



Bay Area Infrastructure Financing Authority
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Memorandum

TO: BAIFA

DATE: December 9, 2015

FR: Executive Director

W. I. 6840

RE: Express Lane Program Quarterly Report – 3rd Quarter 2015

Express Lane program reports are issued on a quarterly basis to summarize major developments, project schedules and risks and to compare forecast costs with the Express Lane Program Expenditure Plan approved by BAIFA. The second report, attached, covers the third quarter of 2015, July 1 to September 30. Selected highlights from the third quarter include:

- Construction of the civil improvements on the CC-680 Southern Segment project began in August. As of November 20th, DeSilva Gates completed approximately 26% of the work. The total amount of contract change orders that have been or are being processed is approximately 15% of the project contingency (excluding supplemental work items). No supplemental budget allocations for this contract are being requested at this time.
- Caltrans signed off on a Categorical Exemption/Categorical Exclusion, concluding environmental clearance for the express lanes on ALA-880.
- A Draft Initial Study/Environmental Assessment for the SOL-80 East and SOL-80 West projects was released for public comment.
- The Toll System Integrator substantially finalized design and commenced software development.

Below is a brief summary of developments occurring since September 30, 2015. These developments will be reflected in the next quarterly report.

- As described under agenda item 3, BAIFA readvertised the Backhaul Communications Network for CC-680 Southern Segment Express Lanes on October 21 and opened bids on December 2. Staff is recommending award at the December BAIFA meeting and anticipates that construction will begin in February 2016. Staff is recommending an amendment to the Express Lanes Expenditure Plan in December to address an increased cost estimate of \$6.7 million for the backhaul improvements in the I-680 corridor. The projected opening of the express lane in Fall 2016 is likely to be delayed due to delays in awarding this contract. Staff will adjust the schedule following contract award.
- The Toll System Integrator submitted its final design for the CC-680 Southern Segment to Caltrans and expects Caltrans to issue an encroachment permit in December.
- On December 3, Caltrans opened bids for the I-880 Median Barrier Replacement

project. Caltrans will construct the express lane sign structure foundations and median barrier modifications under this contract. As reported in Agenda Item 4, staff is requesting an amendment to the cooperative agreement with Caltrans to cover BAIFA's share of the contract. The projected opening of the I-880 express lanes in Spring 2019 remains at risk due to the extended schedule for the median barrier construction project. Staff will adjust the schedule following the award of the contract by Caltrans in January.

- In October, BAIFA staff joined staff from the Contra Costa County Transportation Authority to present the CC-680 Northern Segment project to the Southwest Area Transportation Committee of the Contra Costa Transportation Authority. The project was well received.



Steve Heminger

SH: lk

Attachments: Presentation

MTC Express Lanes Quarterly Report – 3rd Quarter 2015

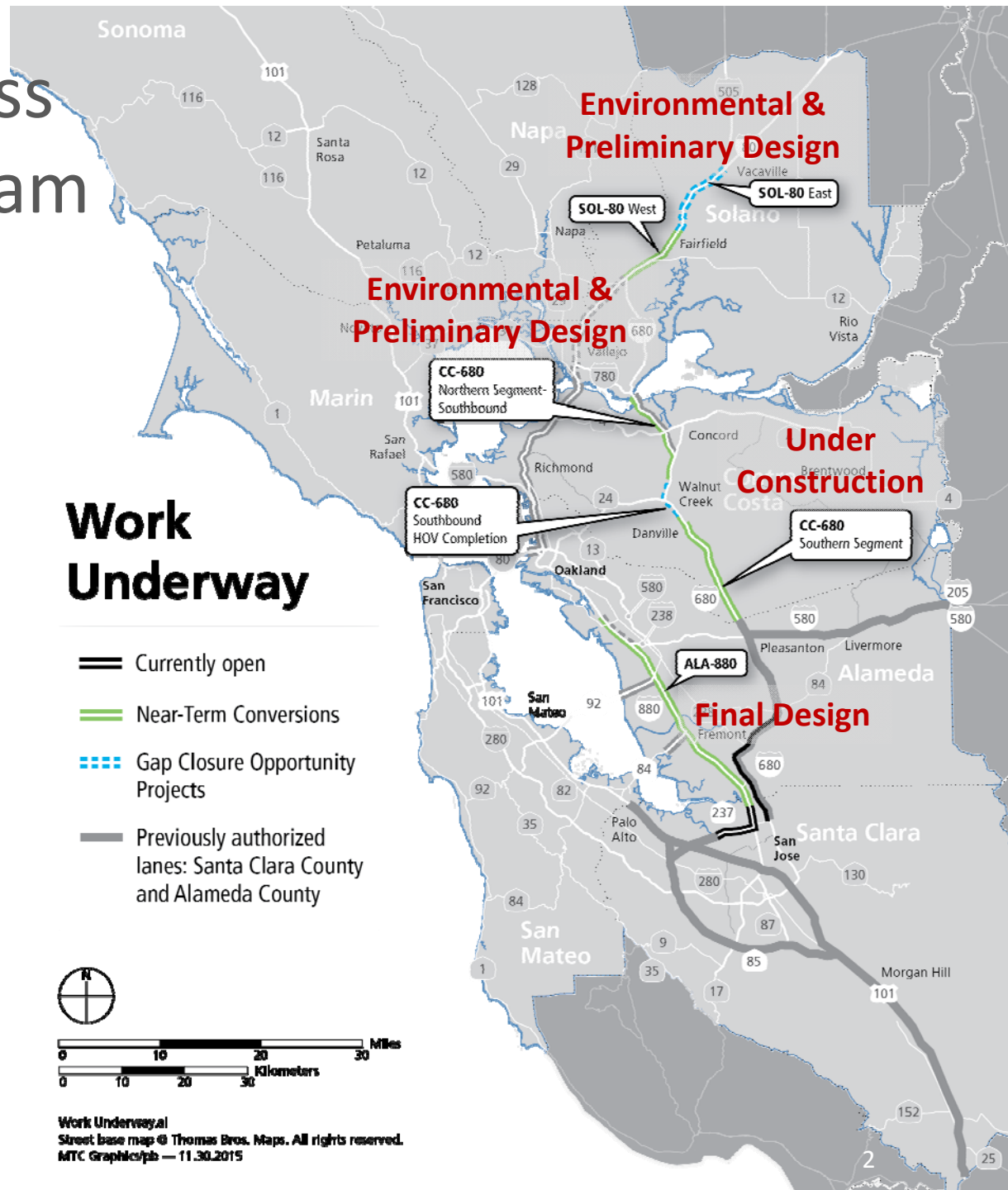


MTC Express Lanes Quarterly Report 3rd Quarter 2015

Presentation to Bay Area Infrastructure Financing Authority
December 16, 2015



MTC Express Lane Program



CC-680 Southern Segment Civil Construction



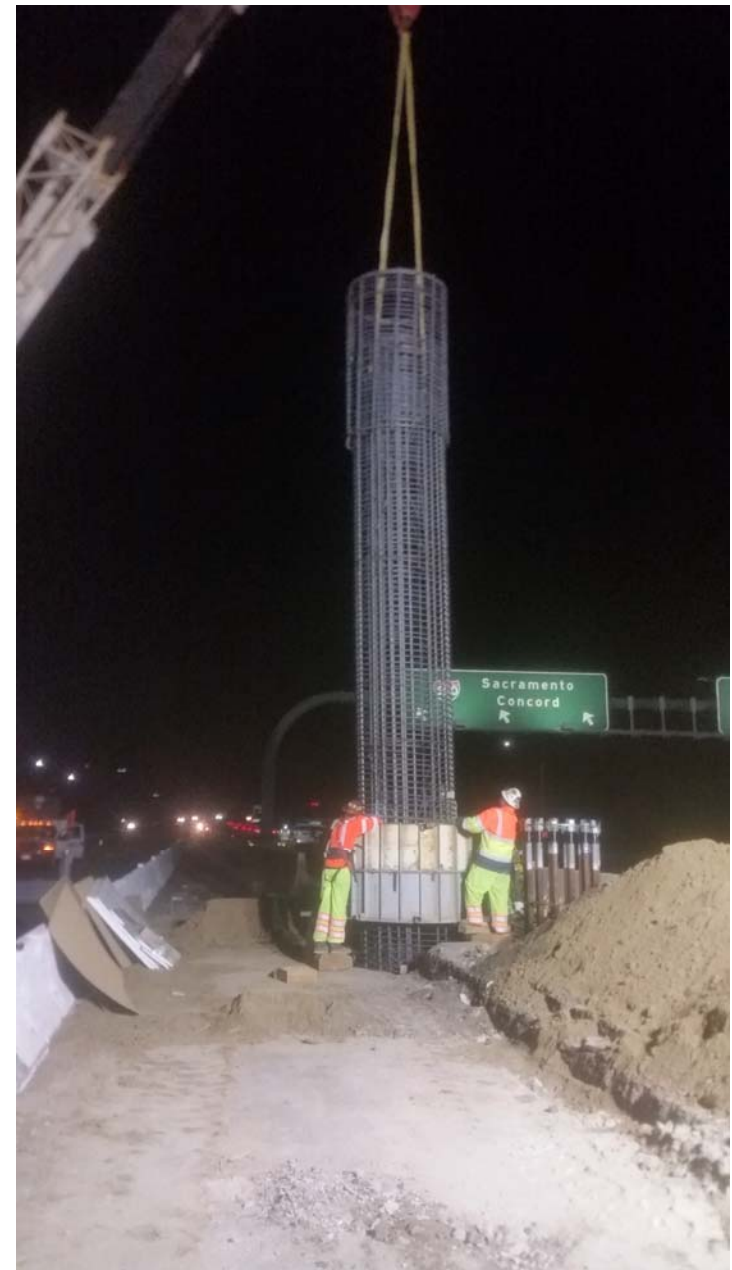
CC-680 Southern Segment Civil Construction



