lane Project is comprised of three segments:

- <u>Segment 1 and 2</u> provided one HOV lane in the eastbound direction from Greenville Road to Hacienda Drive. Construction was completed in 2010.
- <u>Segment 3</u> limits span from Hacienda Drive to Greenville Road and will construct eastbound auxiliary (AUX) lanes from Isabel Avenue to First Street in Livermore. In addition, the project will widen the eastbound bridges at Arroyo-Las Positas, pave and stripe all lanes in the eastbound direction from Hacienda Drive to Greenville Road and make other improvements to accommodate conversion of the HOV lane to a double express / high occupancy toll (HOT) lane facility.

Design and right-of-way acquisition work for Segment 3 was completed in May 2012. The bids for this segment were opened on October 5, 2012. The apparent lowest bidder is O C Jones & Sons with a bid 6.22% below the Engineer's Estimate. The contract is expected to be awarded by end of November 2012.

The total cost of I-580 Eastbound HOV Lane Project is \$138.6M. The project is funded from a combination of local, state and federal funds. The California Transportation Commission allocated \$21.56M CMIA ad \$5M SHOPP funds for Segment 3 at their May 2012 meeting. See Attachment A for detailed project funding and financial status.

I-580 Westbound HOV Lane

The I-580 Westbound HOV Lane Project will provide a westbound HOV lane from the Greenville Overcrossing in Livermore to the San Ramon / Foothill Road overcrossing in Dublin / Pleasanton. The project will also provide an auxiliary lane from Vasco Road to First Street; First Street to North Livermore; North Livermore to Isabel Avenue; and from Airway Blvd to Fallon Road and will rehabilitate the existing pavement. The widening of the Arroyo Las Positas Creek Bridges has been included in Segment 3 of Eastbound HOV Lane Project in order to avoid conflict during construction between contractors. The westbound project will be constructed in two separate construction contracts:

- An East Segment from Greenville Road to Isabel Avenue, and
- A West Segment from Isabel Avenue to San Ramon/Foothill Road.

The total cost of the I-580 Westbound HOV Project is \$170.8M. The project is funded from local, state and federal funds. California Transportation Commission allocated \$101.7M CMIA, \$29.4M SHOPP and \$10M TCRP funds at their April, May and September 2012 meetings. See Attachment B for detailed project funding and financial status.

Design and right-of-way acquisition work for both segments was completed in May 2012. The bids for the western segment were opened on August 29, 2012; the apparent lowest bidder is DeSilva Gates Construction with a bid at 23.32% below Engineer's Estimate. The bids for the eastern segment were opened on September 19, 2012; the apparent lowest bidder is Ghilotti Construction Company with a bid at 16.33% below Engineer's Estimate. The west segment contract was awarded October 29, 2012. The east segment contract is expected to be awarded by end of November 2012.

Benefits

The I-580 Eastbound HOV Project has reduced peak period congestion and delay by providing a new HOV lane for carpooling motorists and transit riders. The I-580 Westbound HOV Project will complement the newly completed eastbound HOV lane and provide similar benefits. The new lane aims to encourage ridesharing and transit use and to reduce the number of single occupant vehicles on the mainline. AUX lanes are designed to improve highway operations by separating vehicle on and off movements on the mainline from the faster moving through traffic lanes. This project will support regional quality attainment goals by reducing the numbers of automobiles in use and idling in traffic. It will also improve safety for motorists and maintenance workers by providing adequate inside and outside shoulders where possible, allowing a refuge area for disabled vehicles and improving accessibility for the California Highway Patrol (CHP) and emergency and maintenance vehicles.

Fiscal Impact

This is an informational item and there is no fiscal impact.

Attachment(s)

Attachment A:ALA580 Eastbound HOV Lane Project Monthly Status ReportAttachment B:ALA580 Westbound HOV Lane Project Monthly Status ReportAttachment C:I-580 Corridor HOV Lane Projects – Location Map

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ATTACHMENT A I-580 Eastbound HOV Lane Monthly Progress Report Through October 31, 2012

PROJECT DESCRIPTION

The Eastbound I-580 HOV Lane Project includes three segments: Segment 1, Segment 2 and Segment 3:

- Segment 1 HOV lane construction from Greenville Road to Portola Avenue.
- Segment 2 HOV lane construction from Portola Avenue to Hacienda Drive.
- Segment 3 Auxiliary (AUX) Lane from Hacienda Drive to Greenville Road. Project scope includes:
 - o Construction of AUX lanes from Isabel Avenue to First Street;
 - Includes the pavement width necessary for a double high occupancy toll (HOT) lane facility;
 - Includes final lift of asphalt concrete (AC) pavement and striping for entire eastbound project limits from Hacienda Drive to Portola Avenue;
 - Includes the sound wall that was deleted from the I-580/Isabel Avenue Interchange Project; and,
 - o Includes the widening of two bridges at Arroyo Las Positas in the eastbound direction.

