BAY AREA EXPRESS LANES

MTC Express Lanes Quarterly Report 4th Quarter 2015

Submitted: February 24, 2016

BAIFA
BAY AREA INFRASTRUCTURE FINANCING AUTHORITY

METROPOLITAN TRANSPORTATION COMMISSION

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Construction is well under way on I-680 in Contra Costa County, the first Bay Area Express Lane project to be planned, built and operated by MTC.

Traffic controlled lane closures off of Crow Canyon Road on I-680. (See additional construction photographs on pages 15-17)

I. PROGRAM HIGHLIGHTS

The purpose of this report is to summarize the progress of delivering Metropolitan Transportation Commission (MTC) Express Lanes. The report covers the fourth quarter of 2015, October 1 to December 30.

The California Transportation Commission (CTC) approved the MTC's application to implement and operate its 270-mile express lane network on October 27, 2011. Soon thereafter, work began to environmentally clear the first phase of express lane conversion projects and produce a Concept of Operations describing how the express lanes will operate. Currently, there are several projects at varying stages of development with the first project scheduled to open in 2017.

Project Development & Construction	4th Quarter 2015 Highlights	Current Activities
I-880 Alameda (ALA-880) Between San Leandro and Milpitas *Hegenberger Road/Lewelling Boulevard to Dixon Landing Road*	• Caltrans opened bids for the median barrier contract on December 3. The apparent low bid was 6.3% over the engineer's estimate. The contract includes express lane sign and light foundations. • MTC decided to incorporate the backhaul network in the express lanes civil construction contract. • Caltrans approved the final combined project scoping/preliminary engineering report in October.	• Caltrans has agreed to conduct a workshop with the approved median barrier contractor to identify opportunities for cost and time savings. • The combined 95% plans for the civil and backhaul network will be submitted to Caltrans for review in March. • MTC staff to conduct second round of meetings with local jurisdiction staff to provide updates on scope and schedule. • The current cost trend is significantly higher than the project budget, as described under the Risk Management Plan on Page 8.
I-680 Contra Costa Southern Segment (CC-680 South) Between Walnut Creek and San Ramon *Livorna Road/Rudgear Road to Alcosta Boulevard*	• Final design for both the backhaul and the toll system was approved by Caltrans in December. • The backhaul construction contract was awarded in December. • Caltrans Encroachment Permit for the toll system was obtained in December.	• Backhaul construction commenced in January. • Toll system installation plans are proressing. • Civil construction is over 35% complete. *(See construction photographs on pages 15-17)*
I-680 Contra Costa Northern Segment Southbound Conversion (CC-680 North) Martinez to Walnut Creek *Marina Vista Boulevard to Rudgear Road/SR 242*	• Project staff presented the project to the Southwest Area Transportation Advisory Committee.	• Environmental studies are progressing. • Staff is continuing to work with Caltrans to find feasible solutions to create width for the striped buffer in stretches with existing narrow lanes. • Staff is planning for additional presentations to other corridor agencies.
I-80 Solano West (SOL-80 West) Fairfield *Red Top Road to Air Base Parkway,* and I-80 Solano East (SOL-80 East) Fairfield to Vacaville *Air Base Parkway to I-505*	• Final environmental document filed in December.	• Developing preliminary civil design.
Centralized Toll System	• Toll system successfully performed two functional software demonstrations.	• Toll system final design is being finalized and functional testing is commencing. • A procurement for toll operations staffing was issued in Fall 2015. The contract is scheduled to be awarded in Spring 2016.
Public Information	• Issued six bi-monthly construction notices to over 1,000 stakeholders about the I-680 Contra Costa Southern Segment.	• Staff will conduct Bishop Ranch Survey in collaboration with Alameda County Transportation Commission in February. • Preparations are underway to conduct a telephone survey in the I-680 corridor in April.

II. PROGRAM OVERVIEW

A. Program Description

MTC and partner agencies are implementing a regional network of express lanes called Bay Area Express Lanes. Upon completion, Bay Area Express Lanes will comprise 550 miles of express lanes operated by MTC, the Valley Transportation Authority (VTA), the Alameda County Transportation Commission (Alameda CTC), and the Sunol Smart Corridors Joint Powers Authority (Sunol JPA) as shown on the map of the Bay Area Express Lane Network.

Primary objectives for Bay Area Express Lanes include:

- Create a seamless network of HOV lanes to encourage carpools, vanpools and express buses;
- Make the best use of HOV lane capacity;
- Provide reliable travel times for solo drivers; and
- Better manage all lanes to keep traffic moving.

MTC's portion of the Bay Area Express Lanes, referred to as MTC Express Lanes, will include 270 miles of express lanes – 150 miles of converted high occupancy vehicle (HOV) lanes and 120 miles of new lanes – on I-80 in Alameda, Contra Costa and Solano Counties, I-880 in Alameda County, I-680 in Contra Costa and Solano counties, and the westbound approaches to the Bay Bridge, San Mateo Bridge and Dumbarton Bridge.

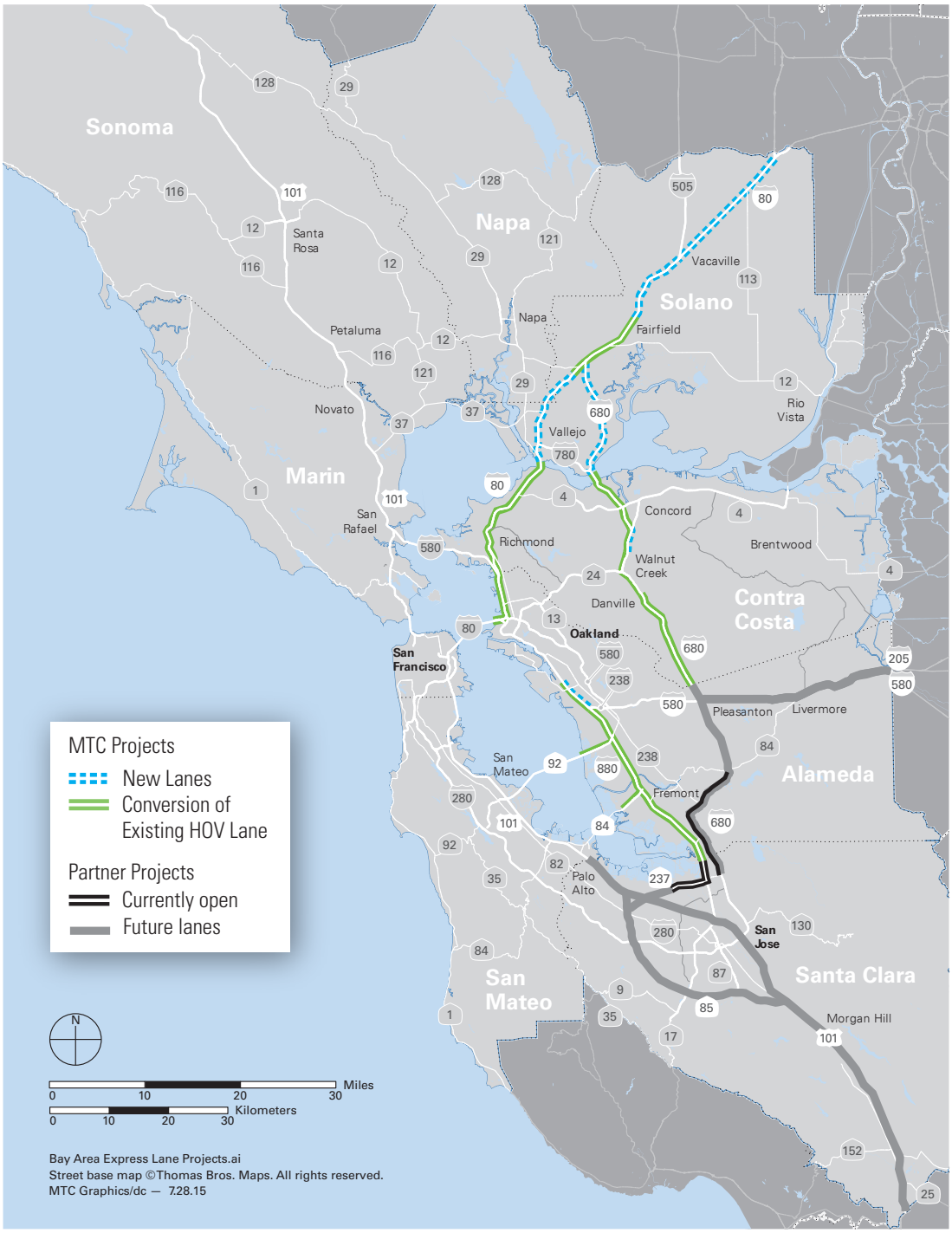
Appendix B includes an overview of how express lanes work.