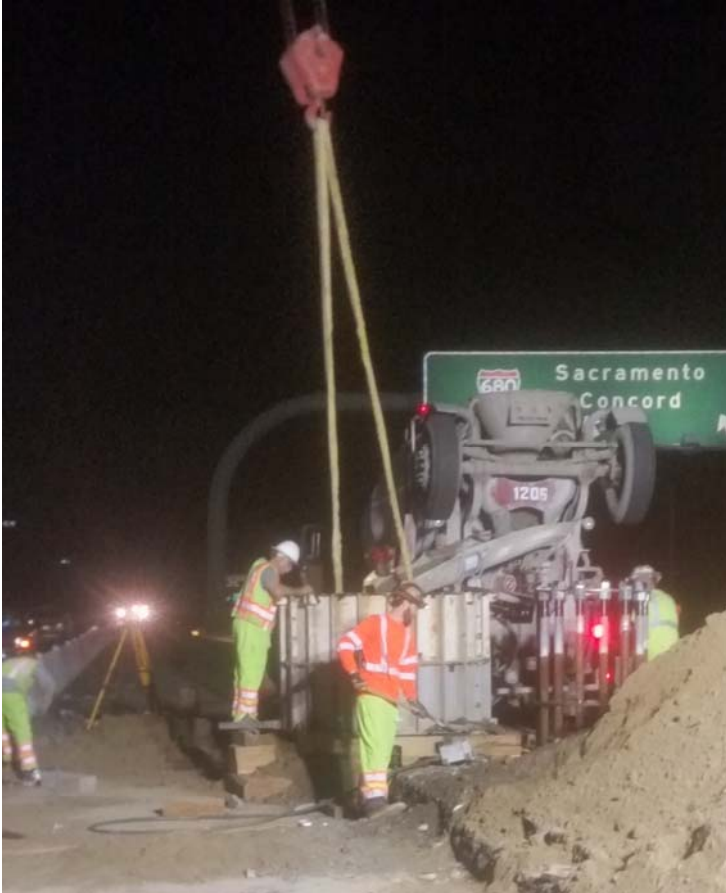
CC-680 Southern Segment Civil Construction



CC-680 Southern Segment Civil Construction



CC-680 Southern Segment Civil Construction



CC-680 Southern Segment Civil Construction



** 18 out of 31 Overhead Sign Structure CIDH Piles complete as of December 7

CC-680 Southern Segment Civil Construction



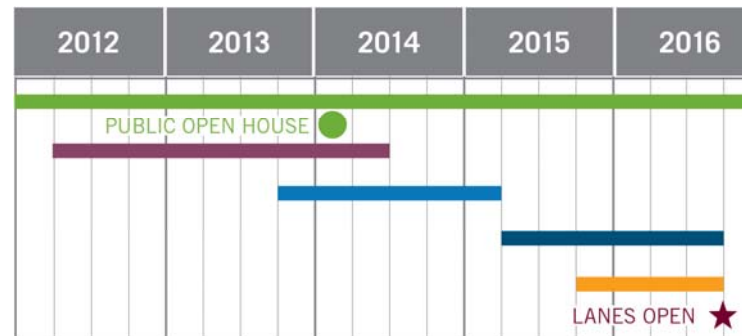
Schedules

to be adjusted following December contract actions

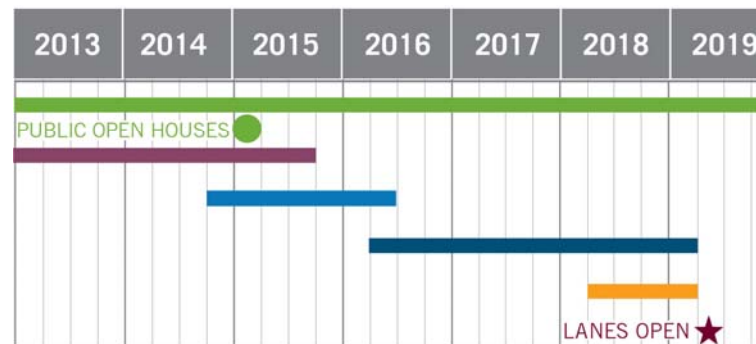
Project	Scheduled Opening	Confidence Level
I-880 Alameda (ALA-880)	Spring 2019	●
I-680 Contra Costa Southern Segment (CC-680 South)	Fall 2016	●
I-680 Contra Costa Northern Segment - Southbound Conversion (CC-680 North)	Fall 2018	●

KEY	
●	Minimal risk to schedule.
●	Identified potential project risks that could significantly impact scheduled opening.
●	Known project impacts with forthcoming changes to scheduled opening.

CC-680 Southern Segment



I-880



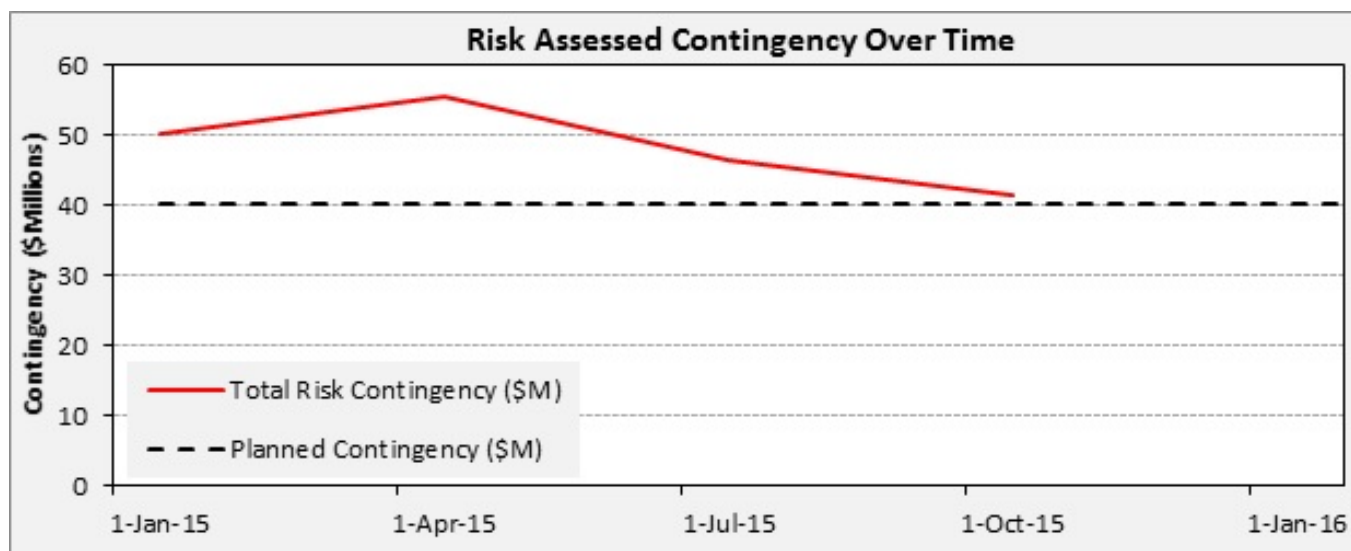
*Includes I-880 median barrier improvements.



Budget & Risk Management

As of 3rd Quarter ending September 30, 2015

Costs in millions	BATA Express Lane Funds	Expended as of 9/30/15	Physical Percent Complete
Projects	\$262.3	\$31.8	
Program Contingency	\$40.0	\$0.0	
Capitalized O&M	\$16.0	\$0.0	
Total	\$318.3	\$31.8	11%

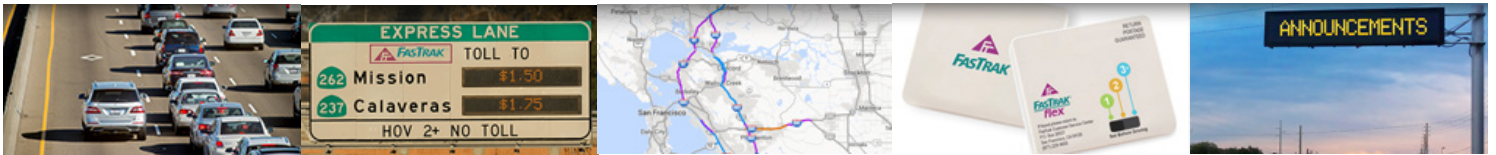


Does not include detailed risks for projects on I-80 in Solano County.
Details will be added when design for the projects gets underway in 2016





BAY AREA EXPRESS LANES



MTC Express Lanes Quarterly Report 3rd Quarter 2015

Submitted: December 16, 2015

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.

Here the crew removes existing median concrete barrier railing along I-680 to make way for the Express Lanes, which will be adjacent to the median.

