BAY AREA EXPRESS LANES

MTC Express Lanes Quarterly Report
2nd Quarter, April - June, 2020

Submitted: September 2020

BAIFA
BAY AREA INFRASTRUCTURE FINANCING AUTHORITY

METROPOLITAN TRANSPORTATION COMMISSION

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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 second quarter of 2020, April 1 to June 30.

The California Transportation Commission (CTC) approved 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. The first of MTC's express lanes opened in October 2017 on I-680 in Contra Costa County. Several additional projects are at varying stages of development.

Project Development & Construction	2nd Quarter 2020 Highlights	Current Activities
I-880 Alameda (ALA-880) San Leandro to Milpitas *Hegenberger Road/Lewelling Boulevard to Dixon Landing Road*	• In June 2020, the civil contractor completed new restricted access striping on the corridor and installed some signage. A public information campaign explained the changes.	• Civil construction work is 98% complete as of June 2020. Remaining work includes installation of fiber laterals to connect Caltrans' freeway management equipment to the communications backhaul. • Final signing and pavement marking civil work to transition the HOV lanes to express lanes will start in August. Until tolling begins, the lanes will function as HOV-2+ only lanes. • The toll system integrator will finish installation and testing of roadside cabinets, toll system equipment in the median, variable toll message signs, CCTVs and connections of electrical and fiber. • The toll system integrator will test the full integration of the field equipment with the Host system starting in August 2020. • Staff is continuing 'go live' planning in order to be ready to open the I-880 Express Lanes. • Staff has finalized customer education materials and messaging channels for a customer education campaign that will start about 6 weeks before tolling begins. • Staff is finalizing a social media campaign to inform travelers of their carpooling options and how to carpool safely during the COVID-19 public health crisis. • Monthly construction notices and ramp closure/ detour notices continue to be sent.
I-680 Contra Costa Southern Segment (CC-680 South) Walnut Creek to San Ramon *Livorna Road/Rudgear Road to Alcosta Boulevard*	• Due to COVID-19 shelter-in-place restrictions, toll operations ceased in mid-March and resumed on June 1, 2020. These actions were coordinated with the other Bay Area Express Lanes. • June 2020 express lanes trips and tolls were significantly below historical trends, and will be reported in the next quarterly report.	• Project complete; see Appendix B for archived summary.

Project Development & Construction	2nd Quarter 2020 Highlights	Current Activities
I-680 Contra Costa Northern Segment Southbound (CC-680 North SB) Martinez to Walnut Creek *Marina Vista Boulevard to Rudgear Road/SR 242*	• Caltrans issued the encroachment permit for toll system installation in April 2020. • The project team developed a strategy to open the new lane capacity between North Main Street and Rudgear Road as an HOV-2+ lane prior to tolling.	• The civil contractor continues highway widening and sound wall activities at various locations on I-680 southbound. Highway widening activities are scheduled for completion in July, and the new lane will be open for use by carpools on August 24. The contractor will continue punch list work for all structures. • Staff is coordinating with Contra Costa Transportation Authority staff on a public information campaign about the phased opening of the express lane extension. • The toll system integrator is installing the roadside tolling equipment.
I-80 Solano (SOL-80) Fairfield to Vacaville *Red Top Road to I-505*	• No highlights to report.	• The project is shelf-ready should construction funds become available. • In May 2020, MTC programmed $85 million of Regional Measure 3 Express Lane Program funds to the project, subject to the successful conclusion of litigation of Regional Measure 3. MTC also endorsed an application for $123 million of Senate Bill 1 competitive funds for the project. Staff anticipates learning whether the California Transportation Commission recommends the project for funds in late fall 2020.
Program Management	• In mid-March 2020, all Bay Area Express Lanes operators ceased tolling on express lanes in response to the COVID-19 public health crisis. Staff coordinated with Caltrans, CHP and BAIFA's civil and toll system contractors to continue progress delivering the I-880 and I-680 North Southbound express lanes. Operators resumed tolling in early June 2020. • Staff coordinated with Caltrans, CHP and the Valley Transportation Authority, which operates the SR-237 Express Lanes, on public information strategies for opening the I-880 Express Lanes. • BAIFA approved the FY 2020-21 operating and capital budgets. Initially, I-880 and I-680 North Southbound operating costs will be capitalized. Staff will amend operating costs and revenues into the operating budget based on tolling experience.	• In partnership with other express lane operators, staff is finalizing a strategic plan to help prioritize express lanes funding and delivery in the region. This work is coordinated with MTC's Planning Section to inform Plan Bay Area 2050. • Staff is developing a team, scope of work, schedule and budget to pilot a means-based toll discount for low-income drivers on one of BAIFA's express lanes. • Staff proposes that BAIFA amend its Toll Facility Ordinance to establish tolling rules for I-680 North Southbound. A public hearing and adoption vote is scheduled for September 2020. • The MTC Operations Committee awarded contracts to two vendors for pilots to improve occupancy enforcement: a roadside camera system and a smartphone app system. The smartphone app award is being contested.

Project Development & Construction	2nd Quarter 2020 Highlights	Current Activities
Toll System	• In June 2020, the toll system integrator began manual image review for low-confidence license plate images to improve trip building.	• Staff continues negotiations with the toll system integrator to streamline work required to produce toll system performance monitoring reports. • The toll system integrator set its goals to commence its new trip building component in July 2020. The integrator is also designing and building a lane-transaction filter to allow for I-880 testing in the live Host system while the I-680 corridor continues to process tolled trips.

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 600 miles of express lanes operated by MTC, the Valley Transportation Authority (VTA), the Alameda County Transportation Commission (Alameda CTC), the Sunol Smart Corridors Joint Powers Authority (Sunol JPA), and the San Mateo County Express Lanes Joint Powers Authority (San Mateo JPA).