Map of Bay Area Express Lane Network

B. Operating Authority

MTC and the Bay Area Toll Authority (BATA) have formed a joint powers authority to develop and operate MTC Express Lanes. The joint powers authority, known as the Bay Area Infrastructure Financing Authority (BAIFA), is composed primarily of representatives of the three counties where the express lanes are located: Alameda, Contra Costa and Solano. BAIFA is responsible for policy and operational decisions such as toll rates, project phasing and use of revenue.

The map below highlights MTC's portion of Bay Area Express Lanes and shows where lanes will be converted from HOV lanes and where new lanes will be added.



Map of Bay Area Express Lanes (MTC lanes highlighted)

D. MTC Express Lane Project Funding

MTC is using existing funding to convert existing HOV lanes to express lanes and to conduct environmental studies on some gap closure projects, so they are "shelf-ready" should construction funding become available. This will allow MTC to open as much of its 270-mile network as quickly as possible.

The table below lists the projects that comprise MTC Express Lanes according to current funding status.

County	Route	Project	Geographical Limits	Environmental	Design	Construction
NEAR TERM CONVERSIONS						
ALA	880	I-880 Alameda	Between San Leandro and Milpitas Hegenberger Rd./Lewelling Blvd. to Dixon Landing Rd.	●	●	●
CC	680	I-680 Contra Costa Southern Segment	Between Walnut Creek and San Ramon Livorna Rd./Rudgear Rd. to Alcosta Blvd.	●	●	●
CC	680	I-680 Contra Costa Northern Segment - Southbound Conversion	Martinez to Walnut Creek Marina Vista Blvd. to Rudgear RD./SR 242	●	●	●
SOL	80	I-80 Solano West	Fairfield Red Top Rd. to Air Base Pkwy.	●	●	○
GAP CLOSURE OPPORTUNITY PROJECTS						
CC	680	I-680 Northern Segment Southbound Conversion	Martinez to Walnut Creek *Benicia Bridge to Rudgear Road*	●	●	●
CC	680	I-680 North Northbound Extension	Walnut Creek to Concord North Main Street to SR 242	○	○	○
SOL	80	I-80 Solano East	Fairfield to Vacaville Air Base Parkway to I-505	●	●	○
FUTURE CONVERSIONS						
ALA/ CC	80	I-80 and Westbound Bridge Approaches	Cummings Skyway to Bay Bridge San Mateo Bridge Westbound Approach Dumbarton Bridge Westbound Approach	◖	○	○
CC	680	I-680 Northern Segment - Northbound Conversion	Walnut Creek to Benicia *North Main St. to the Benicia Bridge*	◖	○	○

KEY

● Funded ◖ Partially Funded ○ Unfunded ALA = Alameda, CC = Contra Costa, SOL = Solano

III. PROGRAM SCHEDULE SUMMARY

The schedule summary below reflects the "open to traffic" dates of the baseline schedule, and the current completion forecast for the projects that are fully funded.

Project	Baseline Opening	Forecast Opening	Confidence Level	Detail Page
I-880 Alameda (ALA-880) Between San Leandro and Milpitas *Hegenberger Rd./Lewelling Blvd. to Dixon Landing Rd.*	Spring 2019	Spring 2019	🟡	12
I-680 Contra Costa Southern Segment (CC-680 South) Between Walnut Creek and San Ramon, *Livorna Rd./Rudgear Rd. to Alcosta Blvd.*	Fall 2016	Spring 2017	🟢	14
I-680 Contra Costa Northern Segment - Southbound Conversion (CC-680 North) Martinez to Walnut Creek *Marina Vista Blvd. to Rudgear RD./SR 242*	Fall 2018	Fall 2018	🟡	18

KEY

- 🟢 Within schedule shown.
- 🟡 Identified potential risks that may significantly impact schedule if not mitigated.
- 🔴 Known impact to schedule, changes forthcoming.

IV. PROGRAM COST SUMMARY

A. Conversions and Gap Closure Opportunity Projects

The cost summary below shows: 1) the costs of each express lane [corridor or segment] including planning, design and construction of the civil infrastructure, and installation and integration of the backhaul communications and toll system, and 2) programwide costs including planning and design, and implementation of centralized elements of the backhaul network and toll system. The program cost estimate includes the full estimated cost to complete MTC Express Lanes. The approved expenditure plan fully funds the first three projects listed below, the environmental and design phases for the I-80 projects in Solano County, and the environmental phase for the SR 92 and SR 84 projects. The expended-to-date amounts shown represent the amount of BATA express lane funds expended through the end of the current quarter. Note that the distribution of expenditures has shifted as compared to the last report due to the reclassification of prior costs to be consistent with the latest expenditure plan.

Project[1]	Program Estimate[2]	Cost Forecast[3]	Regional Measure 2 (allocated)	BATA Express Lane Funds[4]			Physical % Complete[5]	Confidence Level[6]
				June 2015 Baseline	Dec 2015 Amendment	Expended To Date		
NEAR TERM CONVERSIONS	*Costs shown in thousands of escalated dollars*							
I-880 Alameda	77,779	77,779		77,779	77,779	13,360	15%	🔴
I-680 Contra Costa Southern Segment	55,649	55,649		48,939	55,649	17,042	25%	🟢
I-680 Contra Costa Northern Segment Southbound Conversion	36,099	36,099	3,812	32,288	32,288	484	5%	🟡
I-80 Solano West	43,941	9,356	6,504	2,852	2,852	215	10%	🟢
Centralized Toll System	33,574	33,574		36,207	33,574	7,706	20%	🟢
Program Planning, Coordination & Management	28,437	28,437		28,437	28,437	10,397	40%	🟡
Program Contingency	50,000	35,923		40,000	35,923	0		🟡
Capitalized Start-up O&M	16,000	16,000		16,000	16,000	0		🟢
GAP CLOSURE OPPORTUNITY PROJECTS								
I-680 Contra Costa Northern Segment - Southbound HOV Completion[7]	19,000	19,000		19,000	19,000	0	0%	🟢
I-680 Contra Costa Northbound Express Lane Completion (N. Main St. to SR-242)	57,287							
I-80 Solano East	135,484	24,810	8,696	16,114	16,114	0	10%	🟢
FUTURE CONVERSIONS								
I-80 Alameda/Contra Costa & Westbound Bay, San Mateo & Dumbarton Bridge Approaches	110,884	5,692	5,000	692	692	692	1%	🟢
I-680 Contra Costa Northern Segment - Northbound Conversion	14,575	1,511	1,511			0	5%	
Centralized & Program Costs, and Start-Up O&M Gap Closures & Future Conversions	TBD							
TOTALS	**678,709**	**343,831**	**25,522**	**318,309**	**318,309**	**49,896**	**14%**	

(1) Other gap closure and extension projects not shown: ALA-880 extension northbound from Lewelling to Hegenberger; SOL-80 gap closure from Carquinez Bridge to Red Top Road; SOL-80 extension east of I-505; SOL-680 gap closure

(2) Program estimate represents current estimated cost to complete each project.

(3) Cost forecast represents current estimated cost to complete phases that are funded for each project.

(4) BATA Express Lane Funds represent the funds that have been allocated from the BATA budget.

(5) Physical percent complete shown is based on the achievement of major milestones whether those milestones were completed using BAIFA funds or other funds. Projects that have completed milestones using other funds include I-680 Contra Costa Northern Segment, I-80 Solano West and I-80 Solano East.

(6) 🟢 = within budget, 🟡 = identified potential risks that may significantly exceed budget if not mitigated, 🔴 = known impacts to budget - changes forthcoming.

(7) Cost shown is BAIFA's contribution toward shortfall. Total project cost is $85M. Other funds include Measure J ($37M), RM2 ($13M), STIP ($16M)

B. Change Management

The change management process captures the changes in the program that have an impact on the approved baselines.

The major changes to the MTC Express Lanes Program recorded through the change management process during the 4th quarter of 2015 are as follows:

- The Express Lanes Expenditure Plan, originally approved in June of 2015 in BAIFA Resolution No. 9, was amended on December 16, 2015 to draw $4.1 million from Program Contingency to increase the I-680 Contra Costa Southern Segment project budget. This increase was needed to cover the total cost for the construction of the I-680 Contra Costa Southern Segment backhaul network and reflects higher contract costs due to (1) the high market demand for fiber optic electricians, (2) the requirement for third-shift night work, and (3) the accelerated construction schedule. In addition, $2.6 million was shifted from the Centralized Toll System budget to the I-680 Contra Costa Southern Segment budget to group all backhaul costs into a single line item. The two adjustments increased the I-680 Southern Segment budget by $6.7 million. There was a net zero adjustment to overall express lane program funds.
- MTC staff reviewed the I-880 Alameda project corridor design and identified the elimination of eight sign structures. This change was executed following cost saving workshops held by the project team.
- MTC staff elected to combine the backhaul design and construction efforts on the I-880 Alameda project to capture efficiencies from constructing this work in a single contract.
- The opening date for the I-680 Contra Costa Southern Segment has been adjusted from Fall 2016 to Spring 2017. This reflects delay in construction associated with the rebid of the backhaul construction contract in Fall 2015, considerable rain in January 2017, and the strong likelihood of continued rain through the first several months of 2017.