I. PROGRAM HIGHLIGHTS

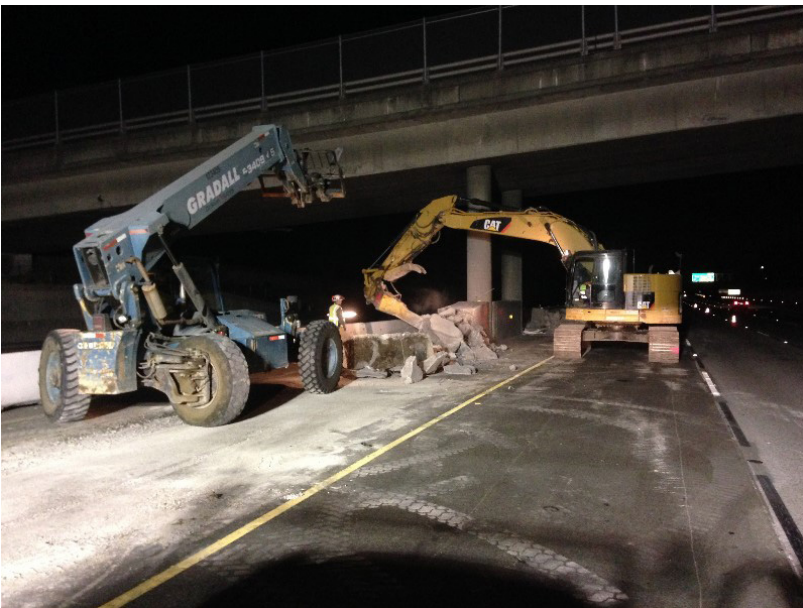
The purpose of this report is to summarize the progress of delivering Metropolitan Transportation Commission (MTC) Express Lanes. The report covers the third quarter of 2015, July 1 to September 30.

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 2016.

Project Development & Construction	3 rd Quarter 2015 Highlights	Current Activities
I-880 Alameda (ALA-880) Between San Leandro and Milpitas <i>Hegenberger Road/Lewelling Boulevard to Dixon Landing Road</i>	<ul style="list-style-type: none"> 65% plans for both the civil work and the backhaul network were submitted to Caltrans in September. Caltrans median barrier contract was advertised on September 28th. The contract includes express lane sign and light foundations. The environmental clearance document was signed in August. 	<ul style="list-style-type: none"> Work continues with Caltrans to find ways to complete the median barrier contract in such a way as to eliminate impacts to the express lanes opening date. 65% toll system design to be submitted to Caltrans for review in October.
I-680 Contra Costa Southern Segment (CC-680 South) Between Walnut Creek and San Ramon <i>Livorna Road/Rudgear Road to Alcosta Boulevard</i>	<ul style="list-style-type: none"> Civil construction began in August. Final design for both the backhaul and the toll system was submitted to Caltrans in September. 	<ul style="list-style-type: none"> Civil construction ongoing. <i>(See detail on pages 15-16, and additional photographs on the following page and page i and 6)</i> Preparing I-680 backhaul invitation for bid document for anticipated October advertisement. Awaiting Caltrans encroachment permit for the toll system and backhaul.
I-680 Contra Costa Northern Segment Southbound Conversion (CC-680 North) Martinez to Walnut Creek <i>Marina Vista Boulevard to Rudgear Road/SR 242</i>	<ul style="list-style-type: none"> Traffic Operation Analysis Report was submitted for Caltrans approval in September. Developed I-680 North design to best accommodate future traffic demand. Modified I-680 South design to accommodate I-680 North requirements. The backhaul contract for CC-680 South will construct most of the backhaul for this segment of I-680. 	<ul style="list-style-type: none"> Environmental studies are progressing. Working with Caltrans to find feasible solutions to create width for the striped buffer in stretches with existing narrow lanes.
I-80 Solano West (SOL-80 West) Fairfield <i>Red Top Road to Air Base Parkway and</i> I-80 Solano East (SOL-80 East) Fairfield to Vacaville <i>Air Base Parkway to I-505</i>	<ul style="list-style-type: none"> Draft environmental document released in July and public comment period closed. Public open forum hearing held August 4. 	<ul style="list-style-type: none"> Preparing the final environmental document. Developing preliminary civil design.
Centralized Toll System	<ul style="list-style-type: none"> Toll system software development commenced in September. 	<ul style="list-style-type: none"> A procurement for toll operations staffing will be issued in Fall 2015. Development of operating procedures is underway. Plans are underway for the build out of express lanes elements of the 375 Beale Operations Center.



Communication installation along I-680 between Walnut Creek and San Ramon (above and to the left).



Median barrier demolition work on I-680 between Walnut Creek and San Ramon.



Median barrier demolition clean up.

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.

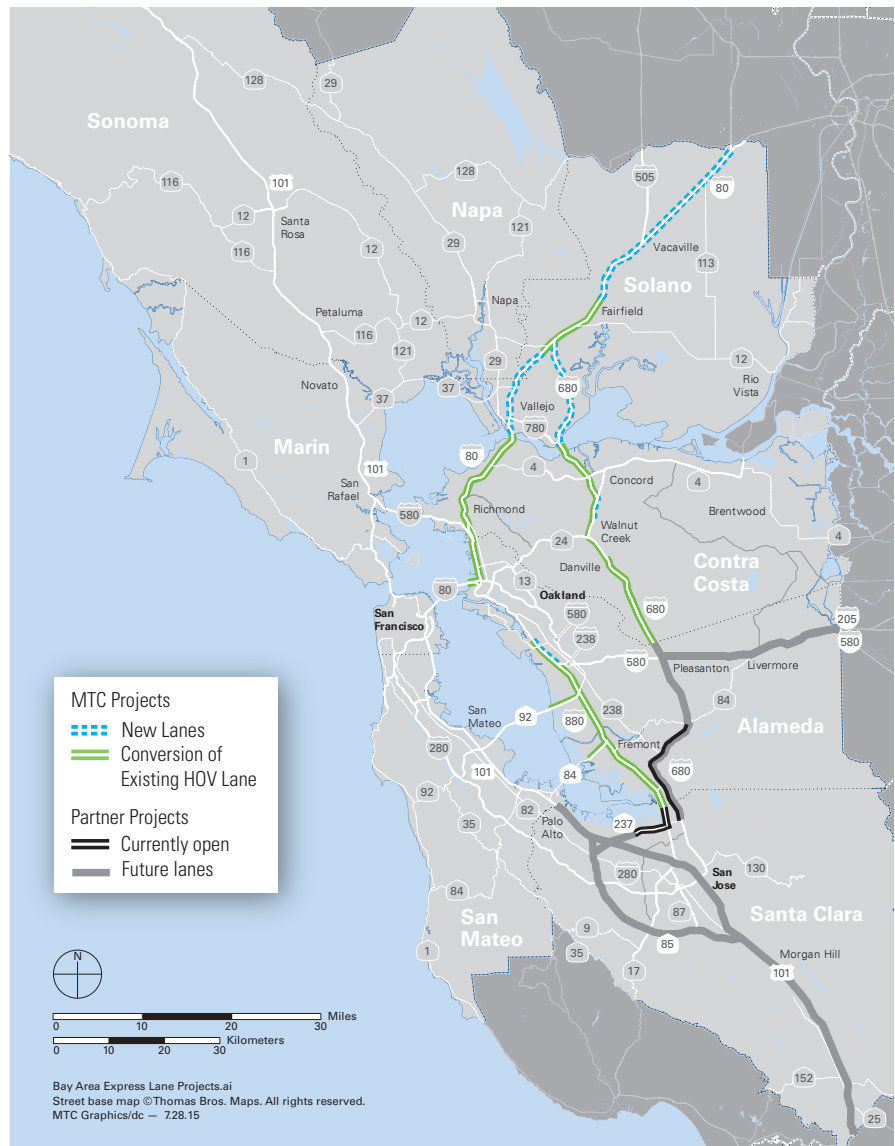


Map of Bay Area Express Lane Network

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

The approved funding strategy is to use existing funding to open as much of MTC's 270-mile network as possible while seeking opportunities to get additional projects "shelf-ready" should additional funding become available for construction. This strategy includes phasing some gap closure projects concurrently with the implementation of adjacent conversion projects.

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 <i>Hegenberger Rd./Lewelling Blvd. to Dixon Landing Rd.</i>	●	●	●
CC	680	I-680 Contra Costa Southern Segment	Between Walnut Creek and San Ramon <i>Livorna Rd./Rudgear Rd. to Alcosta Blvd.</i>	●	●	●
CC	680	I-680 Contra Costa Northern Segment - Southbound Conversion	Martinez to Walnut Creek <i>Marina Vista Blvd. to Rudgear Rd./SR 242</i>	●	●	●
SOL	80	I-80 Solano West	Fairfield <i>Red Top Rd. to Air Base Pkwy.</i>	●	●	○
GAP CLOSURE OPPORTUNITY PROJECTS						
CC	680	I-680 Northern Segment Southbound Conversion	Martinez to Walnut Creek <i>Benicia Bridge to Rudgear Road</i>	●	●	●
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 <i>North Main St. to the Benicia Bridge</i>	◐	○	○

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	Scheduled Opening	Confidence Level	Detail Page
I-880 Alameda (ALA-880) Between San Leandro and Milpitas <i>Hegenberger Rd./Lewelling Blvd. to Dixon Landing Rd.</i>	Spring 2019	●	12
I-680 Contra Costa Southern Segment (CC-680 South) Between Walnut Creek and San Ramon, <i>Livorna Rd./Rudgear Rd. to Alcosta Blvd.</i>	Fall 2016	●	14
I-680 Contra Costa Northern Segment - Southbound Conversion (CC-680 North) Martinez to Walnut Creek <i>Marina Vista Blvd. to Rudgear RD./SR 242</i>	Fall 2018	●	16

KEY

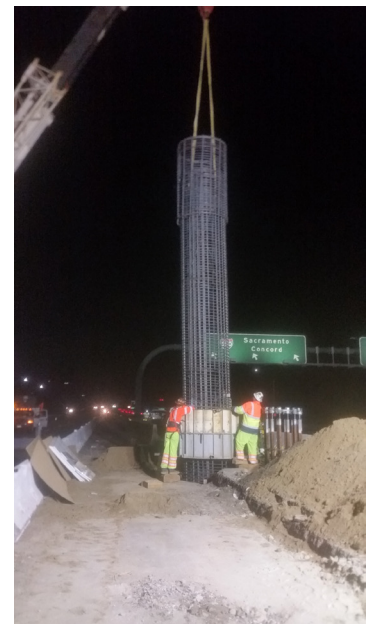
- Minimal risk to schedule.
- Identified potential project risks that could significantly impact scheduled opening.
- Known project impacts with forthcoming changes to scheduled opening.