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. In addition, MTC will operate 45 miles of new and converted lanes on US-101 in San Mateo County for the San Mateo JPA.

Appendix B includes an overview of how express lanes operate.

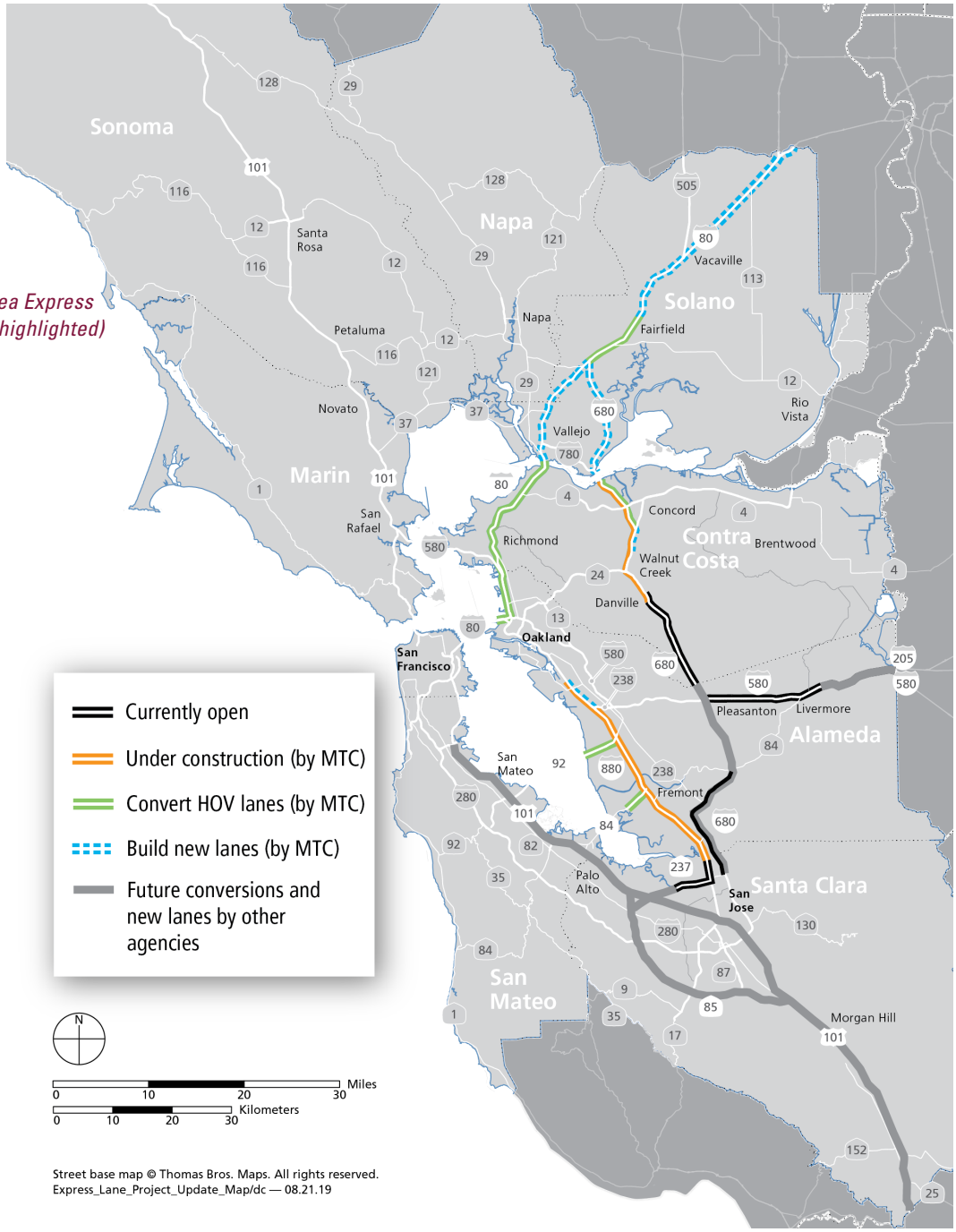
Map of Authorized Bay Area Express Lanes Network

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. BAIFA will also operate the toll system on US-101 in San Mateo County under contract to San Mateo County transportation agencies, which are responsible for project delivery, operational policy and use of revenue.

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

Authorized Bay Area Express Lanes (MTC lanes highlighted)



C. MTC Express Lane Project Funding

MTC is using existing funding to convert existing HOV lanes to express lanes and to conduct environmental studies and design 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	Miles	Environmental	Design	Construction
NEAR-TERM CONVERSIONS AND GAP CLOSURE OPPORTUNITY PROJECTS							
ALA	880	I-880 Alameda	Between San Leandro and Milpitas *Hegenberger Rd./Lewelling Blvd. to Dixon Landing Rd.*	51	●	●	●
CC	680	I-680 Contra Costa Southern Segment	Between Walnut Creek and San Ramon *Livorna Rd./Rudgear Rd. to Alcosta Blvd.*	23	●	●	●
					Project completed 2017		
CC	680	I-680 Contra Costa Northern Segment Southbound	Martinez to Walnut Creek *Marina Vista Blvd. to Rudgear Rd.*	11	●	●	●
SOL	80	I-80 Solano	Fairfield to Vacaville *Red Top Rd. to I-505*	36	●	●	○
MID-TERM CONVERSIONS AND GAP CLOSURE OPPORTUNITY PROJECTS							
ALA/ CC	80	I-80 and Westbound Approaches to the Bay Bridge	Between Crockett and Bay Bridge *Cummings Skyway to Bay Bridge; I-80, I-580, I-880 and West Grand approaches to Bay Bridge*	44	◖	○	○
ALA/ SM	84	Dumbarton Bridge Western Approach	Fremont/Newark *I-880 to Dumbarton Bridge*	3	●	○	○
ALA/ SM	92	San Mateo Bridge Westbound Approach	Hayward *I-880 to San Mateo Bridge*	3	●	○	○
CC	680	I-680 Contra Costa Northbound Express Lane Completion	Walnut Creek to Benicia *North Main St. to Marina Vista Blvd.*	9	●	○	○