C. Risk Management Plan

MTC manages risk at both the program and contract level by identifying risks that could negatively impact the program's cost and schedule and assigns responsibility to the person best positioned to manage each risk.

The program contingency is tracked on a monthly basis and compared to a risk-assessed capital contingency based on the program risk register. The figure below shows the change in the mean risk-assessed capital contingency as the identified risks are mitigated and/or reduced as the project progresses.

As of January 5, 2016, the mean risk-assessed contingency stands at $59.5 million. This is a significant increase when compared to the previous quarter's total of $41.3 million and is due to the risk that the cost to construct the I-880 corridor will exceed the available budget as described below.

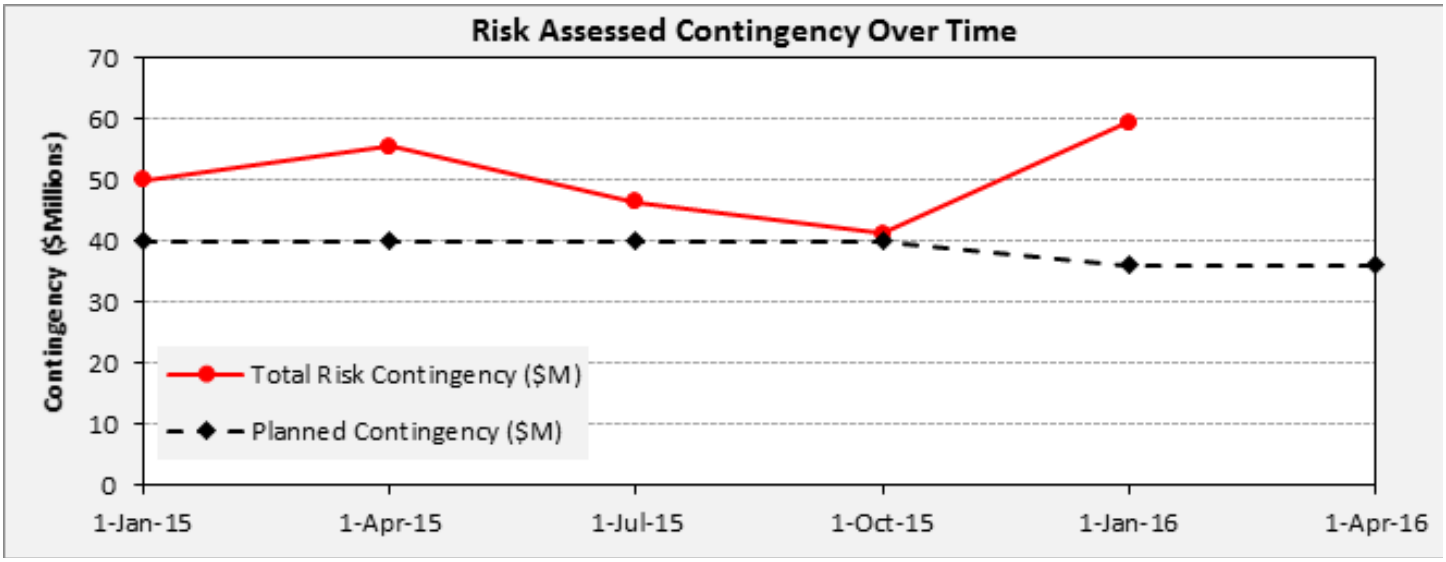
The top contributors to this risk-assessed capital contingency along with the planned/ongoing mitigations are as follows:

I-880 Alameda

- The costs to construct and implement the I-880 corridor may significantly exceed the the project budget and deplete the program contingency. The current cost trend is approximately $38 million higher than the project budget due to the additional cost of highway lighting, widening at access locations and signage not anticipated in the original budget.
- The I-880 backhaul and civil contract work must be staged to minimize, if not eliminate, conflicts with Caltrans' I-880 median barrier contract, creating a risk that delays on the median barrier contract could lead to cost escalation and delays in opening the I-880 Express Lanes. This risk of delay is being mitigated by combining the Express Lanes backhaul contract into the civil contract to reduce the amount of contract interfaces and make it easier to determine a best fit staging plan with the Caltrans median barrier contract. In addition, MTC staff are continuing discussions with Caltrans staff to identify strategies to reduce the duration of the median barrier contract.
- Pavement resurfacing may be required for the I-880 corridor to eliminate scarring due to existing narrow lanes in the corridor. This increased scope of work may impact project schedule and cost. This risk will be mitigated on the median barrier project with the use of striping tape and by coordinating the needs and requirements with Caltrans.

I-680 Contra Costa Northern Segment

- Pavement stripe removal and additional pavement resurfacing may be required for all lanes of the I-680 corridor to eliminate scarring due to existing narrow lanes in the corridor. This increased scope of work may impact project schedule and cost. This risk will be mitigated by thoroughly researching other solutions and coordinating the needs and requirements with Caltrans.



This summary chart show mean risk-assessed contingency over time for the MTC Express Lanes program. This chart does not include detailed risks for projects on I-80 in Solano County. Details will be added when design for the projects gets underway.

I-680 Contra Costa Southern Segment

- Delays in starting the backhaul construction contract for the I-680 corridor could impact both civil and lane-side toll system integration contractors. The project team is coordinating closely on the schedule and is prepared to assess options for sequencing work should there be further delays in the backhaul contract.

Programwide Risks

- Regional policy change recommendations resulting from managed lanes implementation plan (e.g., change in HOV occupancy or hours policy) may cause changes to design or operational policy and may impact scheduled opening dates. In addition, changes could result in increased costs for analysis, toll system design, signage or operations. The program team is monitoring decisions on I-580 hours of operation and exploring potential impacts to MTC's Express Lanes.
- The scope of MTC's Express Lanes program could be expanded to include other agency projects without additional budget allocation. For example, the Freeway Performance Initiative (FPI), park and ride lot improvements, etc., could be made part of Express Lanes program. The mitigation plan is to monitor requests for additional scope and seek additional funding associated with such requests.
- Potential changes to state or national interoperability requirements may cause changes to design or operational policy that may have cost impacts for MTC's Express Lanes program. The California Toll Operators Committee has a goal that all operators will be able to read and process 6C transactions by spring of 2018. This would require tuning for the I-680 Contra Costa Southern Segment and thus may have cost impacts for MTC's Express Lanes. This risk will be managed by participating in the development plan of the transition from Title 21 compliant toll technology to 6C compliant toll technology.
- The Customer Service Center (CSC) relocation may disrupt customer service and increase customer complaints which could impact revenue due to voided transactions. This risk will be mitigated by extending the CSC lease through April 2016. The start of CSC operations at Beale Street is now targeted for the end of April 2016.
- Costs may escalate at higher than projected levels resulting in increased costs for design or construction.

PROJECT SUMMARY SHEETS

Centralized Functions (e.g. Toll System & Program Management, Planning and Regional Coordination)

Total Estimated Cost

$33.6 million for the Centralized Toll System
$28.4 for Program Planning, Coordination & Management

Schedule

Centralized Toll System will be ready with opening of the CC-680 South Project in the Spring of 2017.

Program Planning Coordination & Management is ongoing through the opening of the funded projects.

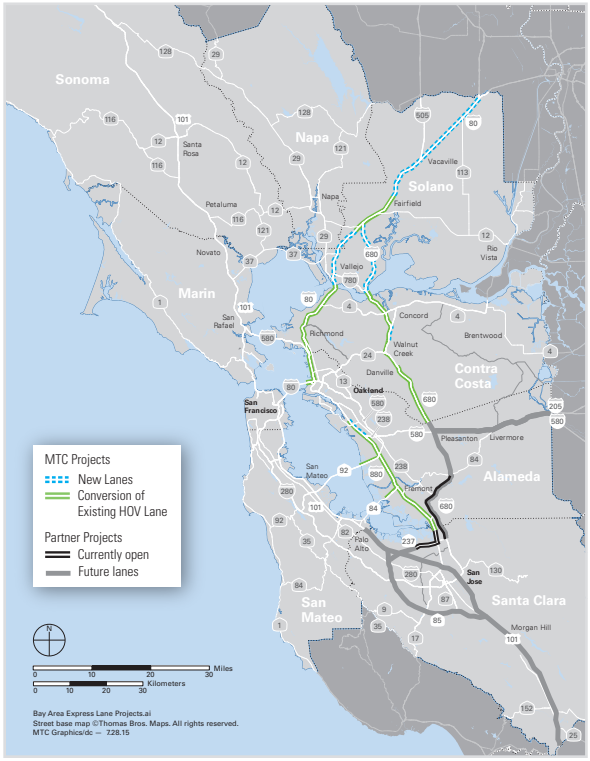
Project Description

The centralized toll system includes the elements of the toll system that are needed to toll all the lanes, as well as the backhaul communications network components that transport toll data from MTC lanes to host and toll operations data centers, including corridor communication hubs. Additional system elements are the fiber optic cables and leased line services to transport data. Centralized toll system work includes designing and implementing the hardware and software for dynamic toll setting and trip building, integration with the FasTrak® Regional Customer Service Center, and acquiring spare parts.