CIDH pile foundations provide deep support for structures that have the potential to shift. Crews drill deep shafts, reinforce them with steel cages, and then pour concrete to create strong foundations for the future overhead signage. The foundations will support the electronic signs that will provide information about the Express Lanes.



Structural work for the Cast in Drilled Hole (CIDH) pile sign foundations is now underway throughout the I-680 corridor between Walnut Creek and San Ramon. (See a completed CIDH pile on page 16.)



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 cost forecast 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.

County	Route	Project ⁽¹⁾	Geographical Limits	Cost Forecast	Regional Measure 2 (allocated)	BATA Express Lane Funds	Expended to Date	Physical % Complete ⁽³⁾
<i>Costs shown in thousands of escalated dollars</i>								
NEAR TERM CONVERSIONS								
ALA	880	I-880 Alameda	Between San Leandro and Milpitas Hegenberger Rd./Lewelling Blvd. to Dixon Landing Rd.	77,779		77,779	5,017	8%
CC	680	I-680 Contra Costa Southern Segment	Between Walnut Creek and San Ramon Livorna Rd./Rudgear Rd. to Alcosta Blvd.	48,939		48,939	10,852	25%
CC	680	I-680 Contra Costa Northern Segment - Southbound Conversion	Martinez to Walnut Creek Marina Vista Blvd. to Rudgear Rd.	36,099	3,812	32,288	243	5%
SOL	80	I-80 Solano West	Fairfield Red Top Rd. to Air Base Pkwy.	43,941	6,504	2,852	108	8%
Centralized Toll System				36,207		36,207	2,541	15%
Program Planning, Coordination & Management				28,437		28,437	16,045	35%
Program Contingency				50,000		40,000		
Capitalized Start-up O&M				16,000		16,000		
GAP CLOSURE OPPORTUNITY PROJECTS								
CC	680	I-680 Northern Segment Southbound Conversion ⁽²⁾	Martinez to Walnut Creek Marina Vista Blvd. to Rudgear Road	19,000		19,000		0%
CC	680	I-680 North Northbound Extension	Walnut Creek to Concord North Main Street to SR 242	57,287				0%
SOL	80	I-80 Solano East	Fairfield to Vacaville Air Base Parkway to I-505	135,484	8,696	16,114		8%
FUTURE CONVERSIONS								
ALA/CC	80 92 84	I-80 and Westbound Bridge Approaches	Cummings Skyway to Bay Bridge San Mateo Bridge Westbound Approach Dumbarton Bridge Westbound Approach	110,884	5,000	692		1%
CC	680	I-680 Northern Segment - Northbound Conversion	Walnut Creek to Martinez North Main St. to Marina Vista Blvd.	14,575	1,511			5%
Total				674,632	25,522	318,309	31,845	11%

⁽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⁾ Cost shown is BAIFA's contribution toward shortfall. Total project cost is \$85 million. Other funds include Measure J (\$37 million), Regional Measure 2 (\$13 million), State Transportation Improvement Program (STIP) (\$16 million).

⁽³⁾ Physical percent completes shown are 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.

B. Change Management

The change management process captures the changes in the program that have an impact on the approved baselines. All the changes to the program are recorded in the change log and distributed to the team on a bi-weekly basis.

The major changes to the MTC Express Lanes Program recorded through the change management process during the 3rd quarter of 2015 are as follows:

- Bids received for construction of the Backhaul Communications Network (backhaul) in July were not in line with the engineer's estimate and program budget. As a result, MTC staff decided to conduct industry outreach in order to gain a better understanding of cost drivers, repackage the work and re-advertise the invitation for bid (IFB) for the backhaul contract. The open to traffic date on the I-680 Contra Costa Southern Segment (CC-680 South) will be adjusted following award of the backhaul contract for I-680. MTC staff decided to combine the I-880 backhaul network improvements into the express lane civil contract for I-880.
- MTC staff revised the CC-680 South plan sheets to construct the project to accommodate the design of the I-680 Contra Costa Northern Segment - Southbound Conversion (CC-680 North), thus reducing the need to modify the median barrier in the future. Changes, in specific locations, include the adjustment of the limits for median concrete barriers, the elimination of temporary fencing, the raising of sign structure height, the installation of conduit, and the change from cantilever design to butterfly structure design.
- MTC staff elected not to continue with environmental clearance for the northbound direction of I-680 between SR-242 and the Benicia-Martinez Bridge as part of the CC-680 North environmental clearance. This decision resulted from traffic operation analysis showing that conversion of the northbound HOV lane to an express lane is not warranted until an express lane can be extended south into Walnut Creek.

C. Risk Management Plan

Risk management for MTC's Express Lanes Program is a straight forward process of identifying and mitigating risks to minimize potential adverse impacts on the program's costs and schedule. Risk is managed at both the program and contract level and responsibility is assigned to the level best positioned to manage the identified risk.

The program contingency is compared and tracked on a monthly basis with a risk-assessed capital contingency derived from 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 September 30, 2015, the mean risk-assessed capital contingency stands at \$41.3 million against the \$40 million in approved program contingency.

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

I-880 Alameda

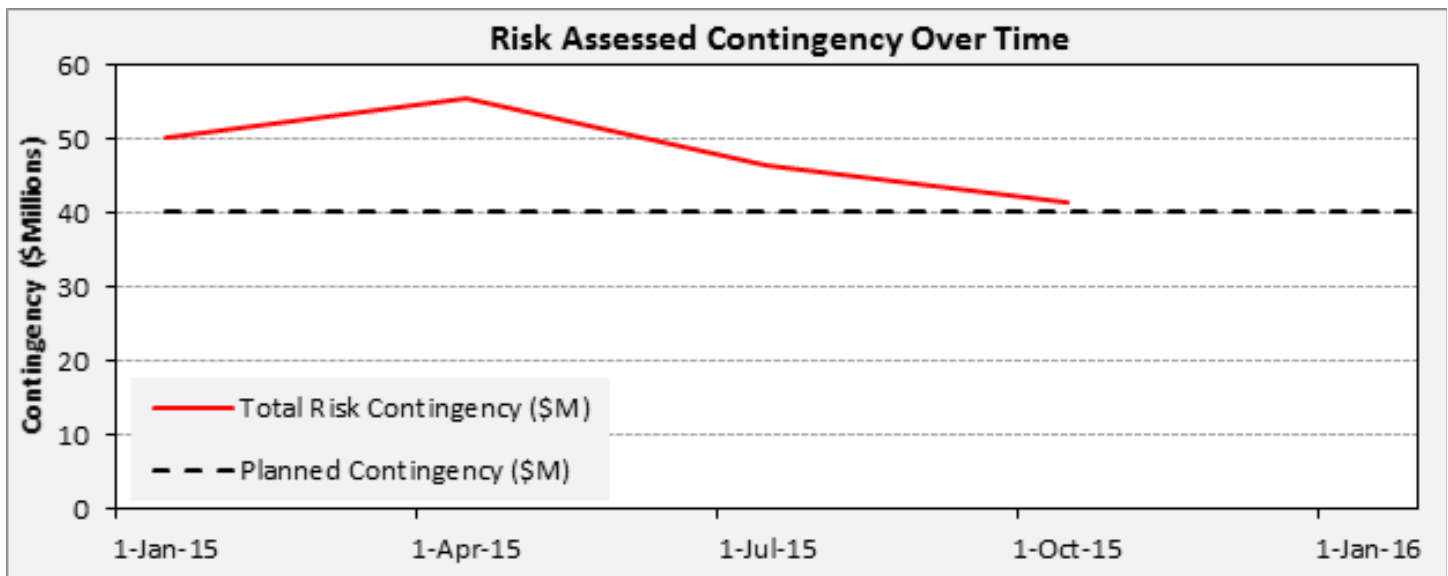
- The I-880 backhaul and civil contract work must be staged to minimize, if not eliminate, conflicts with Caltrans' I-880 median barrier contract, creating a risk that delays on the median barrier contract could lead to cost escalation and delays in opening the I-880 Express Lanes. This risk of delay

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.

- The costs to construct and implement the I-880 corridor may significantly exceed the available contingency identified to cover such costs. The current estimate at completion is approximately \$25 million above the budget. Mitigations are underway and the program team is working on completing the preliminary engineering cost estimate and the final median barrier design estimate, and will then determine ways to cut costs.