KEY

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

III. CAPITAL DELIVERY

A. Schedule

The schedule summary below reflects the "open to traffic" dates of the original "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) San Leandro and Milpitas *Hegenberger Rd./Lewelling Blvd. to Dixon Landing Rd.*	Spring 2019	Fall 2020	●	14
I-680 Contra Costa Southern Segment (CC-680 South) Walnut Creek and San Ramon *Livorna Rd./Rudgear Rd. to Alcosta Blvd.*	Fall 2016	Fall 2017 Actual	●	A-5
I-680 Contra Costa Northern Segment Southbound (CC-680 North SB) Martinez to Walnut Creek *Marina Vista Blvd. to Rudgear Rd.*	Fall 2018	Winter/ Spring 2021	●	18

KEY

- ● Within schedule shown.
- ● Identified potential risks that may significantly impact schedule if not mitigated. See *Section III.D Risk Management Plan* for further discussion of schedule risk.
- ● Known impact to schedule, changes forthcoming.

B. Capital Costs

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) program-wide costs including planning and design, and implementation of centralized elements of the backhaul network and toll system. The total 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 westbound approaches to the San Mateo and Dumbarton Bridges. MTC's Finance Section reports financial information to BAIFA about one quarter in arrears, which does not fit with the production timeline for the Quarterly Report. As a result, the expended-as-of amounts shown below represent the unaudited amount of BATA Express Lane funds expended through the previously reported quarter; percent complete amounts are reported through the previously reported quarter for consistency. The confidence level assessment reflects potential risks to each project budget; for more information, see Section III.D Risk Management Plan.

Project[1]	Total Cost Estimate[2]	Cost Estimate, Funded Phases[3]	Regional Measure 2 Funds (allocated)	Other Funding (allocated)	BAIFA Express Lane Funds[4]			Percent Complete as of 3/31/20[5]	Confidence Level[6]
					July 2018 Amendment	Sept. 2018 Amendment	Expended as of 3/31/20		
NEAR-TERM CONVERSIONS AND GAP CLOSURE OPPORTUNITY PROJECTS									*Costs shown in millions of escalated dollars*
I-880 Alameda	139.1	139.1			135.5	139.1	111.2	90%	●
I-680 Contra Costa Southern Segment	54.0	54.0			55.6	54.0	52.5	99%	●
I-680 Contra Costa Northern Segment Southbound [7]	127.4	127.4	19.4	54.3	51.3	53.6	26.2	50%	●
I-80 Solano	274.9	32.5	14.4		19.0	18.1	11.6	20%	●
Centralized Toll System	32.4	32.4			33.6	32.4	22.6	90%	●
Program Planning, Coordination & Management	28.4	28.4			28.4	28.4	22.0	80%	●
Program Contingency	6.1	6.1			5.1	2.9			●
Capitalized Start-up O&M	16.0	16.0			16.0	16.0	4.9		●
MID-TERM CONVERSIONS AND GAP CLOSURE OPPORTUNITY PROJECTS									
I-80 Alameda/Contra Costa and Westbound approaches to the Bay Bridge (I-80, I-580, I-880, West Grand)	193.0	5.0	5.0						
Dumbarton Bridge Westbound Approach (SR-84)	9.0	0.3			0.3	0.3	0.3	5%	
San Mateo Bridge Westbound Approach (SR-92)	10.0	0.4			0.4	0.4	0.4	5%	
I-680 Contra Costa Northbound Express Lane Completion [8]	390.0	21.5	1.5	20.0				5%	
Centralized & Program Costs & Start-Up O&M - Gap Closures & Future Conversions	TBD								
TOTALS	**1,280.3**	**463.1**	**40.3**	**74.3**	**345.2**	**345.2**	**251.8**	**76%**	

(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 from Benicia to Cordelia

(2) Total Cost Estimate represents current estimated cost to complete each project.

(3) Cost Estimate, Funded Phases represents current estimated cost to complete phases that are funded for each project.

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

(5) 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 Southbound and I-80 Solano.

(6) ● = Within budget, ● = identified potential risks that may significantly exceed budget if not mitigated, ● = Known impacts to budget - changes forthcoming.

(7) Cost represents the total for HOV Completion and Conversion to Express Lanes. Other funds committed to the HOV Completion portion include Measure J ($38.7M) and STIP ($15.6M).

(8) Represents completion of HOV lane through Walnut Creek to SR-242 and conversion of existing HOV lane north of SR-242, which were previously listed separately.

C. Change Management

The change management process captures the changes in the program that have an impact on the approved scope, schedule and budget baselines. In the second quarter of 2020, the forecast opening of the I-880 Alameda was changed from summer to fall 2020, with confidence level green, due to a few actualized risks. Also, a read point on I-880 southbound near SR-92 was removed due to a lack of vertical clearance for tolling equipment at the site. Analysis confirmed that removal would not compromise the ability of the toll system to operate as intended. There was no change to the MTC Express Lanes Program budget in this quarter.