Program management, planning and regional coordination tasks include managing the expenditure plan, cost, schedule and risk; developing the express lane business rules and toll ordinance; conducting customer education and outreach; building out the toll operations center and developing operating procedures; planning for future express lanes; and coordinating with partner agencies to offer a seamless experience for drivers.

Project Highlights and Progress

- BAIFA amended the Express Lane Program Expenditure Plan in December 2015.
- Draft toll system host and software design approved in June 2015.
- Toll system software development commenced in September 2015 and successfully performed two functional software demonstrations.
- Issued six bi-monthly I-680 Contra Costa Southern Segment construction notices to over 1,000 stakeholders.



- MTC released a procurement for toll operations staff on October 30.

Current Project Activities

- A procurement for toll operations staffing was issued in Fall 2015. The contract is scheduled to be awarded in Spring 2016.
- Development of operating procedures is underway.
- Plans are underway for the build out of express lanes elements of the 375 Beale Operations Center.
- Toll system design is being finalized and functional testing is commencing.
- Research is underway to inform staff recommendations for a toll ordinance and violations policies to be adopted in 2016.
- An MTC Express Lanes Communication Plan is being finalized.
- A survey will be conducted at Bishop Ranch in collaboration with Alameda County Transportation Commission in February.
- Preparations are underway to conduct a telephone survey in the I-680 corridor in April.

I-880 Alameda (ALA-880) – between Oakland and Milpitas

Hegenberger Road/Lewelling Boulevard to Dixon Landing Road

Total Program Estimate

$77.8 million

Scheduled Open Date

Spring 2019

Project Description

The project converts the existing I-880 HOV lanes that run from Hegenberger Road to Dixon Landing Road in the southbound direction and from Dixon Landing Road to Lewelling Boulevard in the northbound direction to an express lane.

The conversion involves lane striping and installing sign gantries, signs, FasTrak® toll tag readers, traffic monitoring video cameras and California Highway Patrol observation areas. It will result in 51 express lane miles between Oakland and Milpitas.

Project Highlights and Progress

- Environmental document completed in October 2015.
- Caltrans returned comments on the 65% plans for both the civil work and the backhaul network.
- Caltrans opened bids for the median barrier contract on December 3. The apparent low bid was 6.3% over the engineer's estimate. The contract includes express lane sign and light foundations.
- Caltrans has agreed that only one submittal of toll system plans will be required to secure the encroachment permit.

Current Project Activities

- Work continues with Caltrans to find ways to complete the median barrier contract faster than planned in order to reduce impacts the express lanes opening date. Caltrans has agreed to conduct a workshop with the approved contractor to identify opportunities for cost and time savings.

- The combined 95% plans for the civil and backhaul network will be submitted to Caltrans for review in March.
- Caltrans approved the final combined project scoping/ preliminary engineering report in October.
- MTC staff to conduct a second round of meetings with local jurisdiction staff to provide updates on scope and schedule.
- The current cost trend is significantly higher than the project budget, as described under the Risk Management Plan on Page 8.

Project Schedule by Phase

*Includes I-880 median barrier improvements.

Project Cost

Program Estimate[1]	Cost Forecast[2]	Regional Measure 2 (allocated)	BATA Express Lane Funds[3]			Physical % Complete[4]
			June 2015 Baseline	Dec 2015 Amendment	Expended To Date	
77,779	77,779		77,779	77,779	13,360	15%

Costs shown in thousands of escalated dollars.

The program estimate for this project includes planning, design, construction, utilities, backhaul communications and toll system integration.

(1) Program estimate represents current estimated cost to complete each project.

(2) Cost forecast represents current estimated cost to complete phases that are funded for each project.

(3) BATA Express Lane Funds represent the funds that have been allocated from the BATA budget.

(4) Physical percent complete shown is based on the achievement of major milestones whether those milestones were completed using BAIFA funds or other funds.

I-680 Contra Costa Southern Segment (CC-680 South) – between Walnut Creek and San Ramon

Livorna Road/Rudgear Road to Alcosta Boulevard

Total Program Estimate

$55.6 million

Scheduled Open Date

Spring 2017

The scheduled open date has been revised from Fall 2016 to Spring 2017. This reflects delay in construction associated with the rebid of the backhaul construction contract in Fall 2015, considerable rain in January 2017, and the strong likelihood of continued rain through the first several months of 2017.

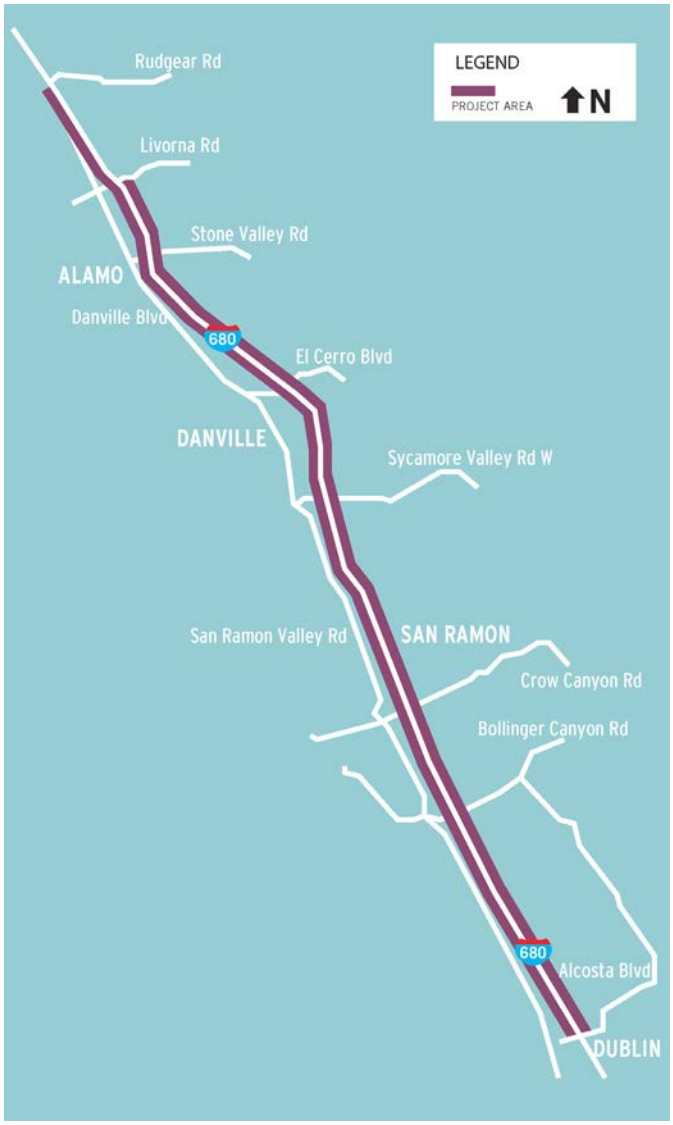
Project Description

The project converts existing HOV lanes to express lanes on I-680 from Rudgear Road to Alcosta Boulevard in the southbound direction and from Alcosta Boulevard to Livorna Road in the northbound direction. It will result in 23 express lane miles through San Ramon, Danville, Alamo and southern Walnut Creek. No widening or additional lanes will be added to the freeway.

This conversion project includes striping lanes and installing sign gantries, signs, FasTrak® toll tag readers, and traffic monitoring video cameras. In addition, the project installs equipment and observation areas to help the California Highway Patrol enforce proper use of the lanes.

Project Highlights and Progress

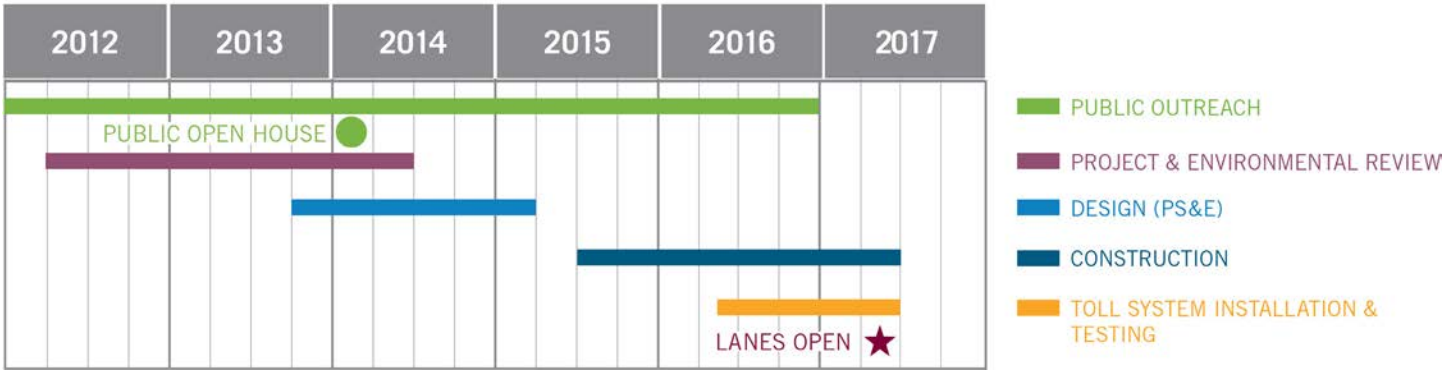
- Environmental document completed in August 2014.
- Final design completed in April 2015.
- Civil construction began in August 2015.
- Final design for both the backhaul and the toll system was completed in December 2015.
- Caltrans encroachment permit for the toll system and backhaul was completed in December 2015.
- The backhaul construction contract was awarded in December 2015.