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 coordinating the needs and requirements with Caltrans.



This summary 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 will 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

- Costs may escalate at higher than projected levels resulting in increased costs for design or construction.
- Recommendations of regional policy change from the 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.

PROJECT SUMMARY SHEETS

Centralized Toll System & Program Management, Planning and Regional Coordination

Total Estimated Cost

\$36.2 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 Fall of 2016.

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

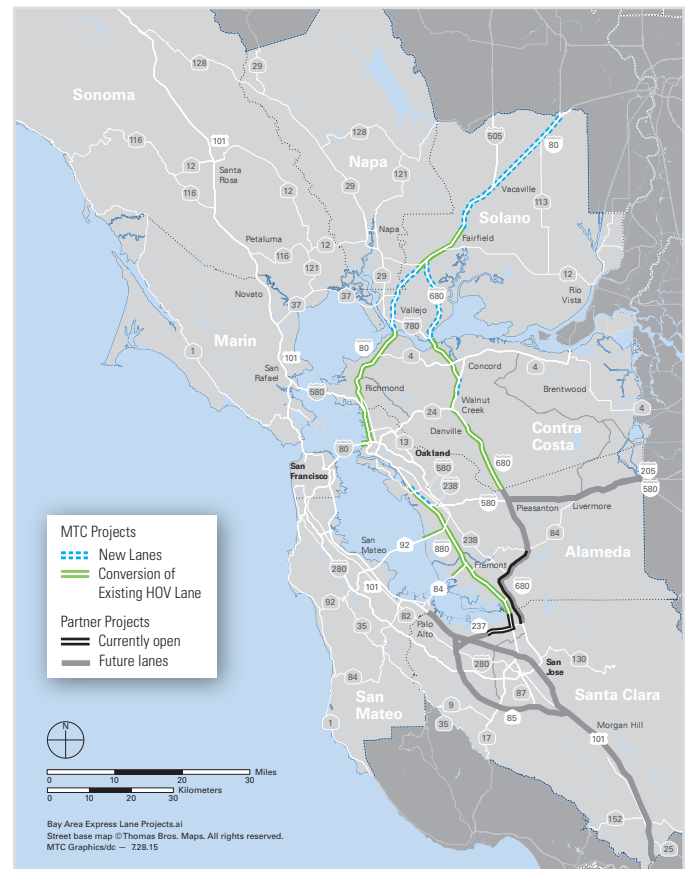
Project Description

The centralized toll system includes the elements of the toll system that are needed to toll all the lanes. This 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. Additionally, the centralized toll system includes the backhaul communications network components that transports toll data from all MTC lanes to host and toll operations data centers, including corridor communication hubs, fiber optic cables, and leased line services.

The planning, coordination and management tasks of this project 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 approved the Express Lane Program Expenditure Plan in June.
- Draft toll system host and software design approved in June.
- Toll system software development commenced in September.



Current Project Activities

- A procurement for toll operations staffing will be issued in Fall 2015.
- Development of operating procedures is underway.
- Plans are underway for the build out of express lanes elements of the 375 Beale Operations Center.
- Research is underway to inform staff recommendations for a toll ordinance and violations policies to be adopted in 2016.

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

Hegenberger Road/Lewelling Boulevard to Dixon Landing Road

Total Estimated Cost

\$77.8 million

Scheduled Open Date

Spring 2019

Project Description

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

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

- 65% plans for both the civil work and the backhaul network were submitted to Caltrans in September.
- Caltrans median barrier contract was advertised on September 28th. The contract includes express lane sign and light foundations.
- The environmental clearance was signed in August.

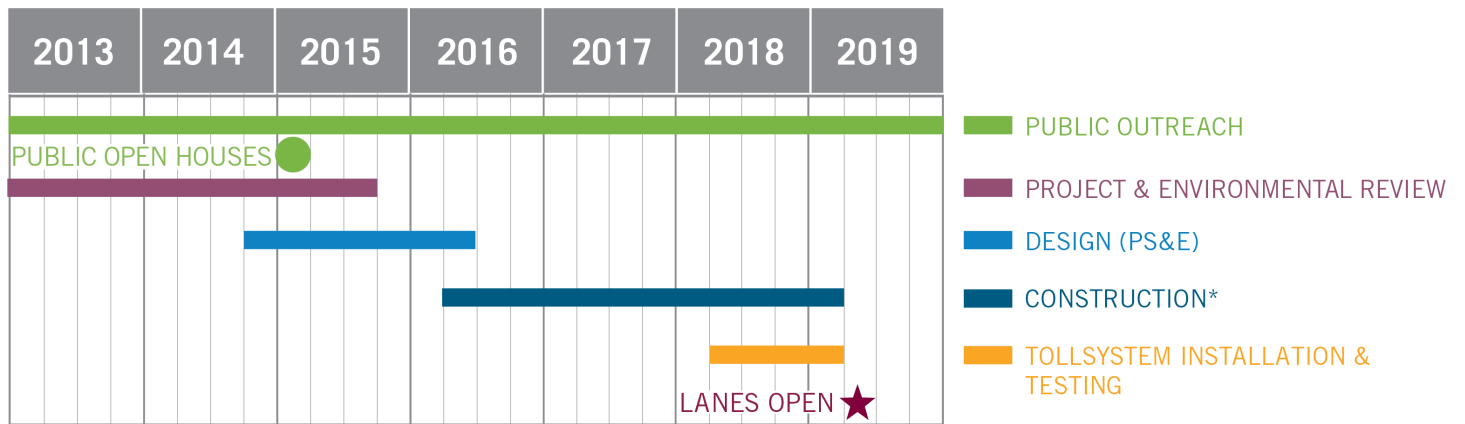
Current Project Activities

- The current schedule for the I-880 median barrier replacement project would require BAIFA to push back the start of construction and the express lanes opening date. Work continues with Caltrans to find ways to complete the median barrier contract in such a way as to reduce impacts the express lanes opening date.



- 65% toll system design to be submitted to Caltrans for review in November.
- The final combined project scoping/preliminary engineering report is circulating at Caltrans for executive signature.
- Staff decided in September to combine the backhaul network improvements into the express lanes civil contract. The effort to combine the plans is underway.

Project Schedule by Phase



*Includes I-880 median barrier improvements.

Project Cost

Cost Forecast	Regional Measure 2 (allocated)	BATA Express Lane Funds	Expended to Date	Physical % Complete
77,779		77,779	5,017	8%

Costs shown in thousands of escalated dollars.

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

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

Livorna Road/Rudgear Road to Alcosta Boulevard

Total Estimated Cost

\$48.9 million

Scheduled Open Date

Fall 2016

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.

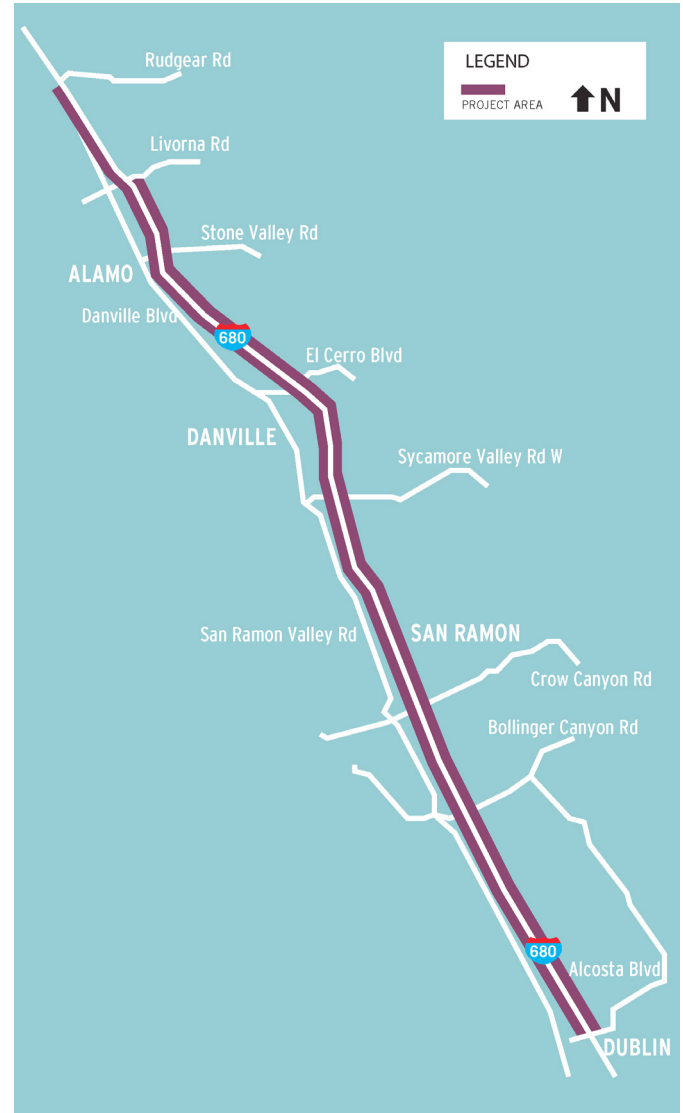
This conversion project includes striping lanes and installing sign gantries, signs, FasTrak® toll tag readers, and traffic monitoring video cameras. In addition, the project installs equipment and observation areas to help the California Highway Patrol enforce proper use of the lanes. The express lanes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