D. 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 assigning responsibility to the person best positioned to manage each risk. Risks managed at the contract level are associated with contingency funding authorized by BAIFA for specific contracts. Risks managed at the program level would draw upon the program contingency line item in the Express Lanes Expenditure Plan. Staff regularly review the risk exposure and mitigation plans at both the contract and program level.

Chart #1 shows the median risk exposure for the program-level risks using Monte Carlo analysis. As of June 30, 2020, the risk exposure stands at $4.7 million, which is slightly lower than the $4.8 million reported last quarter. Overall construction progress on the I-680 and I-880 corridors is still on track, and the COVID-19 impact has opened up an opportunity for construction, with Caltrans extending project timeframes due to reduced traffic operations. It should be noted, however, that the team is still tracking the potential for adverse impacts related to COVID 19, civil unrest related to the struggle for racial equality, and the approaching California wildfire season.

Chart #2 tracks the program's cost forecast and risk exposure as compared to the authorized program budget. Consistent with the amendment to the Expenditure Plan that was adopted on September 26, 2018, the amount of BATA Express Lane Funds allocated to specific express lanes projects is $342.3 million, plus program contingency, for a total authorized budget of $345.2 million.

The current program contingency of $2.9 million would fall short if the risk exposure of $4.7 million were realized. While there are few individual risks with major cost impacts, there are many risks with minor cost impacts, resulting in an overall significant risk exposure. Staff remains diligent in managing cost and risk while seeking new funding opportunities.

The top contributors to the program-level risk exposure and the associated mitigation strategies are as follows:

I-880 Alameda

- Last quarter, BAIFA found project construction to be an essential government function based on Governor Newsom's identification of critical infrastructure sectors, allowing construction to continue in compliance with Alameda County public health directives. The team is still tracking potential impacts of the COVID-19 public health crisis on the completion of the I-880 corridor. The crisis has created an opportunity for work to progress faster, however, civil unrest related to protests caused about 2 weeks of delay for the toll system integrator. Given the unknowns, the risk will continue to be monitored closely

Chart #1: Median Risk Exposure ($M)

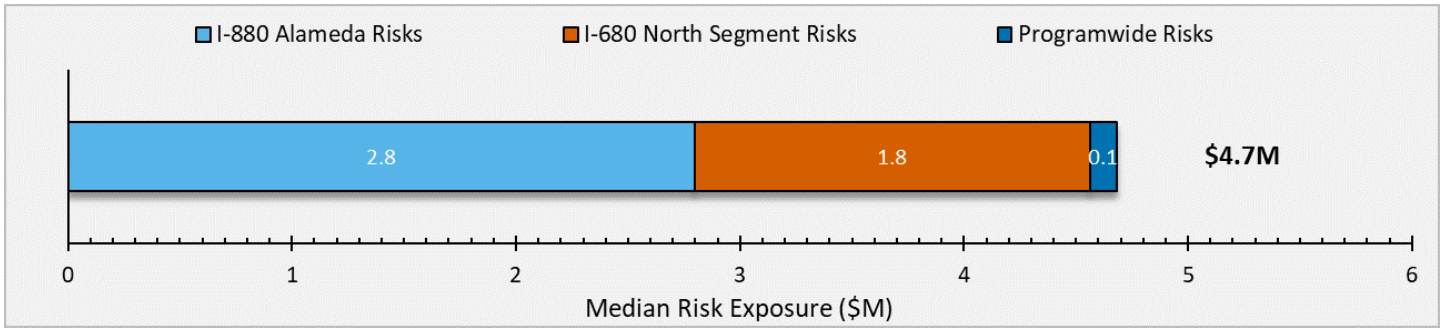


Chart #1 shows the contribution of each project's risks toward the total program risk exposure. Risk exposure is calculated using Monte Carlo simulation.

over the coming months, with slightly lowered probability, cost, and schedule impacts.

- The most significant risk affecting cost and schedule relates to toll system delays that impact the opening of I-880. In general, the toll system integrator has been delayed for reasons including challenges coordinating with civil construction, weather, equipment delays, tight labor market affecting hiring of qualified staff, and staff shared with competing projects. Collectively, these issues have impacted the baseline schedule, which now reflects an end of September opening date. MTC staff continues to work with the toll system integrator to mitigate cost and schedule delays as we near opening.
- MTC staff is working actively to mitigate risks relating to toll system and backhaul conflicts with previously undisclosed Caltrans projects under construction in the corridor. BAIFA has provided field marking services to locate facilities underground for Caltrans. BAIFA is also working with Caltrans to determine mitigation strategies, such as convening workshops to identify conflicts during project design, and providing maps of toll system and backhaul asset locations for future reference. Many of these mitigation strategies have proven successful in identifying project conflicts; however, the risk remains significant due to the large number of ongoing projects.
- Additionally, MTC staff is tracking risks regarding a delay in AT&T communication network connections. The project was delayed earlier in the quarter, with conduit installation to be completed by the end of July. The risk probability has been increased and is being monitored closely by MTC staff.
- A number of risks regarding Caltrans concurrence on the I-880 transition plan and the vendor's delivery of LED brick panels for pricing signs are due to be retired, pending future verification. This would reduce the calculated cost of risk exposure.