Current Project Activities

- Backhaul construction commenced in January.
- Toll system installation plans are progressing.
- Civil construction is over 35% complete.

Project Schedule by Phase



Project Cost

Program Estimate[1]	Cost Forecast[2]	Regional Measure 2 (allocated)	BATA Express Lane Funds[3]			Physical % Complete[4]
			June 2015 Baseline	Dec 2015 Amendment	Expended To Date	
55,649	55,649		48,939	55,649	17,042	25%

Costs shown in thousands of escalated dollars.

The program estimate for this project includes planning, design, construction, utilities, backhaul communications and toll system integration.

(1) Program estimate represents current estimated cost to complete each project.

(2) Cost forecast represents current estimated cost to complete phases that are funded for each project.

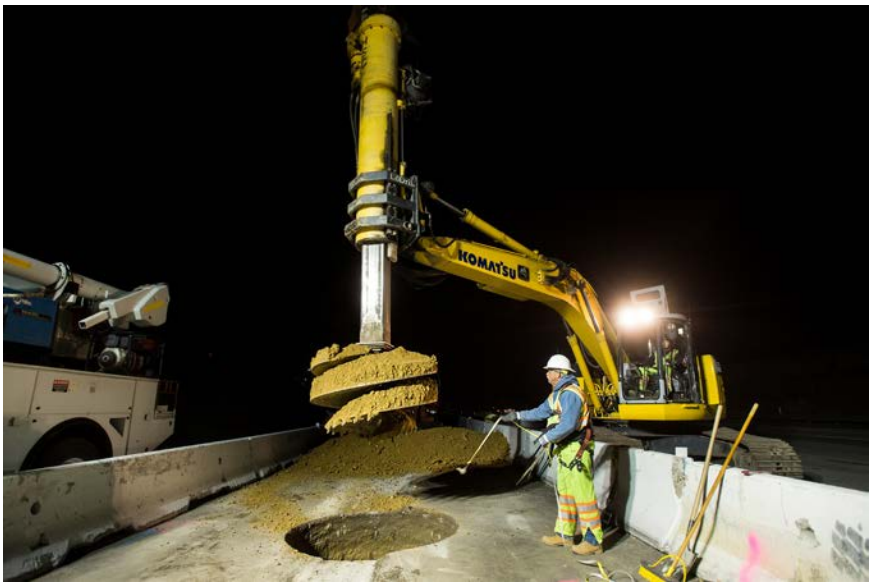
(3) BATA Express Lane Funds represent the funds that have been allocated from the BATA budget.

(4) Physical percent complete shown is based on the achievement of major milestones whether those milestones were completed using BAIFA funds or other funds.

A completed CIDH (Cast-In-Drill-Hole) structural foundation for an express lane sign placed in the future reconstructed median barrier of I-680.

Drill attachment pushes through the earth to pre-drill shafts for the express lane sign foundations.

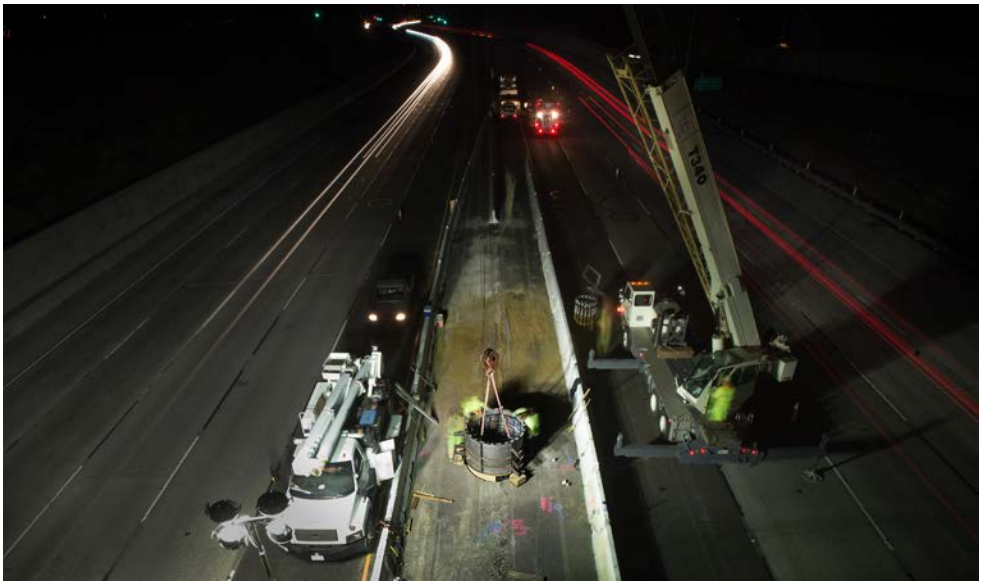
Construction crews use an excavator in pre-drilling activities for express lane sign foundations.



An excavator with a drill attachment pre-drills a shaft where metal rebar cages and concrete will be placed.

Construction crews unload a pre-fabricated metal rebar cage. This cage reinforces the foundations once concrete is poured.

A crane picks up a pre-fabricated rebar cage to place in the pre-drilled shaft to reinforce the concrete for the express lane sign foundations.



A crane places the metal rebar cage into the pre-drilled shaft before concrete is poured.

I-680 Northern Segment Southbound Conversion (CC-680 North) – Martinez to Walnut Creek

Benicia Bridge to Rudgear Road

Total Program Estimate

$36.1 million ($32.3 million to be funded by BAIFA)

Scheduled Open Date

End of 2018

Project Description

The project will convert 11 miles of the existing HOV lane on southbound I-680 from just south of Marina Vista Avenue in Martinez to North Main Street in Walnut Creek into an express lane. It also includes express lane elements for the I-680 Southbound HOV Completion Project. Once complete, I-680 will have a continuous southbound express lane from Martinez to the Alameda County line.

Civil construction will be delivered by the Contra Costa Transportation Authority (CCTA). MTC will install toll and communications equipment and will operate the express lanes.

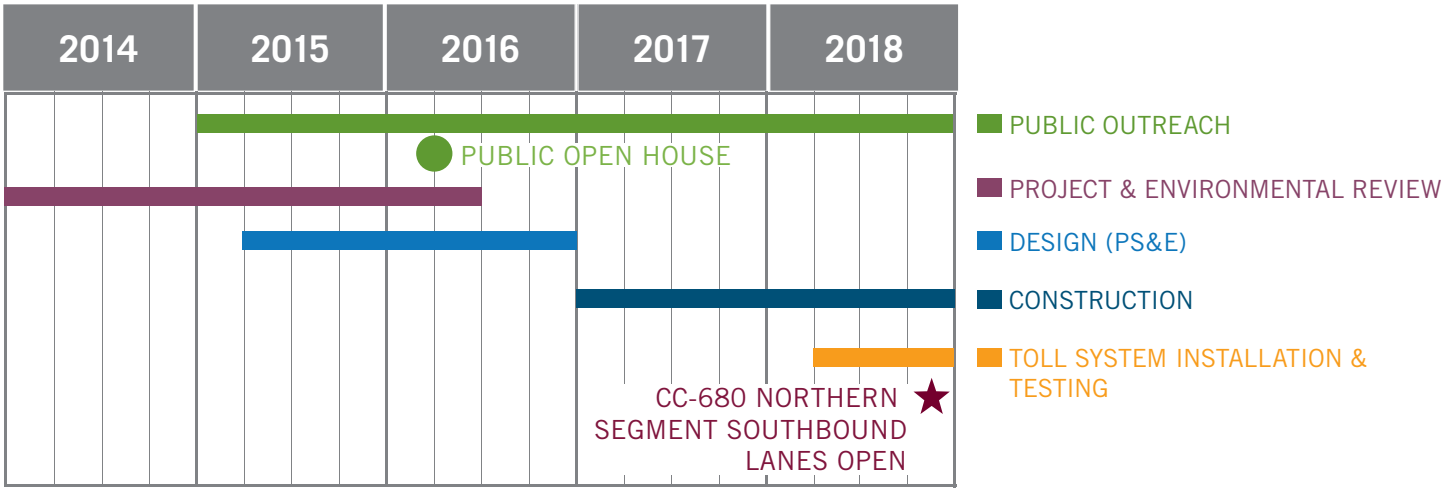
Project Highlights and Progress

- Caltrans accepted the Traffic Operation Analysis Report in October.
- Project staff presented the project to the Southwest Area Transportation Advisory Committee.