Project Highlights and Progress

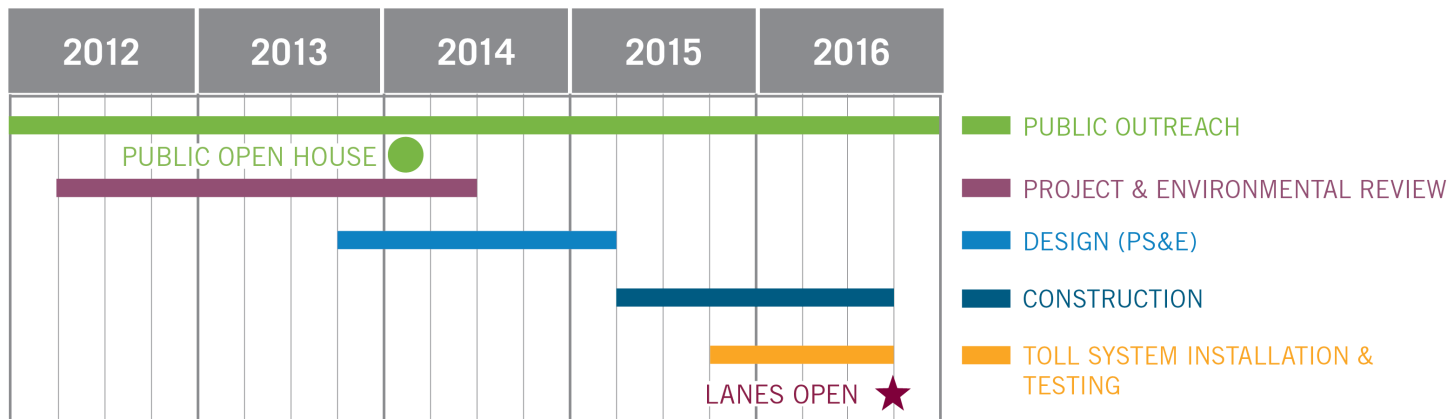
- Environmental document completed in August 2014.
- Final design completed in April.
- Civil construction began in August.
- Final design for both the backhaul and the toll system was submitted to Caltrans in September.

Current Project Activities

- Civil construction ongoing.
- Preparing I-680 backhaul invitation for bid for advertisement in October.
- Awaiting Caltrans encroachment permit for the toll system and backhaul.



Project Schedule by Phase



Project Cost

Cost Forecast	Regional Measure 2 (allocated)	BATA Express Lane Funds	Expended to Date	Physical % Complete
48,939		48,939	10,852	25%

Costs shown in thousands of escalated dollars.

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



Completed Cast in Drilled Hole (CIDH) pile..

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

Benicia Bridge to Rudgear Road

Total Estimated Cost

\$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.

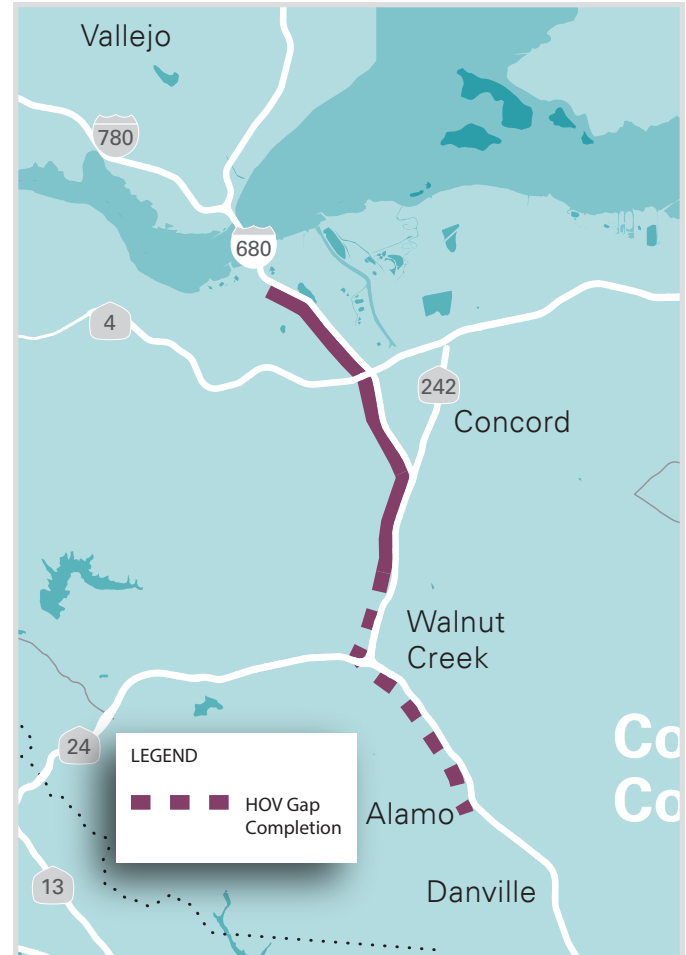
Civil construction will be delivered by the Contra Costa Transportation Authority (CCTA). MTC will install toll and communications equipment and will operate the express lanes.

Project Highlights and Progress

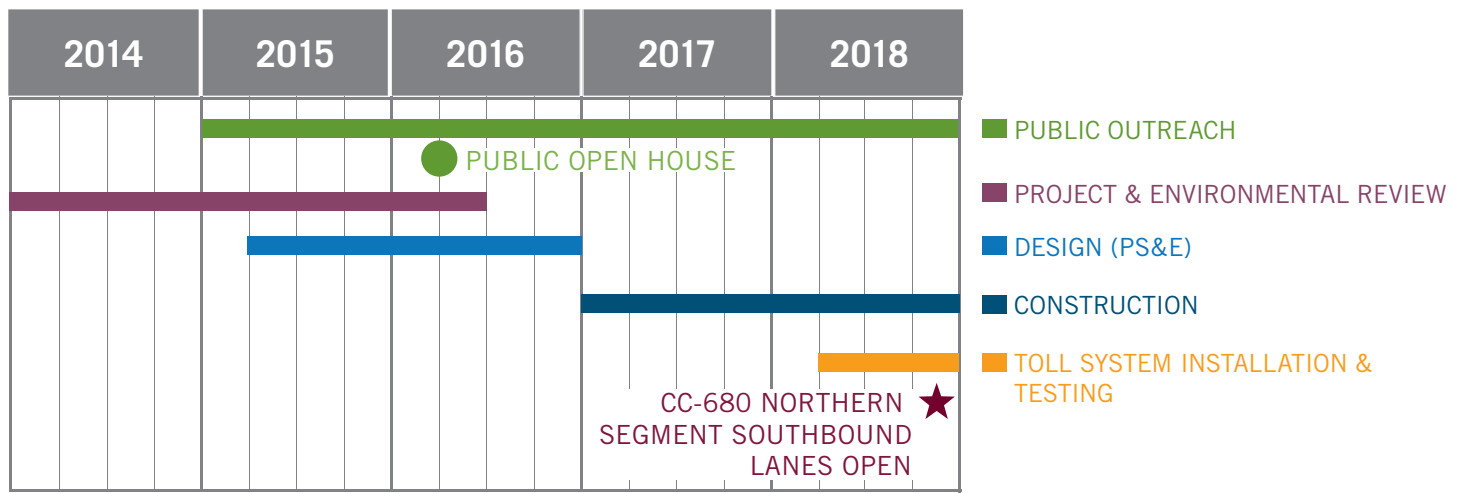
- Traffic Operation Analysis Report was submitted for Caltrans approval in September.
- Developed I-680 North design to best accommodate future traffic demand.
- Modified I-680 South design to accommodate I-680 North requirements.
- The backhaul contract for CC-680 South will construct most of the backhaul for this segment of I-680.

Current Project Activities

- Environmental studies are progressing.
- Working with Caltrans to find feasible solutions to create width for the striped buffer in stretches with existing narrow lanes.
- Preparing to present project overview to stakeholders starting in October.



Project Schedule by Phase



Project Cost

Cost Forecast	Regional Measure 2 (allocated)	BATA Express Lane Funds	Expended to Date	Physical % Complete
36,099	3,812	32,288	243	5%

Costs shown in thousands of escalated dollars.

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

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

Red Top Road to Air Base Parkway

Total Estimated Cost

\$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.