I-680 Contra Costa Northern Segment Southbound

- The team is tracking potential impacts of the public health crisis on the completion of the I-680 corridor. At this time, the project is ahead of schedule and work has progressed without significant impacts; however, there are still concerns about materials availability and staffing in the future. Given the unknowns, the risk will be monitored closely over the coming months.
- The most significant schedule risk at this time continues to be due to the toll system integrator working in tight sequence on I-880, I-680 North and US-101. Based on recent developments, the team is working to expedite the delivery of I-680 North, but in order to do so, timely delivery of the I-880 corridor as well as additional staff support will be needed. Construction crews began early mobilization on the I-680 cabinet set-ups and fiber installation. MTC has set up a meeting with the toll system integrator to get the staff resources it needs with the intent of beginning tolling in early 2021.
- PG&E delays in hook-ups remain a risk on I-680 North, however, the risk has been lowered based on recent developments. There are currently regular quarterly meetings with PG&E to discuss progress and issue resolution, and all but one site has been energized. The team will continue to track this risk as it nears retirement.
- A risk regarding the delivery and installation of LED panels for pricing signs is still being tracked. The order has been placed, however, there is still a potential for schedule impacts that may require a temporary panel for opening.

Programwide Risks

- As the program moves towards opening both the I-880 and I-680 North express lanes, MTC staff is supporting the FasTrak® customer service center's readiness in anticipation of increased workload. Staff is working in close collaboration with FasTrak® to ensure successful express lanes openings.

Chart #2: Program Cost Forecast and Risk Exposure vs. Authorized Budget ($M)

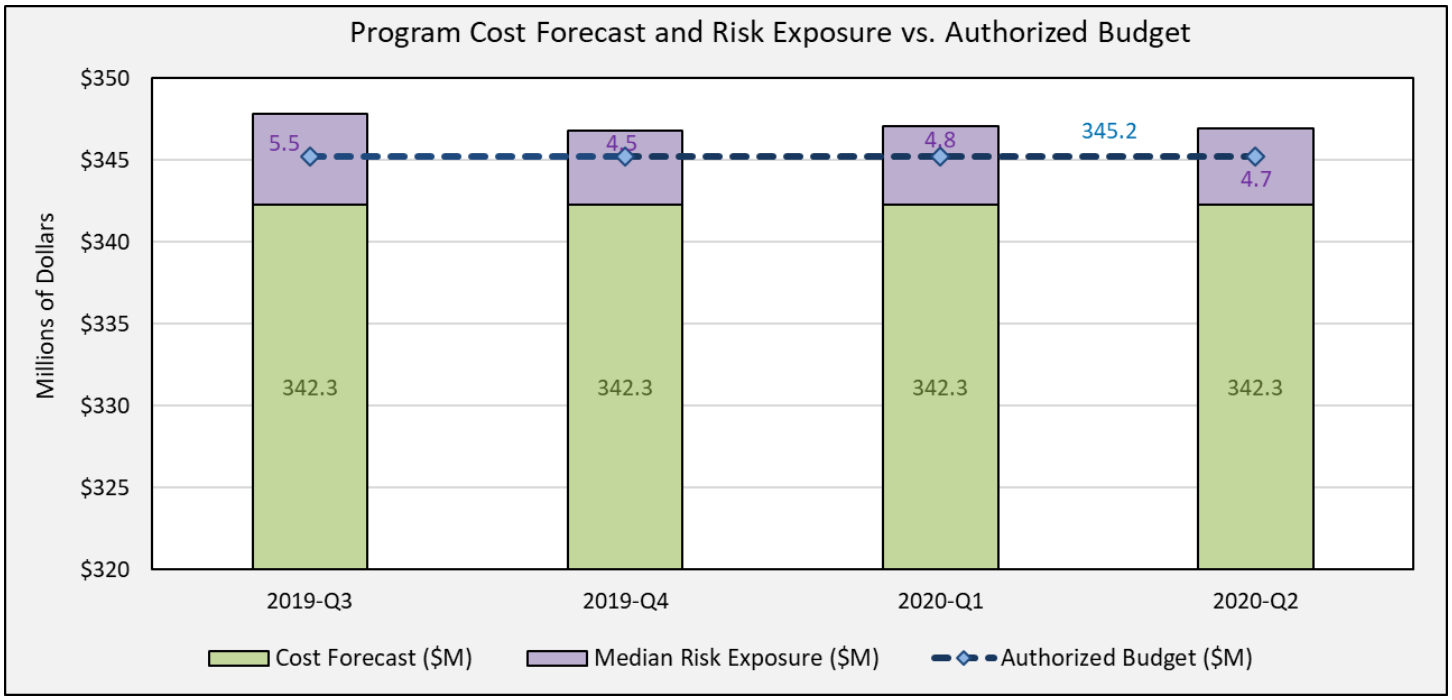


Chart #2 shows the program cost forecast and risk exposure as compared to the authorized program budget.

E. Active Capital Project Summaries

Centralized Functions

Toll System and Program Management, Planning and Regional Coordination

Total Estimated Cost

$32.4 million for the Centralized Toll System
$28.4 million for Program Planning, Coordination and Management

Schedule

Centralized Toll System was ready for the opening of the I-680 Contra Costa Southern Segment on October 9, 2017.

Program Planning, Coordination and 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 express lanes, as well as the backhaul communications network components, such as fiber optic cable and leased line services, that transport toll data from MTC lanes to host and toll operations data centers. Centralized toll system work includes designing and implementing the hardware and software for dynamic toll setting and trip building, integration with the FasTrak® 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 Regional Operations Center and developing operating procedures; planning for future express lanes; and coordinating with partner agencies to offer a seamless experience for drivers.

Program Management Highlights and Progress

- In mid-March 2020, all Bay Area Express Lanes operators ceased tolling on express lanes in response to the COVID-19 public health crisis. While operations of BAIFA's I-680 Contra Costa Express Lanes was affected, staff coordinated with Caltrans, CHP and BAIFA's civil and toll system contractors to continue progress delivering the I-880 and I-680 North Southbound express lanes. All Bay Area Express Lanes operators resumed tolling in early June 2020 so drivers have a reliable trip option as shelter-in-place is lifted and traffic resumes.
- Staff coordinated with Caltrans, CHP and the Valley Transportation Authority, which operates the SR-237 Express Lanes, on public information strategies for opening the I-880 Express Lanes.
- Staff worked with the Contra Costa Transportation Authority and Caltrans to prepare an opening and public messaging strategy for new lane capacity on I-680 North Southbound.
- Staff developed, and BAIFA approved, the FY 2020-21 operating and capital budgets. Initially, I-880 and I-680 North Southbound operating costs will be capitalized; however, staff will amend operating costs and revenues into the operating budget based on tolling experience.