CONSTRUCTION STATUS

Segment 1 - The HOV lane from Greenville Road to Portola Avenue was opened to traffic in October 2009. The construction contract of this segment was accepted on February 2, 2010.

Segment 2 - The HOV lane from Hacienda Drive to Portola Avenue was opened to traffic in November 2010. The construction contract was accepted on September 30, 2011.

PROJECT DELIVERY STATUS

Segment 3 – Project was advertised on July 9, 2012 and bids opened on October 05, 2012. The apparent low bidder is O C Jones & Sons with a low bid at 6.33% below Engineer's Estimate. The contract is expected to be awarded by mid-November 2012.

SEGMENT 3 ANTICIPATED CONSTRUCTION STAGING & TRAFFIC HANDLING

Construction activities are expected to include both day and night work; final construction staging sequence may change based on contractor's proposed plans. Significant work is involved in rehabilitating the existing pavement which requires closing traffic lanes. Due to heavy day time traffic volumes, closing traffic lanes will create considerable traffic delays. For this reason, pavement rehabilitation work can only be done during night time 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. According to the approved lane closure charts by Caltrans, night work will occur between 9:00 PM and 4:00 AM. Lane closures are expected, but complete freeway closure is not anticipated. Work within the median behind k-rail is expected as the first order of work and will occur during day time hours. In addition, all bridge work is expected to occur during day time hours. In cooperation with Alameda CTC, Caltrans will lead the public outreach effort; which is expected to occur following award of the construction contract.

PROJECT FUNDING & FINANCIAL STATUS

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

I-580 Eastbound AUX Lane Project Funding Plan - Segment 3

	CMIA	RM2	TVTC	FED	SHOPP	Meas. B	CMA TIP	Total	
PA&ED		1.54	0.64					2.18	
PS&E		1.00	0.92	0.12			0.18	2.22	
ROW		0.14	0.06	0.11		0.23		0.54	
Construct Cap	19.03	2.64			5.00	6.62		33.29	
Construct Sup	2.53	1.12					0.55	4.2	
TOTAL	21.56	6.44	1.62	0.23	5.00	6.85	0.73	42.43	
Total Project Cost: \$42.43 M									

SCHEDULE STATUS

I-580 Eastbound AUX Lane Project Schedule - Segment 3

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

RECENT ACTIVITIES

Project was advertised on July 9, 2012 and bids opened on October 5, 2012.

UPCOMING ACTIVITIES

Project is expected to be awarded mid November 2012.

ATTACHMENT B I-580 Westbound HOV Lane Monthly Progress Report Through October 31, 2012

PROJECT DESCRIPTION

The Westbound I-580 HOV Lane Project includes three segments: Segment 1, Segment 2 and Segment 3:

- Segment 1 East HOV Segment; project limits are Greenville Road to Isabel Avenue.
- Segment 2 West HOV Segment; project limits are from Isabel Avenue to San Ramon Road in Dublin.
- Segment 3 Eastbound bridge widenings at Arroyo Las Positas Creek. The project scope of this segment has been combined with the Segment 3 of the Eastbound HOV Lane Project. Construction is scheduled to begin November 2012.

PROJECT DELIVERY STATUS

Segment 1(East Segment) – This project was advertised on July 16, 2012 and bids were opened on September 19, 2012. The apparent lowest bidder is Ghilotti Construction Company, Inc. with bid about 16.33% below Engineer's Estimate. Award of the contract is expected by mid-November 2012.

Segment 2 (West Segment) – This project was advertised on June 25, 2012 and bids were opened on August 29, 2012. The apparent lowest bidder is DeSilva Gates Construction with bid about 23.32% below Engineer's Estimate. The contract was awarded by Caltrans on October 29, 2012.

ANTICIPATED CONSTRUCTION STAGING & TRAFFIC HANDLING

Even though final construction staging sequence could change based on contractor's proposed plans, construction activities are expected to include both day and night work. Significant work is involved in rehabilitating the existing pavement which requires closing traffic lanes. Due to heavy day time traffic, closing traffic lanes will create significant traffic delays. As such pavement rehabilitation work can be done only during night time. 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 paving) and electrical work. According to the approved lane closure charts by Caltrans, night work will occur between 9:00 PM and 4:00 AM. Lane closures are expected but no freeway closure is anticipated. Work within the median behind k-rail is expected as first order of work and will occur during day time. All bridge work is expected during day time. In cooperation with Alameda CTC, Caltrans will lead the public outreach effort; which is expected to occur following award of the construction contracts.