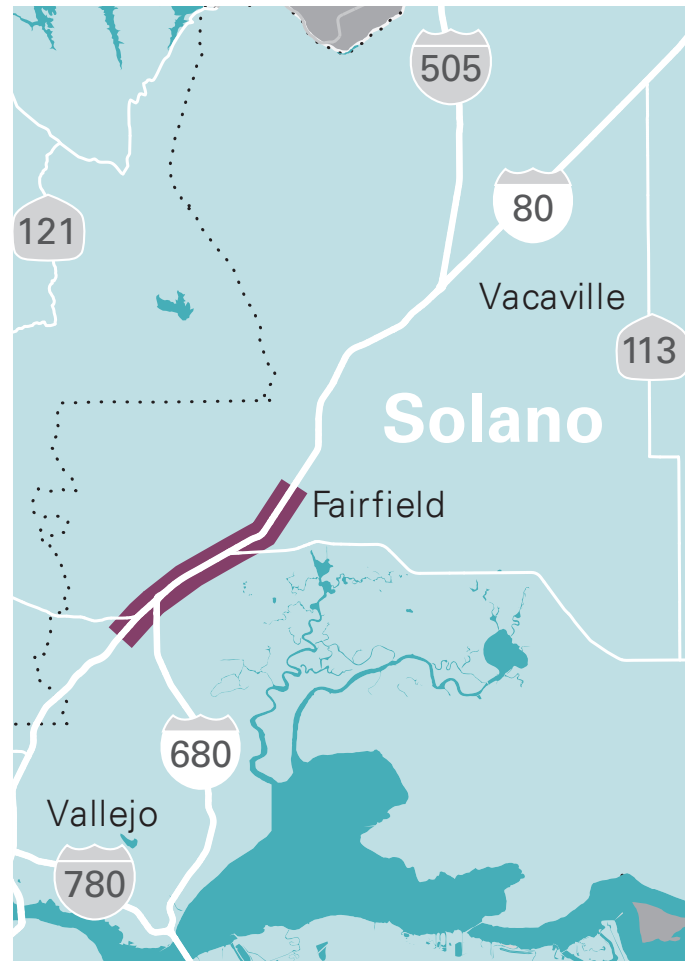
Civil construction will be delivered by STA. MTC will install toll and communications equipment and will operate the express lanes.

Project Highlights and Progress

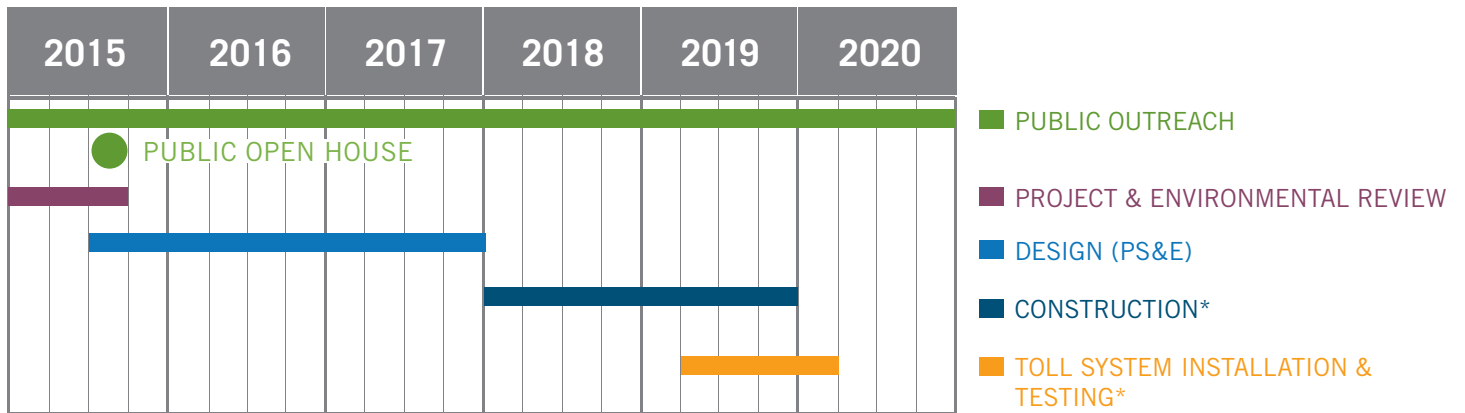
- Draft environmental document released in July and public comment period closed.
- Public open forum hearing held August 4.

Current Project Activities

- Preparing the final environmental document.
- Developing preliminary civil design.



Project Schedule by Phase



* Funding for these activities is not yet secured.

Project Cost

Cost Forecast	Regional Measure 2 (allocated)	BATA Express Lane Funds	Expended to Date	Physical % Complete
43,941	6,504	2,852	108	8%

Costs shown in thousands of escalated dollars.

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

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

Air Base Parkway to I-505

Total Estimated Cost

\$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.

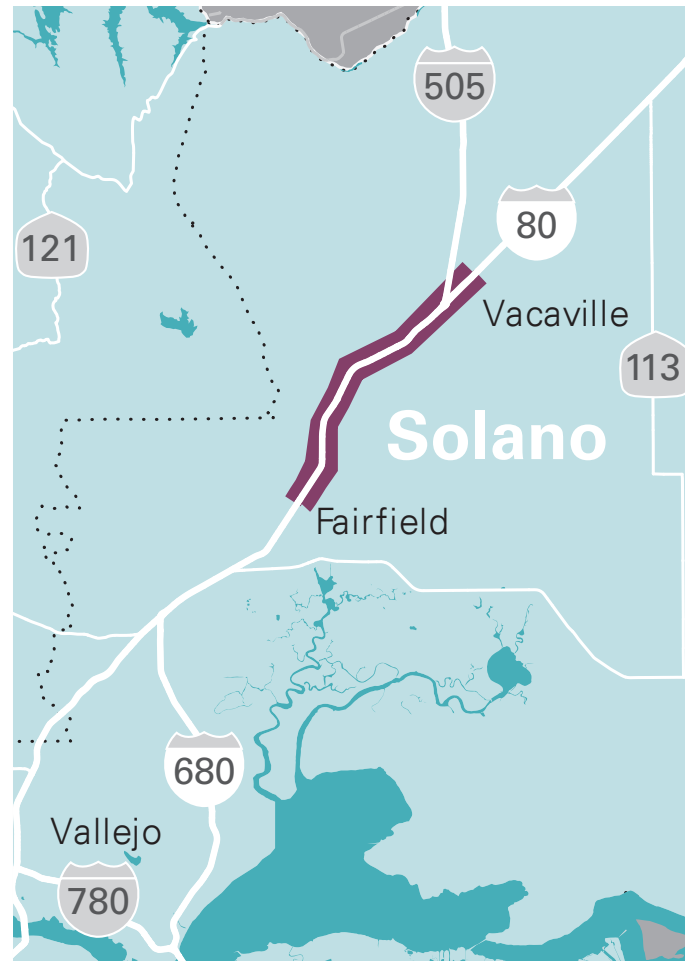
Civil construction will be delivered by STA. MTC will install toll and communications equipment and will operate the express lanes.

Project Highlights and Progress

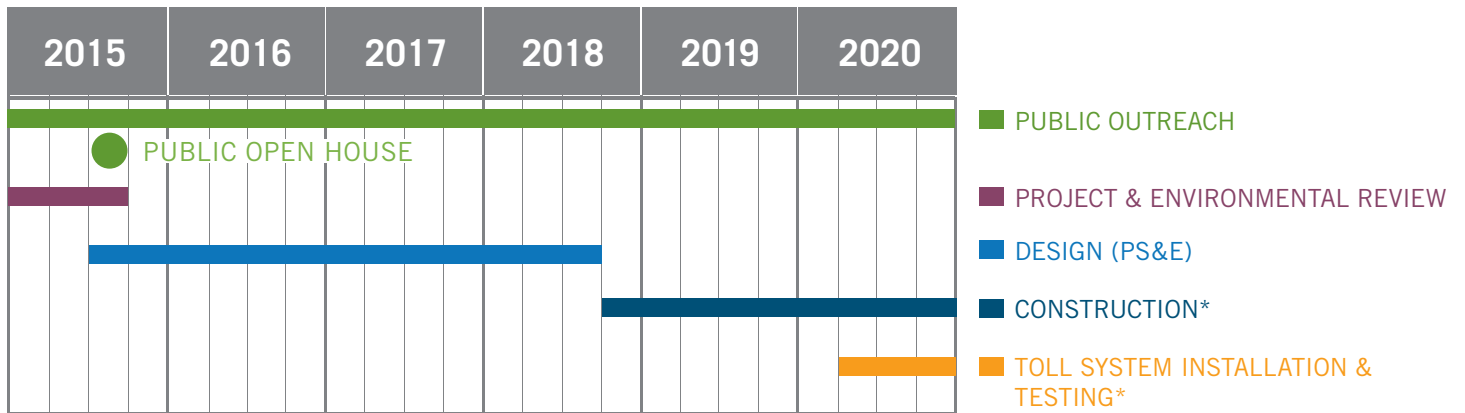
- Draft environmental document released in July and public comment period closed.
- Public open forum hearing held August 4.

Current Project Activities

- Preparing the final environmental document.
- Developing preliminary civil design.



Project Schedule by Phase



* Funding for these activities is not yet secured.

Project Cost

Cost Forecast	Regional Measure 2 (allocated)	BATA Express Lane Funds	Expended to Date	Physical % Complete
135,484	8,696	16,114	0	8%

Costs shown in thousands of escalated dollars.

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

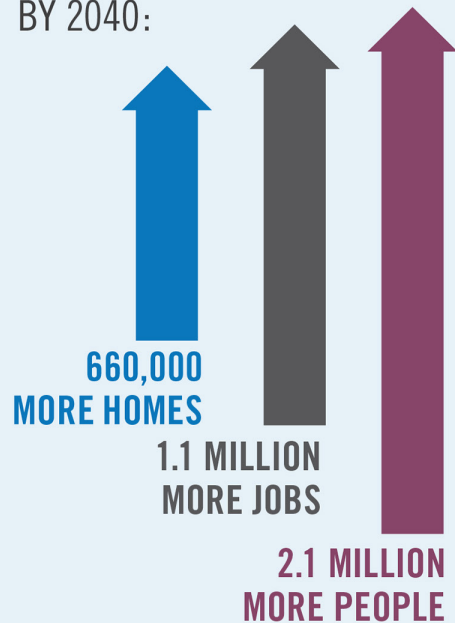
APPENDICES

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.