Current Program Management Activities

- In partnership with other express lane operators, staff is finalizing a strategic plan to help prioritize express lanes funding and delivery in the region. This work is coordinated with MTC's Planning Section to inform Plan Bay Area 2050.
- Staff is developing a team, scope of work, schedule and budget to pilot a means-based toll discount for low-income drivers on one of BAIFA's express lanes.
- Staff proposes that BAIFA amend its Toll Facility Ordinance to establish tolling rules for I-680 North Southbound. A public hearing and adoption vote is scheduled for September 2020.
- The MTC Operations Committee awarded contracts to two vendors for pilots to improve occupancy enforcement: a roadside camera system and a smartphone app system. The smartphone app award is being contested by the runner-up.

Toll System Highlights and Progress

- The toll system integrator contract was awarded in June 2014.
- Buildout of the Regional Operations Center was finished in March 2017.
- The toll system went live to the public on October 9, 2017.
- In December 2018, the toll system integrator contract was extended to June 2023 to include the I-680 Northern Segment. The change removed the I-80 Solano express lanes from the contract. It will be added back when construction funding is secured.
- The I-680 Southern Segment Operations Test concluded in April 2019. Operations testing is a system acceptance test. The Operations & Maintenance (O&M) phase, which includes a one-year warranty period, began in May 2019.
- The toll system integrator went live with lane-side equipment software to finalize the 6C enhancements. The system began tolling 6C tags on October 8, 2019.
- In March 2020, the express lane Host system began sharing toll rate information with MTC's 511 Traveler Information System.
- In June 2020, the toll system integrator began manual image review for low-confidence license plate images to improve trip building.

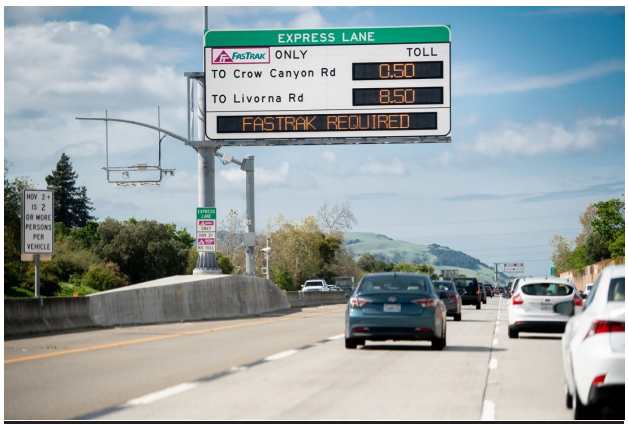
Current Toll System Activities

- Staff continues negotiations with the toll system integrator to streamline the work required to produce toll system performance monitoring reports. The current process is too manual. The goal is to reduce the future maintenance costs for new express lane corridor
- After the launch of the manual image review module in June 2020, the toll system integrator set its goals to commence its new trip building component in July 2020. The integrator is also designing and building a lane-transaction filter to allow for I-880 testing in the live Host system while the I-680 corridor continues to process tolled trips.

Close-up of toll system equipment under sign (enforcement beacons, reader antennae and laser trigger)

Photos courtesy of Noah Berger

Overhead hours of operation sign and toll system equipment on the I-680 Express Lanes



Overhead pricing sign on the I-680 Express Lanes

I-880 Alameda (ALA-880)

Oakland to Milpitas

Hegenberger Road/Lewelling Boulevard to Dixon Landing Road

Total Cost Estimate

$139.1 million

Scheduled Open Date

Fall 2020

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 express lanes.

The conversion involves lane striping and installing sign structures, signs, FasTrak® toll tag readers, traffic monitoring video cameras, lighting, a data communications network and California Highway Patrol observation areas. The highway is also being widened in three locations to accommodate merge lanes into and out of the express lanes. It will result in 51 express lane miles between Oakland and Milpitas.

The express lanes conversion project was coordinated with a median barrier reconstruction project and a pavement resurfacing project, both led by Caltrans. The median barrier reconstruction project installed foundations and other infrastructure required for the express lanes for a large portion of the corridor.