PROJECT FUNDING & 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 \$173.1M. The total programmed (committed) funding from federal, state and local sources is \$170.8M.

I-580 Westbound HOV Lane Project Funding Plan Segment 1 (East Segment)

	CMIA	RM2	TCRP	FED	SHOPP	Meas. B	TVTC	TCRP	CMA	Total
								LONP	TIP	
PA&ED		4.44								4.44
PS&E		3.14		0.12		0.24	0.55		0.72	4.77
ROW		1.33							0.03	1.36
Const	42.82		5.92	6.19	16.40	2.24		0.24		73.81
Сар										
Const.	6.52	0.10	1.59						0.75	8.96
Sup										
Total	49.34	9.01	7.51	6.31	16.40	2.48	0.55	0.24	1.50	93.30
	Total Project Cost: \$93.30M									

Segment 2 (West Segment)

	CMIA	RM2	TCRP	FED	SHOPP	Meas. B	TVTC	CMA TIP	Total
PA&ED		3.71							3.71
PS&E		2.62		0.10		0.20	0.46	0.60	3.98
ROW		1.11						0.03	1.14
Const	45.61		2.49		13.00				61.10
Сар									
Const.	6.75	0.10						0.75	7.60
Sup									
Total	52.36	7.54	2.49	0.10	13.00	0.20	0.46	1.38	77.49
Total Project Cost: \$77.49									

SCHEDULE STATUS

I-580 Westbound HOV Lane Project Schedule:

Segment 1 (East Segment):

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

Segment 2 (West Segment):

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

RECENT ACTIVITIES

- Bids opened for Segment 2 on August 29, 2012 and for Segment 1 on September 19, 2012.
- West segment construction contract awarded October 29, 2012.

UPCOMING ACTIVITIES

• Award of the east segment construction contract expected by mid-November 2012.

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Attachment C





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Memorandum

SUBJECT:	I-580 Express (HOT) Lane Projects Status Update
FROM:	Stewart D. Ng, Deputy Director of Programming and Projects Connie Fremier, Project Controls Team
TO:	I-580 Express Lane Policy Advisory Committee
DATE:	November 6, 2012

Recommendation

This is an informational item only. No action is required.

Summary

The Eastbound I-580 Express High Occupancy Toll (HOT) Lane Project will convert the newly constructed eastbound HOV lane, from Hacienda Drive to Greenville Road, to a double express lane facility. The I-580 Westbound Express High Occupancy Toll (HOT) Lane 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.

Both I-580 express lane projects are currently in the environmental phase which is estimated for completion Spring of 2013 (pending Caltrans approval of Design Exceptions in November 2012) and are scheduled to start construction immediately after the east and west segments of the I-580 Westbound HOV and I-580 Eastbound Auxiliary lane projects are completed in 2014. These projects will widen the freeway to provide the width needed for the express lane projects. The I-580 Eastbound and Westbound Express Lane Projects 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.

Progress reports for both the Eastbound I-580 Express (HOT) Lane Project and the Westbound I-580 Express (HOT) Lane Project; which include more information on funding, schedule and project status are attached.

Discussion

Delivery Strategy

Originally, the delivery concept for the two proposed I-580 express lane projects was to incorporate the express lane elements into the I-580 Westbound HOV Lane (east and west segments) and I-580 Eastbound Auxiliary Lane Projects. Both projects are recipients of CMIA Bond money which required that they be delivered prior to December 2012 in order to meet funding requirements. Due to unresolved issues, particularly regarding Caltrans acceptance of Design Exceptions and the amount of time required to complete the traffic analysis for the express lane projects, the express lane projects lagged behind the HOV and Auxiliary Lane projects. In October 2011, staff recommended and the I-580 Policy Advisory Committee concurred with separating the express lane projects from the HOV lane and Auxiliary Lane projects: Making them independent projects that would be delivered and constructed separately and allowing the HOV lane and AUX lane projects to move forward through the final design phase and to successfully meet the above mentioned project delivery requirement of December 2012; both projects were delivered spring 2012 and CMIA Bond funds have been allocated to each. The I-580 Eastbound and Westbound Express (HOT) Lane Projects are now on similar delivery schedules and staff has developed a project delivery approach to expedite the delivery of the express lane projects in the most cost effective manner.

Currently, on the I-580 Eastbound Express (HOT) Lane project, URS Corporation has a contract to perform environmental and design services and ETC has a contract for the System Integration. On the I-580 Westbound Express (HOT) Lane project, URS Corporation has a contract to perform environmental services. There is no contract in place for design or System Integration on the I-580 Westbound Express Lane Project.