Current Project Activities

- Environmental studies are progressing.
- Continued work with Caltrans to find feasible solutions to create width for the striped buffer in stretches with existing narrow lanes.

Project Schedule by Phase



Project Cost

Program Estimate[1]	Cost Forecast[2]	Regional Measure 2 (allocated)	BATA Express Lane Funds[3]			Physical % Complete[4]
			June 2015 Baseline	Dec 2015 Amendment	Expended To Date	
36,099	36,099	3,812	32,288	32,288	484	5%

Costs shown in thousands of escalated dollars.

The program estimate for this project includes planning, design, construction, utilities, backhaul communications and toll system integration.

(1) Program estimate represents current estimated cost to complete each project.

(2) Cost forecast represents current estimated cost to complete phases that are funded for each project.

(3) BATA Express Lane Funds represent the funds that have been allocated from the BATA budget.

(4) Physical percent complete shown is based on the achievement of major milestones whether those milestones were completed using BAIFA funds or other funds.

I-80 Solano West (SOL-80 West) – Fairfield

Red Top Road to Air Base Parkway

Total Program Estimate

$43.9 million

Scheduled Open Date

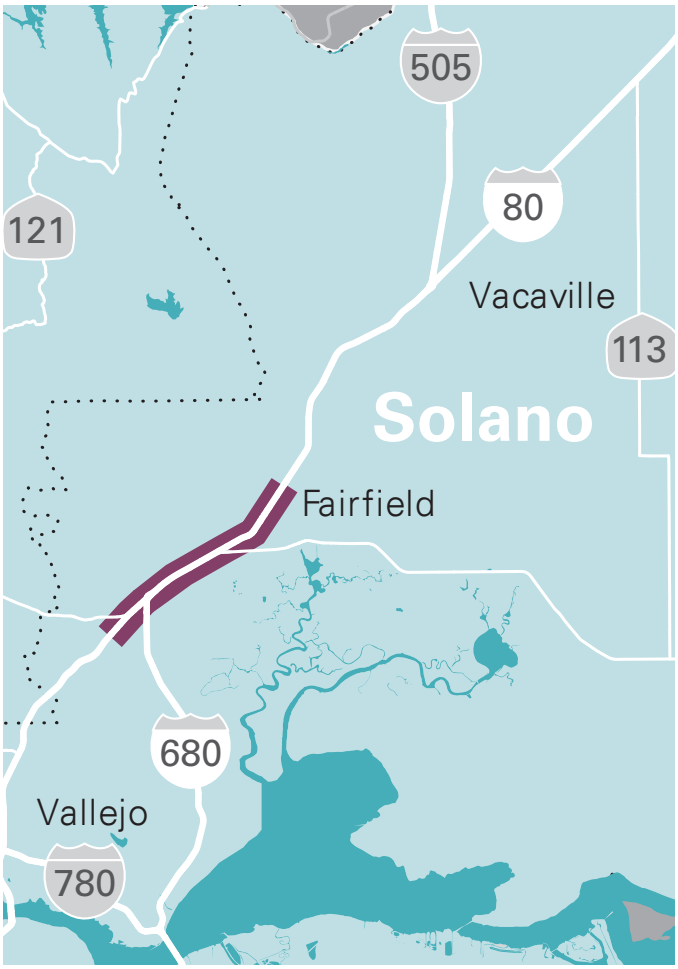
TBD

Project Description

This project will convert the existing eastbound and westbound HOV lanes to express lanes between Red Top Road and Air Base Parkway in Fairfield, resulting in 18 miles of express lanes. Conversion work includes striping lanes and installing sign gantries, signs, FasTrak® toll tag readers, and traffic-monitoring video cameras.

The Solano Transportation Authority (STA) is the lead agency for environmental clearance and civil design.

Civil construction will be delivered by STA. MTC will install toll and communications equipment and will operate the express lanes.



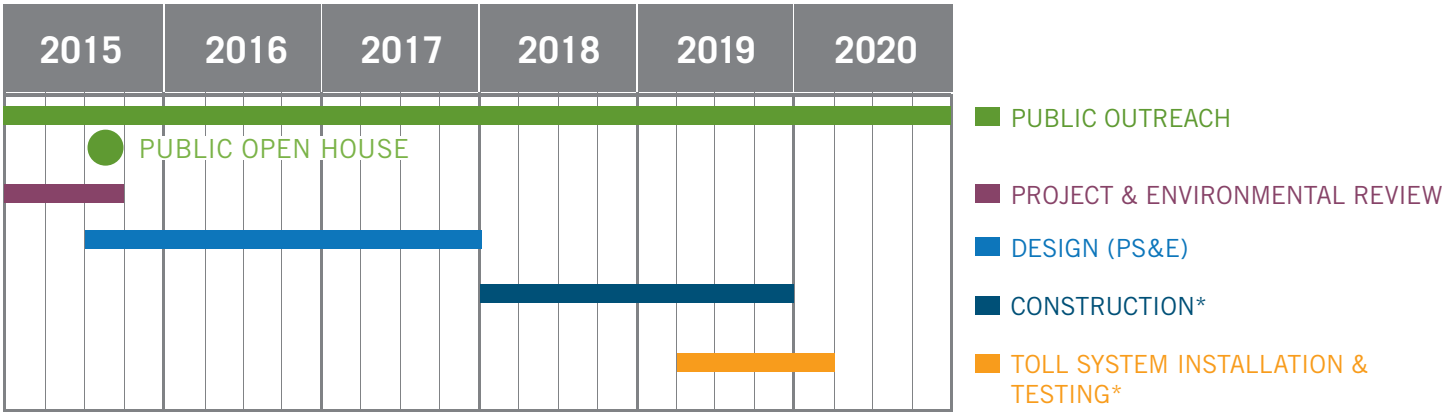
Project Highlights and Progress

- Draft environmental document released in July and public comment period closed.
- Public open forum hearing held August 4.
- Final environmental document filed in December. The 30-day statute of limitations period ended on January 2, 2016.

Current Project Activities

- Developing preliminary civil design.

Project Schedule by Phase



* Funding for these activities is not yet secured.

Project Cost

Program Estimate[1]	Cost Forecast[2]	Regional Measure 2 (allocated)	BATA Express Lane Funds[3]			Physical % Complete[4]
			June 2015 Baseline	Dec 2015 Amendment	Expended To Date	
43,941	9,356	6,504	2,852	2,852	215	10%

Costs shown in thousands of escalated dollars.

The program estimate for this project includes planning, design, construction, utilities, backhaul communications and toll system integration.

(1) Program estimate represents current estimated cost to complete each project.

(2) Cost forecast represents current estimated cost to complete phases that are funded for each project. I-80 Solano West is funded through the design phase.

(3) BATA Express Lane Funds represent the funds that have been allocated from the BATA budget.

(4) Physical percent complete shown is based on the achievement of major milestones whether those milestones were completed using BAIFA funds or other funds.

I-80 Solano East (SOL-80 East) – Between Fairfield and Vacaville

Air Base Parkway to I-505

Total Program Estimate

$135.5 million

Scheduled Open Date

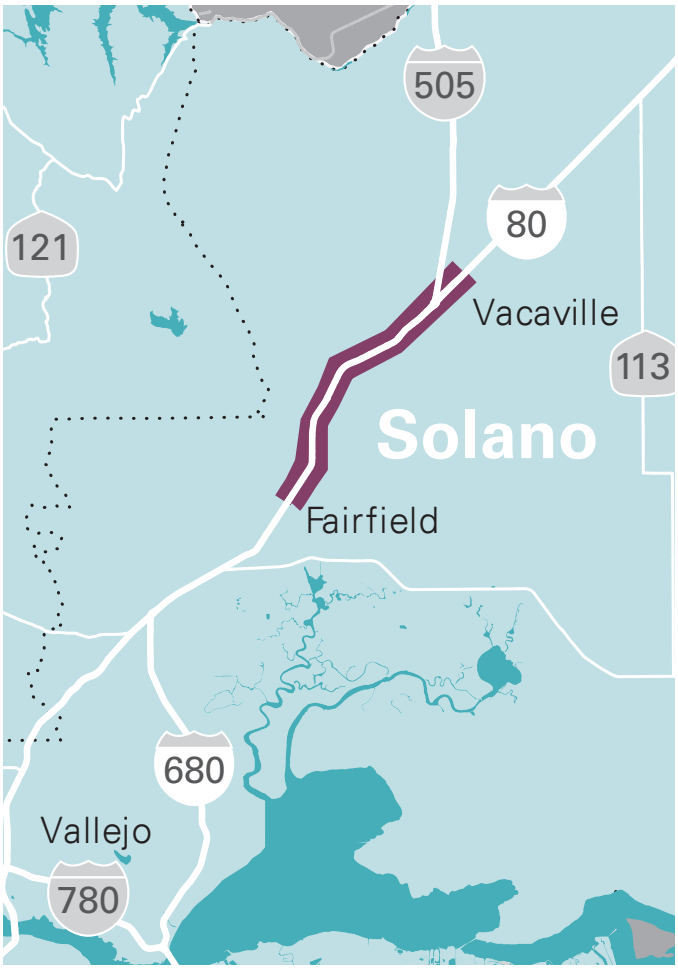
TBD

Project Description

This project will construct new eastbound and westbound express lanes between Air Base Parkway and I-505, for 18 miles of new express lanes. The highway will be widened and express lane striping, signage and equipment will be installed.