Project Highlights and Progress

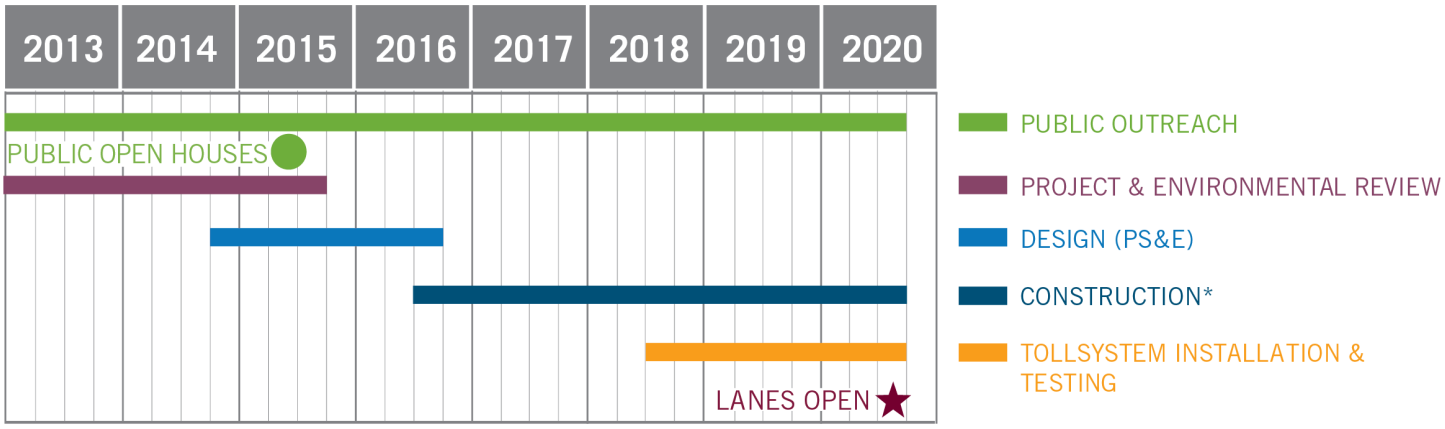
- Public open houses were held in March 2015.
- Preliminary engineering report and environmental document were completed in October 2016.
- The express lanes civil contractor began construction in September 2017.
- Caltrans approved the toll system design and issued the encroachment permit for the toll system integrator in March 2018.
- MTC's express lanes scope of work delivered through Caltrans' median barrier contract was completed in the second quarter of 2018, including barrier demolition, express lane sign structure foundations and light foundations.
- Caltrans completed its technical review to determine I-880 hours of operation (5am to 8pm, Monday through Friday) and high occupancy vehicle threshold (3 or more persons) in fall 2018.
- Caltrans finalized the design of fiber laterals to connect its freeway management equipment to the communications backhaul in December 2018. Construction work commenced on the Caltrans fiber laterals in October 2019.
- In March 2019, the civil contractor successfully removed two existing overhead sign bridge structures at the SR-92 interchange and installed two new ones.
- The backhaul contractor connected the backhaul corridor hubs to the toll system host and operations datacenters in Martinez, Oakland and San Francisco in October 2019. The toll system integrator approved the I-880 backhaul fiber in November 2019.

- All PG&E service connections are complete.
- In June 2020, the civil contractor completed new restricted access striping on the corridor and installed some signage. A public information campaign explained the changes.
- At strategic points in the project timeline, staff performed outreach and education about I-880 design, construction and proposed operations including with members of low-income communities (2012); corridor city staff (2015 & 2019); and corridor elected officials (2017, 2019 & 2020).

Current Project Activities

- Civil construction work is 98% complete as of June 2020. Remaining work includes installation of fiber laterals to connect Caltrans' freeway management equipment to the communications backhaul, which will continue through summer 2020.
- Final signing and pavement marking civil work to transition the HOV lanes to express lanes will start in August. Until tolling begins, the lanes will function as HOV-2+ only lanes.
- The toll system integrator will finish installation and testing of roadside cabinets, toll system equipment in the median, variable toll message signs, CCTVs and connections of electrical and fiber.
- The toll system integrator will test the full integration of the field equipment with the Host system starting in August 2020. Staff is incentivizing the toll system integrator to be ready to open by early October.
- Staff is coordinating with AT&T to establish a second communication path from the southern hub at Dixon Landing Road to host datacenters. The civil contractor started this work in June 2020.
- Staff is continuing 'go live' planning in order to be ready to open the I-880 Express Lanes.
- Staff has finalized customer education materials and messaging channels for a customer education campaign that will start about 6 weeks before tolling begins.
- Staff is finalizing a social media campaign to inform travelers of their carpooling options and how to carpool safely during the COVID-19 public health crisis.
- Monthly construction notices and ramp closure/ detour notices continue to be sent.

Project Schedule by Phase



*Includes I-880 median barrier improvements.

Project Cost

Total Cost Estimate[1]	Cost Estimate, Funded Phases[2]	Regional Measure 2 Funds (allocated)	Other Funding (allocated)	BAIFA Express Lane Funds[3]			Percent Complete as of 3/31/20[4]
				July 2018 Amendment	Sept. 2018 Amendment	Expended as of 3/31/20	
139.1	139.1			135.5	139.1	111.2	90%

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

Costs shown in millions of escalated dollars.

(1) Total Cost Estimate represents current estimated cost to complete each project.

(2) Cost Estimate, Funded Phases represents current estimated cost to complete phases that are funded for each project.

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

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

Numeric enforcement beacon for CHP on I-880

New striping and temporary sign overlay at Whipple Avenue exit

Temporary overhead sign alerting drivers to future tolls

I-680 Northern Segment Southbound (CC-680 North SB)

Martinez to Walnut Creek

Benicia Bridge to Rudgear Road

Total Cost Estimate

$127.4 million ($53.6 million to be funded by BAIFA)