In order to deliver the westbound express project, ACTC needs to contract for the design and System Integration services. The most efficient and cost effective way to delivery these services is to use the existing firms that are already providing services on the corridor for the I-580 express lane projects. Both URS Corporation and ETC are already familiar with the corridor and the associated project issues and would require no learning curve. Staff proposes to amend the existing URS contract (Contract No. A11-0025) for the I-580 Westbound Express (HOT) project to include design services, and to sole source the System Integration component to ETC. Staff is currently negotiating the scope and cost of these services with the two firms and will bring back contracts for approval in January 2013.

In addition, staff proposes to combine the I-580 Eastbound Express (HOT) and I-580 Westbound Express (HOT) Projects into one construction project. This will save money in 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. Using the same design and System Integration firms for both projects will make it easier and more cost effective to combine the projects.

Finally, staff is currently working 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 additional traffic disruptions to the traveling public and eliminate and reduce re-work. Work under consideration to include via contract change order includes:

- Sign foundations in median
- Electrical Conduit across and along I-580

- Striping stripe to final HOT configuration
- Install K-rail along median at sign locations

Express Lane Access Options

Recently, at the request of Caltrans, staff is currently investigating an "open" access configuration in lieu of "limited" access for the express lanes on the I-580 corridor. The concept of open access has gained momentum in the Bay Area and is under consideration for several other express lane corridors such as I-80 in Solano County. Open access has no transition lanes and a single hash-stripe for access (similar to current HOV lanes), whereas limited access has designated ingress and egress locations, typically near interchanges and a double stripe (2' width) between access areas. The I-580 Eastbound Express (HOT) Lane Project is currently designed for limited access with access restricted to interchange locations.

In order to assess the open access configuration, the traffic operations analysis for the I-580 express lane projects needs to be refined. Initial results indicate that open access will not have a negative effect on the corridor. The additional refinement of the traffic analysis for both the Eastbound and Westbound HOT lane projects will be complete in November, 2012.

The open access configuration would eliminate the 2' 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 Fallon Road and I-680 (westbound).

The benefits of open access include a more continuous access (except at "hot spots" or safety zones) for the traveling public and a reduced project footprint due to the elimination of the two foot buffer between the express lane and general purpose lanes.

Although open access has benefits and is being looked upon favorably by Caltrans and MTC, there are several risks and challenges associated with changing the access approach as follows:

- Capital Cost Increase the open access approach will require more Dynamic Message Signs (DMS) and toll zone gantries in order to implement open access and zone tolling (Item 4C discusses open access and zone tolling in more detail).
- Support Cost Increase The System Integrator, ETC, has already completed toll systems and software design for limited access. Open access would change this design and result in additional costs.
- Support Cost Increase The previously approved Concept and Operations Plan and System Engineering and Management Plan would need to be updated for open access approach.
- Zone tolling requirements since this is the first project in the State to potentially implement open access, there are several details for pricing and messaging, spacing of tolling zone gantries, and toll enforcement strategies that will have to be analyzed and determined during the system design process which could be a risk to the overall project schedule.

Staff will continue to look for opportunities to minimize throw away costs and advance the project through design and construction while finalizing project design details such as zone tolling requirements for open access.

Fiscal Impact

Future contract amendments to URS (civil design), CDM and ETC (system integration) contracts to revise access approach from limited access to open access and to complete the design and

system integration work for the Westbound Express Lane (HOT) Project. Anticipated costs are approximately \$13.2M for system integration work including conversion to open access (Eastbound and Westbound) and approximately \$1.5M for design and project management of the Westbound Express Lane.

Attachment(s)

Attachment A: ALA580 Eastbound Express (HOT) Lane Project Monthly Status Report Attachment B: ALA580 Westbound Express (HOT) Lane Project Monthly Status Report Attachment C: I-580 Corridor Express Lane Projects – Location Map

ATTACHMENT A I-580 Eastbound Express (HOT) Lane Project Monthly Status Report Through October 31, 2012

PROJECT DESCRIPTION

The Eastbound I-580 Express or High Occupancy Toll (HOT) Lane Project will convert the newly constructed eastbound HOV lane, from Hacienda Drive to Greenville Road, to a double express lane facility which will include standard shoulder and lane widths where feasible.

PROJECT FUNDING

The I-580 Eastbound Express (HOT) Lane Project is funded through a combination of Federal, State, and local funds. Staff has recently reconciled RM2 funding on the 580 corridor and funding that was previously programmed for this project has been used to fund needs on other projects in the corridor resulting in a funding shortfall of approximately \$4.8M for the construction capital phase of the project.

Potential options to fill the funding gap include redirecting RM2 funds that were previously set aside for a express bus direct connection from westbound I-580 to the Dublin BART Station (\$12M), and/or a loan from Measure B to be repaid with future toll revenue. Alameda CTC staff are working with the Metropolitan Transportation Commission (MTC) to identify funding for this shortfall.