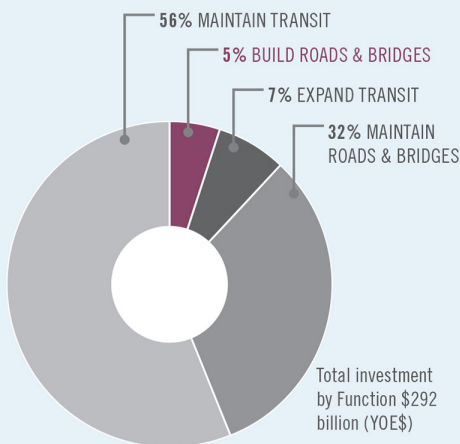
REGIONAL GROWTH BY 2040:



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

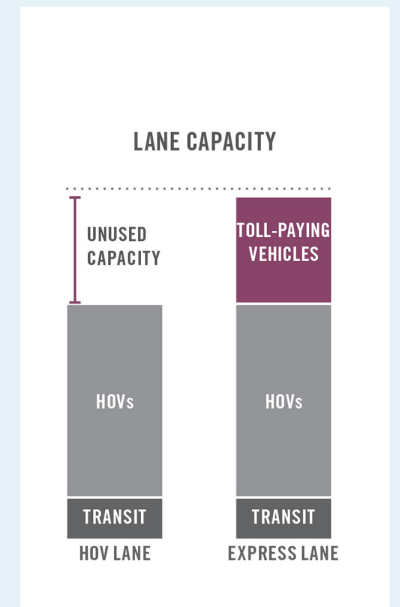
REGIONAL INVESTMENT BY 2040:

ONLY 5% OF THE REGION'S
TRANSPORTATION DOLLARS WILL BE
USED TO BUILD NEW ROADS.



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

HOW EXPRESS LANES HELP:



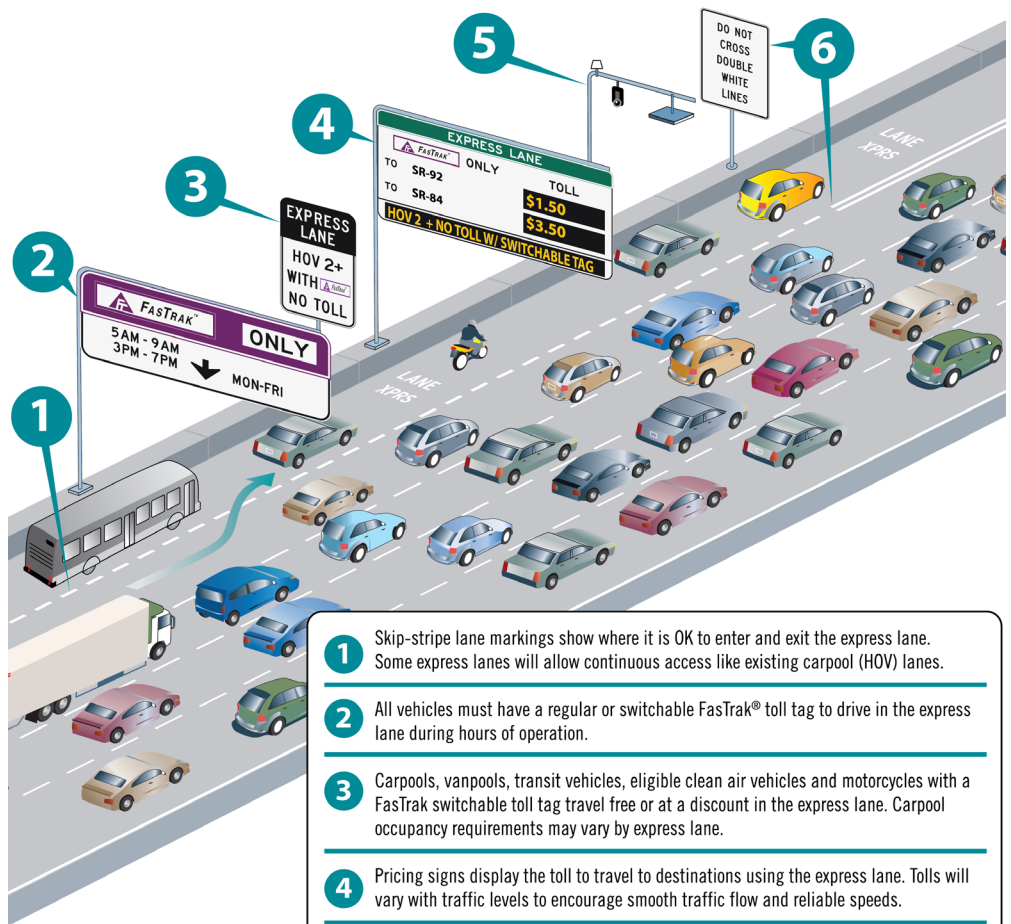
B. How Express Lanes Work

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

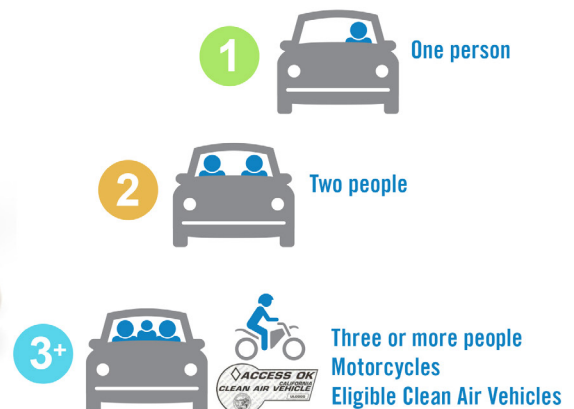


- 1 Skip-stripe lane markings show where it is OK to enter and exit the express lane. Some express lanes will allow continuous access like existing carpool (HOV) lanes.
- 2 All vehicles must have a regular or switchable FasTrak® toll tag to drive in the express lane during hours of operation.
- 3 Carpools, vanpools, transit vehicles, eligible clean air vehicles and motorcycles with a FasTrak switchable toll tag travel free or at a discount in the express lane. Carpool occupancy requirements may vary by express lane.
- 4 Pricing signs display the toll to travel to destinations using the express lane. Tolls will vary with traffic levels to encourage smooth traffic flow and reliable speeds.
- 5 Electronic toll tag readers automatically charge tolls to a vehicle's FasTrak account. Like at Bay Area bridges, license plate cameras prevent cheating and support enforcement.
- 6 Double-stripe lane markings show where it is illegal to enter and exit the express lane. These access limitations support lane safety and operations.

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

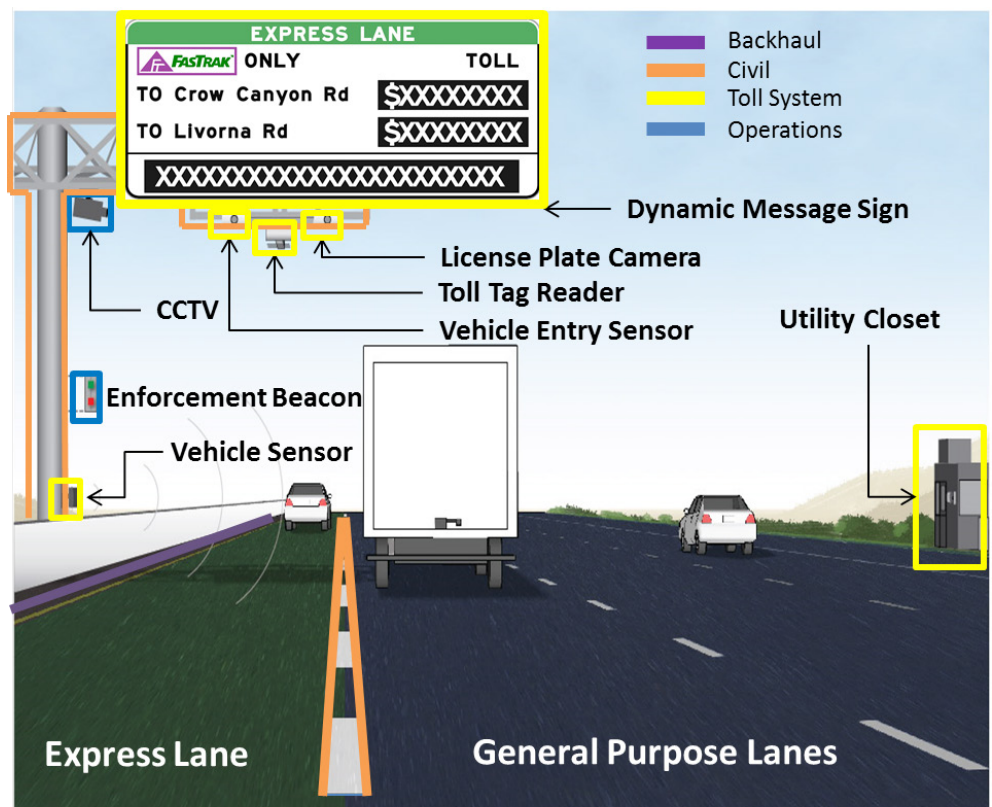
The toll system consists of two components, the in-lane systems and the back-end “host” system. The lane systems consist of all the equipment on the highway needed to operate the toll system including toll tag readers, cameras and vehicle detection. The host system serves as the brain of the toll system, 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