The Solano Transportation Authority (STA) is the lead agency for environmental clearance and civil design.

Civil construction will be delivered by STA. MTC will install toll and communications equipment and will operate the express lanes.



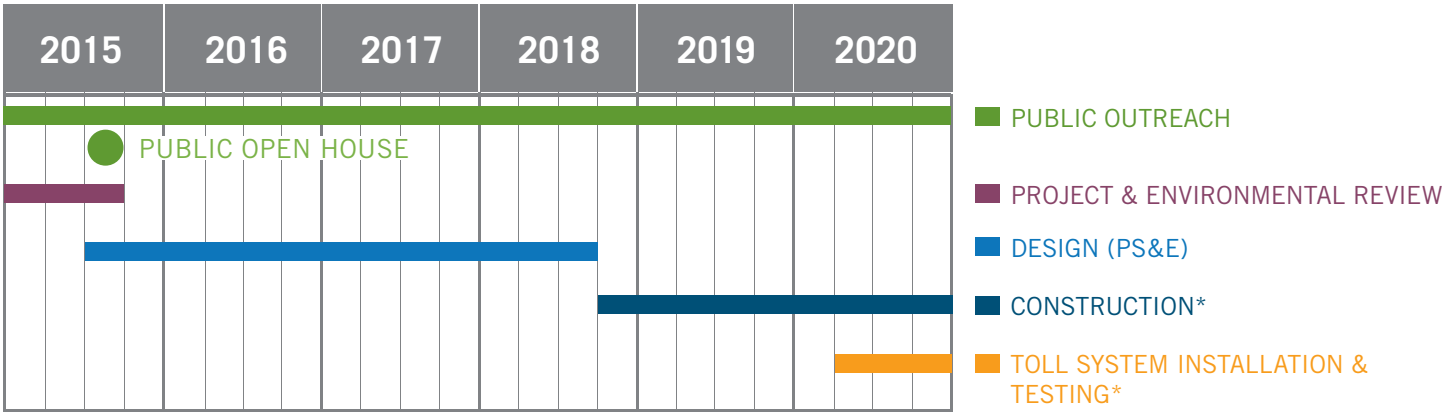
Project Highlights and Progress

- Draft environmental document released in July and public comment period closed.
- Public open forum hearing held August 4.
- Final environmental document filed in December. The 30-day statute of limitations period ended January 2, 2016.

Current Project Activities

- Developing preliminary civil design.

Project Schedule by Phase



* Funding for these activities is not yet secured.

Project Cost

Program Estimate[1]	Cost Forecast[2]	Regional Measure 2 (allocated)	BATA Express Lane Funds[3]			Physical % Complete[4]
			June 2015 Baseline	Dec 2015 Amendment	Expended To Date	
135,484	24,810	8,696	16,114	16,114	0	10%

Costs shown in thousands of escalated dollars.

The program estimate for this project includes planning, design, construction, utilities, backhaul communications and toll system integration.

(1) Program estimate represents current estimated cost to complete each project.

(2) Cost forecast represents current estimated cost to complete phases that are funded for each project.

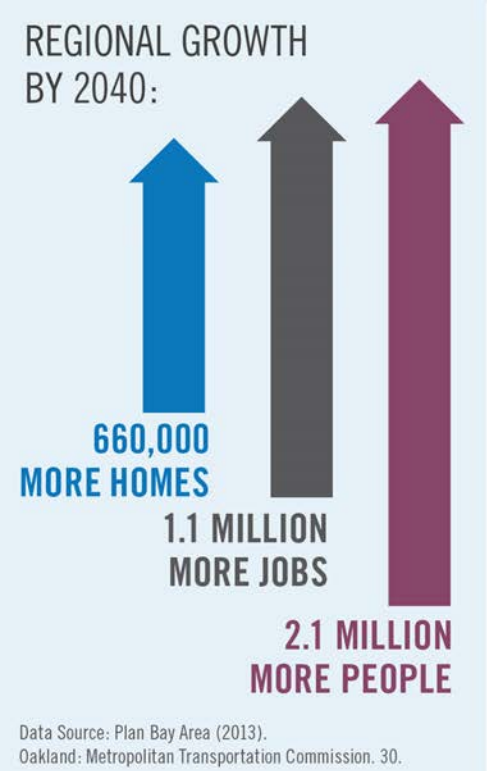
(3) BATA Express Lane Funds represent the funds that have been allocated from the BATA budget.

(4) Physical percent complete shown is based on the achievement of major milestones whether those milestones were completed using BAIFA funds or other funds.

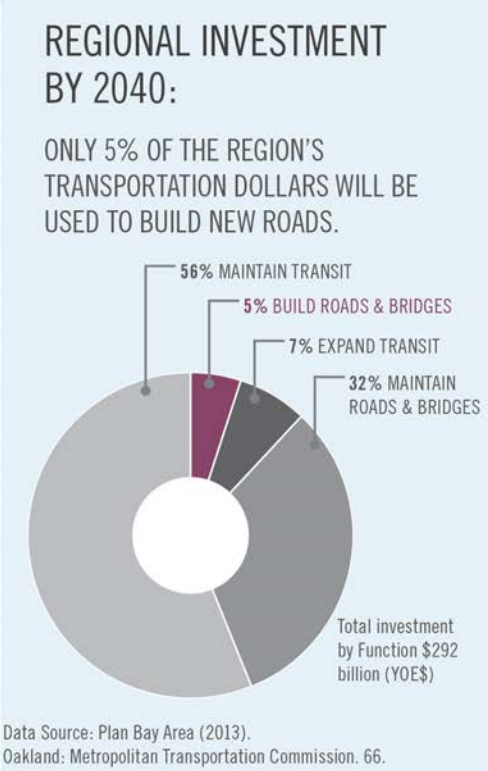
APPENDICES

A. Why Express Lanes?

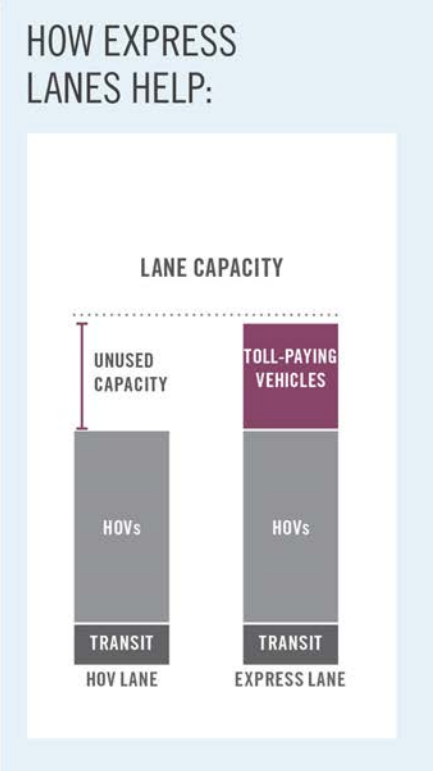
While regional growth will continue, transportation funding and land are simply not available to build enough new transportation capacity to keep up. Bay Area Express Lanes maximize use of our highways by A) filling any empty space in existing HOV lanes, B) improving operations in existing HOV lanes through better carpool enforcement and strategies to prevent lane slowdowns, and C) filling gaps in the HOV lane system to encourage more carpooling.



Data Source: Plan Bay Area (2013).
Oakland: Metropolitan Transportation Commission. 30.



Data Source: Plan Bay Area (2013).
Oakland: Metropolitan Transportation Commission. 66.