PROJECT DELIVERY STATUS

An Initial Study and Environmental Assessment (IS/EA) for this project is underway as follows:

- Environmental studies are complete and the IS/EA is drafted and ready to circulate pending minor changes to address open access alternative and Caltrans approval of the Draft Project Report. The estimated date of circulation of the IS/EA is January 2013 (pending approval of Design Exceptions in November 2012). A 30 day public circulation period is required in addition to a public meeting.
- The Draft Project Report is drafted and is pending approval upon Caltrans approval of Design Exceptions for reduced shoulder width and lane widths. It is anticipated that the Project Report will be finalized in December 2012.
- Staff continues to work with Caltrans staff to obtain approval of Design Exceptions for reduced inside shoulder width (4'-8') and reduced lane widths (11') at locations where right of way is insufficient. Focus meetings with Caltrans have been taking place on a regular basis to address their issues and concerns. The project team has been able to significantly reduce the magnitude of the Design Exceptions by maximizing use of existing right of way including an open access approach, however, Caltrans still has not granted approval at all locations. In general, Caltrans appears to be agreeable to the

reduced lane widths (11'), however, the reduced inside shoulder width continues to be problematic. The project team continues to work with Caltrans and is meeting on a regular basis to resolve their concerns, however additional project costs may result in order to resolve Caltrans concerns.

- Staff is working to coordinate with the HOV projects (I-580 Westbound HOV West Segment, I-580 Westbound HOV - East Segment, I-580 Eastbound HOV Segment 3 -Auxiliary Lanes) to add some project express lane elements to the HOV projects via contract change order (CCO). Work under consideration to include via CCO includes:
 - Sign foundations in median
 - Electrical Conduit across and along I-580
 - Striping stripe to final HOT configuration
 - Install K-rail along median at sign locations

POTENTIAL ISSUES/RISKS

- Funding Current shortfall (for limited access design) of \$5.5M
- Funding Additional funding shortfall of approximately \$7M to convert limited access approach to open access
- Approval of design exceptions by Caltrans if Caltrans does not approve the requested Design Exceptions, it could require additional work to increase inside shoulder width to meet standard (10') such as constructing retaining walls, reconfiguring interchange ramps, relocating environmental mitigation areas to an offsite location, and/or purchasing additional right of way which would increase the project cost. Depending on the solution, additional cost could range from \$5M-\$50M. Additional right of way would also require additional environmental evaluation which would delay completion of the environmental phase of the project.
- Schedule impacts there could be additional project delays should Caltrans and Alameda CTC be unable to come to an agreement on the Design Exceptions by November 2012. There is also the possibility of delays associated with an open access approach. At this time, staff anticipates to work on design details for open access (location and number of toll gantries) concurrently with completing the overall civil design to avoid delays.

FINANCIAL STATUS

	ARRA	RM2	TVTC	TCRP	Local	TBD	Total
				Deferred	(Meas.B)		
PA&ED		1.32	0.30	0.12			1.74
PS& E		0.18	0.70	1.15			2.03
Sys.Int.	7.50						7.50
ROW			0.20				0.20
Const. Support		0.60	0.18	0.50			1.28
Construct Cap		1.95		2.23		4.82	9.00
O& M					0.18		0.18
TOTAL	7.5 0	4.05	1.38	4.0	0.18	4.82	21.93
Total Project Cost: \$21.93M							

I-580 Eastbound Express (HOT) Lane Project Funding Plan (For Limited Access Design)

SCHEDULE STATUS

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

Project Approval	March 2013
RTL	October 2013
Begin Construction	2014
End Construction	2015

* Schedule assumes design exceptions approved by November 2012

RECENT ACTIVITIES

- System Integrator finalizing electrical plans.
- Refining traffic studies for "open" access alternative
- Continuing to work with Caltrans for approval of Design Exceptions for reduced shoulder width and lane widths

UPCOMING ACTIVITIES

- Finalize Design Exceptions Target date November 2013
- Finalize Draft Project Report Target date December 2013
- Circulate the Draft IS/EA for 30 day public comment working toward January 2013 circulation of document; dependent on approval of design exceptions and limited additional work for conversion to open 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 March 2013
- Determine items to be added to HOV lane projects via CCO Target date March 2013

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ATTACHMENT B I-580 Westbound Express (HOT) Lane Monthly Status Report Through October 31, 2012

PROJECT DESCRIPTION

The I-580 Westbound Express or High Occupancy Toll (HOT) Lane will convert the planned westbound HOV lane to single express lane facility on I-580 in Alameda County from west of the Greenville Road Undercrossing in Livermore (PM R8.3) to west of the San Ramon Road/ Foothill Road Overcrossing in Dublin/Pleasanton (PM 21.4), a distance of approximately 13.1 miles.

PROJECT FUNDING

The I-580 Westbound Express (HOT) Lane Project is partially funded through Federal, and local funds. A shortfall of \$11.1 Million remains; Alameda CTC staff are working with the Metropolitan Transportation Commission (MTC) to identify funding for this shortfall. Potential options to fill the funding gap include redirecting RM2 funds that were previously set aside for a express bus direct connection from westbound 580 to the Dublin BART Station (\$12M), or a loan from Measure B to be repaid with future toll revenue.

PROJECT DELIVERY STATUS

The environmental phase for this project is underway as follows:

- Traffic studies will be finalized in November and include an evaluation of open access alternative
- The environmental document, a Categorical Exemption (CE), is being prepared
- A Draft Project Report is being prepared.
- This project will require design exceptions, reduced inside shoulder widths and potential lane width reductions (11'). The design exceptions, however, are the same design exceptions previously approved by Caltrans for the I-580 westbound HOV projects. The intent is to request the same design exceptions that Caltrans previously approved. Staff has a meeting to discuss design exceptions with Caltrans in November 2012.

POTENTIAL ISSUES/RISKS

- Funding Current shortfall (for limited access design) of \$11.1M
- Funding Additional funding shortfall of approximately \$7 to implement open access alternative
- Approval of design exceptions by Caltrans if Caltrans does not approve the requested Design Exceptions, it could require additional work to increase inside shoulder width to meet standard (10'). This project is in its early phase of engineering. Until the initial meeting regarding the design exceptions takes place later this month, it is unknown how Caltrans will respond to the requested design exceptions.
- Schedule impacts there could be additional project delays should Caltrans and Alameda CTC not come to agreement on the Design Exceptions by January 2012. There is also the possibility of delays associated with an open access approach. At this

time, staff anticipates to work on design details for open access (location and number of toll gantries) concurrently with completing the overall civil design to avoid delays.

FINANCIAL STATUS I-580 Westbound Express (HOT) Lane Project Funding Plan (For Limited Access)

	Fed	ТУТС	TCRP LONP	TBD*	Total
			Deferred		
PA&ED	0.78	0.78			1.56
PS& E	0.19	0.25	1.00		1.44
Sys.Int.			1.00	4.50	5.50
ROW		0.17			0.17
Const. Support		0.90			0.90
Construct Cap		1.30		6.60	7.90
TOTAL	0.97	3.40	2.00	11.10	17.47
	Тс	tal Project Co	ost: \$17.47M		

*TBD = funding shortfall

SCHEDULE STATUS

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

Project Approval	March 2013
RTL	October 2013
Begin Construction	October 2014
End Construction	November 2015

RECENT ACTIVITIES

- Environmental technical studies and traffic studies are underway
- Draft geometrics and Draft Project Report (including Design Exceptions) are underway

UPCOMING ACTIVITIES

- Complete traffic studies Target date November 2012
- Finalize Design Exceptions Target date January 2012
- Draft Project Report Target date January 2013
- Draft Environmental Document (CE) Target date January 2013
- Final environmental clearance Target date March 2013



1-580 Corridor Express Lane Projects - Location Map

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Memorandum

SUBJECT:	I-580 Express (HOT) Lanes System Integration Status Update
FROM:	Stewart D. Ng, Deputy Director of Programming and Projects Kanda Raj, Project Controls Team
TO:	I-580 Express Lane Policy Advisory Committee
DATE:	November 6, 2012

Recommendation

This is an informational item only. No action is required.

Although this is an informational item, staff is seeking I-580 Express Lane Policy Advisory Committee's endorsement for seeking approval of Alameda CTC for amending consultant services agreements to accommodate revised scope, schedule and budget, based on a revised project delivery plan, as further described in this item.

Summary

This staff report provides a status update of current and planned project development and procurement activities associated with the I-580 System Integration; including the opportunities and risks associated with implementing an open access configuration.

Currently, two High Occupancy Vehicle (HOV) Lanes along the I-580 corridor are proposed to be converted to express lanes or High Occupancy Toll (HOT) lanes; one each in the eastbound and westbound directions. The limits of the proposed I-580 Eastbound and Westbound Express (HOT) Lane Projects span from Hacienda Drive to Greenville Road and from Greenville Road to San Ramon Road/ Foothill Road, respectively. System integration is the last component of express lane implementation; which typically follows the civil-roadway infrastructure improvements. For efficiency purposes, both the eastbound and westbound express lane projects will likely install some elements of the system integration work such as: installing sign gantries for dynamic messaging and overhead toll readers (toll collection via transponder reads), barriers for protecting the toll equipment and electrical conduit for providing connections to power and communication sources. The System Integration projects will ultimately provide the design of the software and hardware and install and test the equipment to implement the express lanes.