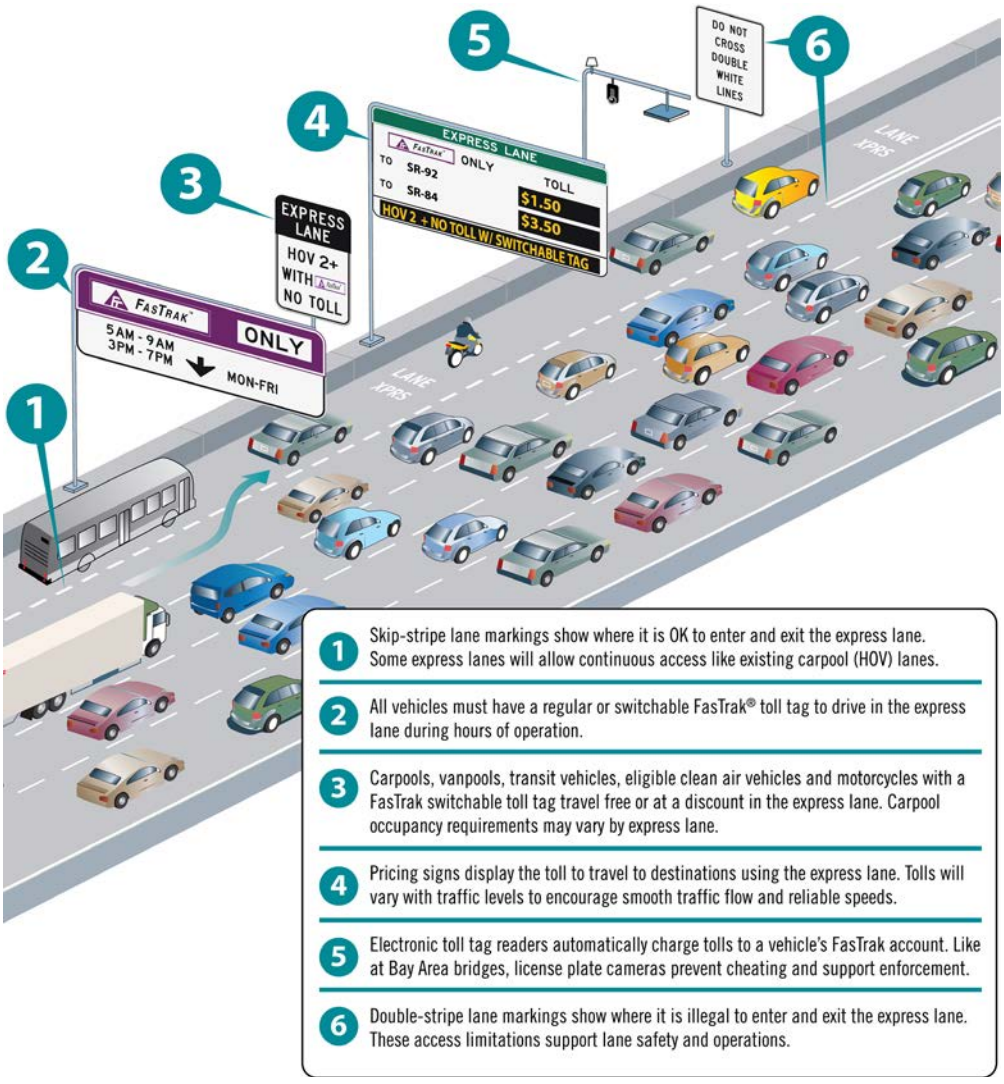


B. How Express Lanes Work

MTC Express Lanes will be free to carpoolers, vanpoolers, motorcycles, eligible clean air vehicles, and transit buses. Solo drivers can choose to pay tolls to use the lanes. Tolls for solo drivers will be collected electronically via FasTrak®, as on Bay Area toll bridges. Overhead electronic pricing signs will display the current toll rates, which will increase as traffic congestion increases and decrease as traffic congestion decreases.

A qualifying toll-free vehicle will need a FasTrak® Flex toll tag properly mounted in the vehicle, and set in the toll-free position. A FasTrak® Flex tag has a switch that can be set to one of three positions indicating that the vehicle has one (1), two (2), or three or more (3+) occupants. When set on 2 or 3+, the tolling equipment knows not to charge that vehicle a toll. When set on 1, tolls will be charged.

The figure to the right gives an overview of how the express lanes signage will direct drivers and explains how the lanes are to be used.



MTC Express Lanes will mostly have "open," or "continuous" access configurations, meaning drivers will enter and exit the express lanes similar to how they enter and exit the HOV lanes today. Where necessary, due to operational or safety issues, sections of MTC Express Lanes will have limited access, meaning that entry and exit to/from an express lane is allowed only at certain locations. Where access is limited, special signage and lane striping will indicate entry and exit locations.

FasTrak® Flex

Carpools, vanpools, transit vehicles, eligible clean air vehicles and motorcycles with FasTrak® Flex travel toll-free. Before driving, move the switch to show the number of people in the vehicle. Carpool occupancy requirements may vary by express lane. Solo drivers can use regular FasTrak or FasTrak® Flex set in the "1" position.

C. System Technology and Elements

MTC Express Lanes are implemented by overlaying communications equipment on new and existing freeway infrastructure. Express lanes implementation requires four discrete elements that are integrated through design, construction and operations, including:

Civil Infrastructure (Highway Modifications)

For lane conversions, the civil infrastructure consists of sign structures, sign panels, lane striping, and conduit work for power and communications. For gap closure and extension projects, the civil infrastructure includes highway widening to add lanes as well as the signage and communications equipment required for conversions.

The civil contractor will put in place the foundations and structures upon which the toll systems contractor will install the toll equipment. In addition, the civil contractor will construct the infrastructure necessary to provide power and communications to the toll system.

Toll System

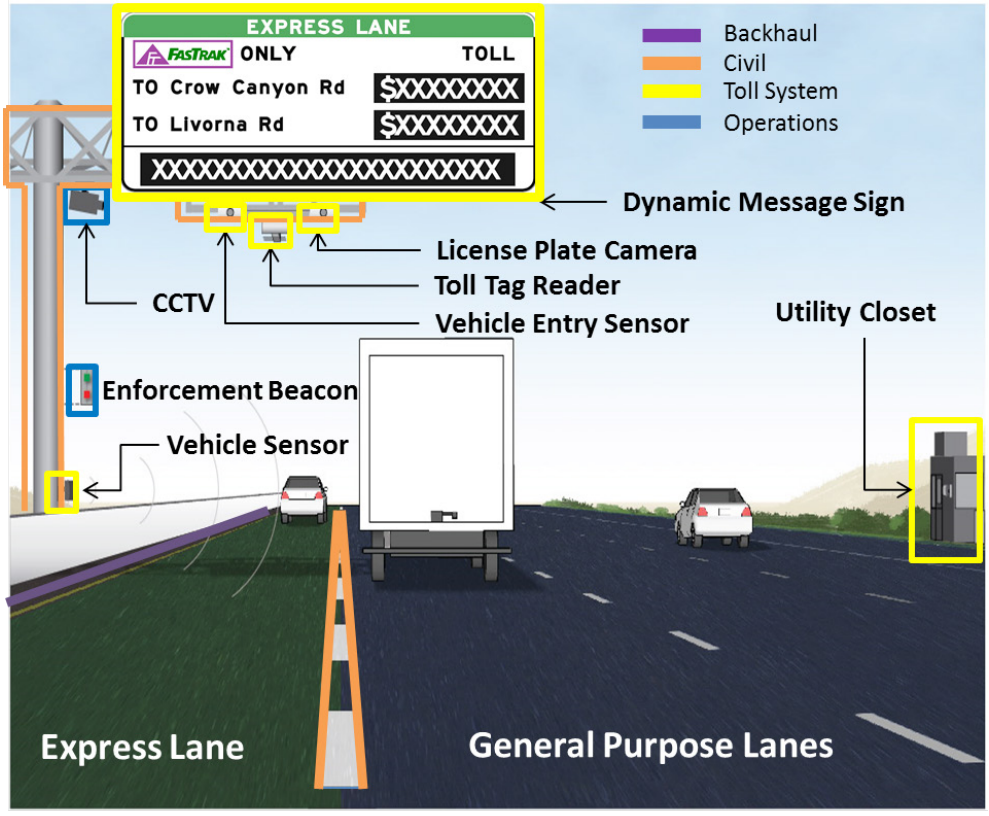
The toll system consists of two components, the in-lane system and the back-end "host" system. The lane system consists of all the equipment on the highway needed to operate the toll system including toll tag readers, cameras and vehicle detection. The host system serves as the brain of the toll system, which collects and processes all the data from the highway and sends it to the regional customer service center for billing.

Backhaul Communications Network

The backhaul is the communication line along which data collected in the lanes is sent to the toll host system, operations center and regional customer service center. The backhaul contractor will install new conduit and communications fiber as well as utilize existing Caltrans, BART and other existing infrastructure to build the network. The backhaul network is being designed with the expectation that it will become part of a broader regional communications network.

Operations

The operations element consists of everything that is needed to successfully operate the express lanes including: an operations center, the regional customer service center, enforcement, public outreach, performance monitoring and on-going maintenance. An express lanes toll operations center will be established in the Regional Agency Headquarters building in San Francisco where operators will actively monitor the condition of the lanes and coordinate with Caltrans and the California Highway Patrol to ensure that the lanes operate efficiently.



For illustrative purposes only