This System Integration work is being coordinated with the I-580 Eastbound and Westbound Express Lane (HOT) Projects and will immediately follow the construction of these contracts.

Discussion

The system integration is a specialized field, focusing on newer technologies including software and hardware equipment deployment for optimizing existing corridor/system capacity to manage current and forecasted traffic congestion. The system integrators however, will continue to own the software while the implementing agency pays for the licensing fee associated with use of the integrator's software and for the design, development and deployment of the electronic toll system (ETS). The system integrator is responsible for the design, development, integration, and testing of the software and hardware and field installation of toll hardware equipment. In addition, they provide integration of the road geometry and toll equipment with the toll collection software for seamless electronic toll collection, utilizing FasTrak® transponders.

In March 2010, the Alameda CTC retained Electronic Transaction Consultants (ETC) Corporation as its System Integrator for implementation of the new ETS for the I-580 Eastbound Express Lanes facility; with a planned schedule for full toll operations by July 2011. ETC has completed design of the toll software and hardware; which has been reviewed and approved by the agency. However, the schedule for the next steps of integration, such as the equipment procurement, field installation and system testing, has been revised due to unforeseen delays in the express lane contracts. ETC is expected to conduct several important tests to ensure proper functionality of the toll system design and development, including factory acceptance and site acceptance tests, to ensure that the system meets all of the pre-determined technical and operating requirements. Once the agency accepts the field tests, ETC can commission the new toll system and a 12-month warranty period will commence for system maintenance and operations support. The agency has yet to procure a system integrator for the I-580 Westbound express lane. However, a corridor-wide project delivery approach for system integration is described in subsequent paragraphs.

The current eastbound I-580 toll pricing, equipment and software design is based on a limited access configuration, which is comprised of a total of five access locations: three exclusive ingress/egress and two combined ingress/egress locations. As previously discussed in Item 4B - I-580 Express Lane Status Update, "open" or "near open" access has gained momentum in the Bay Area for express lane implementation. Even though open access will address some of the issues related to limited access configuration that is encountered on the I-680 Southbound Express Lane, the new concept brings the following opportunities and challenges:

Concept of Operations

CDM Smith (formerly Wilbur Smith and Associates) staff, as an extension of agency staff, completed a concept of operations (Con Ops) plan for eastbound I-580 that defined the toll pricing strategies, software and hardware needs and enforcement concepts. CDM Smith also developed a system engineering management plan (SEMP) for the I-580 Eastbound Express (HOT) Lane Project that outlined the engineering process, the testing process, QA/QC guidelines, toll maintenance and operations requirements, communication network requirements, etc. Both documents were reviewed and approved by the FHWA and Caltrans prior to the

agency issuing a Request for Proposal to select the systems integrator, who was contracted to develop the system software, hardware and to install and implement the tolling system.

The open access concept provides additional access opportunities while reducing the foot-print required for implementing a shared express/general purpose lane facility. To maintain the required traffic operating conditions (Level of Service (LOS) C or higher) in the express lane, buffer separation may be warranted at selected locations where traffic conflicts are anticipated. With changes proposed to the access type and locations, both the Con Ops and SEMP documents will have to be revised to properly support an open access type express lanes system. Until such revisions are made, revisions to the revenue study and system design work cannot commence. Efforts will be made to salvage some of CDM Smith's past work, but substantial revisions to those documents are required. CDM Smith has also been retained to prepare the Con Ops and SEMP for the I-580 Westbound Express (HOT) Lane Project. Staff will review an option to combine the scope of services for efficiency purposes.

Toll pricing, rate publishing and enforcement

For practical purposes, a zone-based toll pricing scheme will have to be implemented to effectively support the open access configuration and publish the toll rates to patrons via the dynamic message signs (DMS). Zone-based pricing means that the price for using a certain length of express lane (zone) will be fixed, regardless of actual distance traveled by users within that zone. A vehicle will have to travel through one of the toll readers, which will be located within that zone to get charged the full toll rate that was dynamically calculated to travel in that zone. The DMSs likely will have to display two rates, one that applies to that specific toll zone and the other for the zone immediately downstream. It will be cumbersome for potential express lane users to process a lot of toll rate information as they approach the express lane entry point, which is why it is important to limit the number of toll rates to be displayed on the DMSs. Since the open 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.

Closely spaced toll readers will facilitate an open access express lanes configuration since it will lead to an effective FasTrak® transponder read process and will also support more effective violation enforcement. Various local and regional agencies are currently studying the potential effects of placing toll reader gantries every ½ mile through the corridor, which is expected to effectively support an open access facility. Alternatively, they are also reviewing the effectiveness of placing the toll readers every 1 or 2 miles. Staff will evaluate this further and report back with an approach for the I-580 express lanes system.

Deploying CHP Enforcement Observation Areas at several of these toll reader sites (toll zones) and/or utilizing a manual violation enforcement approach might be cost prohibited. Therefore, an automated toll violation enforcement strategy will have to be designed and deployed to effectively provide the required system enforcement. The issues related to customer privacy, toll dispute resolution, customer service and issuance of automated violation tickets will have to be vetted to ensure that it can be implemented within the current California vehicle code, likely through some type of regional implementation plan and through future legislation. To enhance system violation detection, additional CCTV cameras and violation enforcement system (VES)

cameras (for automated violation detection) will need to be designed, procured and installed; which will affect the toll system design and increase the initial construction capital costs.

The traffic and revenue (T&R) study for the I-580 Eastbound Express (HOT) Lane Project was completed in 2009. Implementing an open access approach might provide additional opportunity for patrons to enter and exit the express lane, but the effects of zone-based pricing and potential for revenue leakage will have to be carefully studied, and the toll revenue forecast to be revised, accordingly. URS Corporation (URS) is expected to provide the scope of services for the toll revenue forecast work.

Software and hardware design

ETC, the System Integrator, completed the Detailed Design Document (DDD) for the software and hardware development. ETC also recently completed the toll system software design and is nearing completion of the electrical design plans. Deploying an open access express lane system will require revisions to these documents and plans which have already been developed by ETC and reviewed by the agency and CDM Smith staff. Some of the design documents that ETC has developed can be utilized. The open access approach will require additional toll reader (toll zone) gantries and DMSs to be deployed. These changes will also require additional power sources and associated conduit runs. Communication lines and system design will have to be beefed up to accommodate the changes.

Based on the current limited access configuration, ETC's design, development, installation and implementation cost for the eastbound I-580 systems integration is approximately \$8.0 million, which includes escalation costs associated with the 3-4 year construction delay. The agency has yet to procure a systems integrator to design, develop, install and deploy the toll system for the I-580 Westbound Express (HOT) Lane Project. For a similar limited access configuration with five (5) access locations, the systems integration cost for the westbound project is estimated at \$6.5 million. Therefore, the total systems integration cost for a combined I-580 Express Lane System is currently estimated to be approximately\$14.5 million. As discussed above, the open access approach will require additional DMSs, toll readers and gantries; which will add to an increase in both the initial construction cost for these additional equipment and services is estimated to range from \$7-10 million. Therefore, the total design and construction cost for the ETS elements for implementing open access express lanes along eastbound and westbound I-580 is estimated to range from \$21.5-24.5 million.

The open access approach will provide additional access opportunities to/from the express lane and additional opportunities to meet design standards and to provide a familiar lane configuration to system users. Staff has evaluated various opportunities to curb the construction cost increases associated with the change in express lane access type. Currently both the I-580 Eastbound and Westbound Express (HOT) Lane Project schedules are on a similar track; with anticipated system installation in the spring of 2015 and opening of the express lane facilities in the fall of 2015. Therefore, there is an opportunity to combine the I-580 Eastbound and Westbound design and construction contracts in order to reduce construction capital costs and help avoid construction conflicts between two system integrators. By opting to use a single system integrator for both the I-580 eastbound and westbound systems integration contracts, the agency will reap the benefit of economies of scale and save on construction, operations and maintenance costs. Preliminary construction cost estimates for the combined system integration effort is estimated at a range of \$19.5-22.5 million, a \$2.0 million savings when compared to utilizing two separate system integrator contracts. The system installation work for the combined project could begin in spring of 2015 with the express lanes opening to traffic as scheduled in fall of 2015.

Based on the information presented herein, staff recommends that the agency retain ETC for the systems design, development, testing, and implementation work for both the I-580 Eastbound and Westbound Express (HOT) Lane Projects (sole sourcing the I-580 westbound system integration work), and combine the construction of both projects into a single I-580 Express Lanes Facility Project. Staff is seeking the I-580 Express Lane Technical Advisory Committee's endorsement for this revised project delivery approach so that the Alameda CTC's approval can be sought for amending the ETC, CDM Smith and URS contracts.

Fiscal Impact

The I-580 Express Lane Technical Advisory Committee's endorsement will result in future contract amendments that will encumber an additional \$13.2-16.2 million in TCRP (Deferred) and local Measure B Loan funds.

Attachment(s)

Attachment A: Photographs of Express Lane Components

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Attachment A: Photographs of Express Lane Components



Express Lane Dynamic Message Sign (DMS)

Attachment A

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