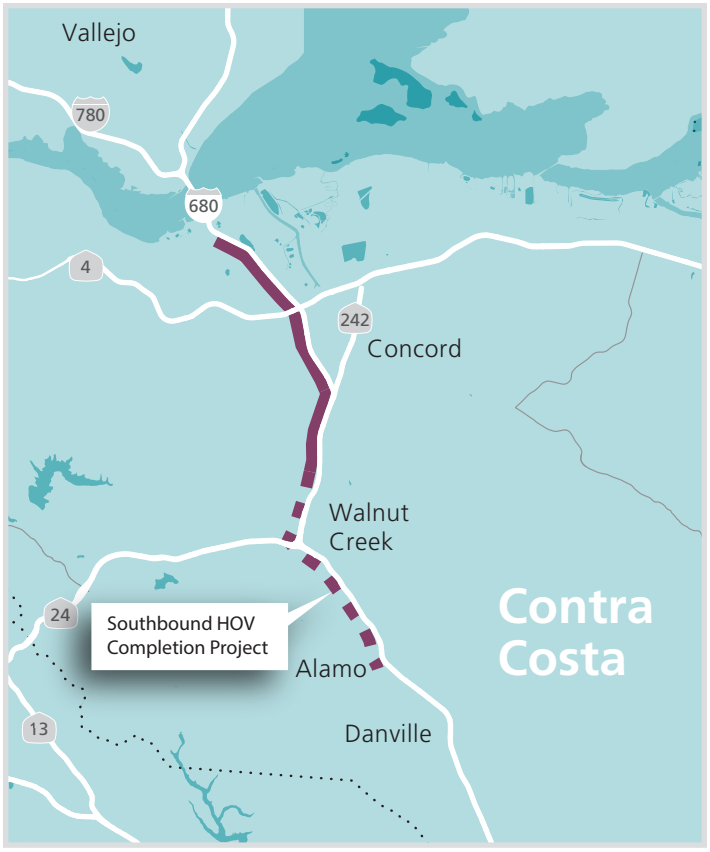
Scheduled Open Date

Winter/Spring 2021

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.



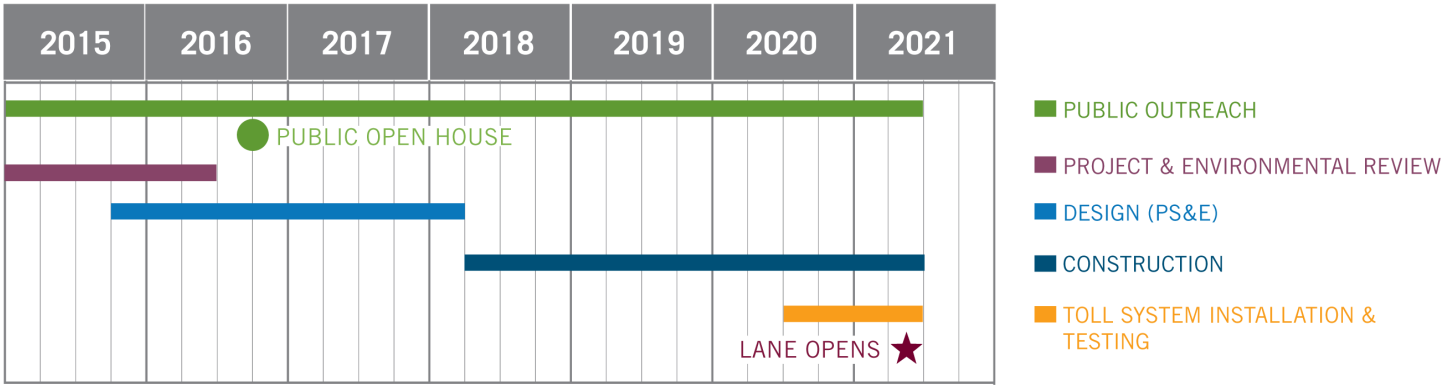
Project Highlights and Progress

- Caltrans signed the environmental document in December 2016 and approved the Project Report in August 2017. Caltrans completed a revalidation in September 2017.
- A contract to remove trees along southbound I-680 in Walnut Creek between South Main Street and Livorna Road was awarded in October 2017, and work was completed in December 2017.
- All utility relocations were completed as of August 2018.
- Construction started October 1, 2018, and a ground-breaking event was held October 3, 2018.
- In December 2018, the toll system integrator contract was extended to June 2023 to include I-680 North SB.
- In May 2019, the backhaul contractor successfully rerouted the backhaul fiber between SR-24 and Livorna Road in Walnut Creek to allow for lane widening, and the toll system integrator participated in switching the live toll equipment from the old to the new fiber.
- In June 2019, CCTA and Caltrans executed an amendment to incorporate Caltrans oversight of landscape work and the first year of plant establishment into their cooperative agreement.
- In September 2019, BAIFA and Caltrans executed a cooperative agreement for Caltrans to review and approve the toll system design package, issue an encroachment permit and review site installation (as needed).
- Caltrans concurred with the replacement planting design in February 2020.
- Caltrans issued the encroachment permit for toll system installation in April 2020.
- In the second quarter of 2020, the project team developed a strategy to open the new lane capacity between North Main Street and Rudgear Road as an HOV-2+ lane prior to tolling.

Current Project Activities

- The civil contractor continues highway widening activities at various locations on I-680 southbound at the BART overcrossing and between Lilac Drive and South Main Street in Walnut Creek. Contractor completed construction of the masonry sound wall from the South Main Street undercrossing to Crest Avenue and also completed application of the stain at the retaining walls between Rudgear Road and Livorna Road and between the I-680 southbound on and off ramps at South Main Street.
- The civil contractor is supposed to complete highway widening activities at the BART overcrossing in July, and the new lane will be open for use by carpools on August 24. The contractor will continue punch list work for all structures.
- Staff is coordinating with Contra Costa Transportation Authority staff on a public information campaign about the phased opening of the express lane extension.
- The toll system integrator is installing the roadside tolling equipment.

Project Schedule by Phase



Project Cost

Total Cost Estimate[1]	Cost Estimate, Funded Phases[2]	Regional Measure 2 Funds (allocated)	Other Funding (allocated)	BAIFA Express Lane Funds[3]			Percent Complete as of 3/31/20[4]
				July 2018 Amendment	Sept. 2018 Amendment	Expended as of 3/31/20	
127.4	127.4	19.4	54.3	51.3	53.6	26.2	50%

Costs shown in millions of escalated dollars.

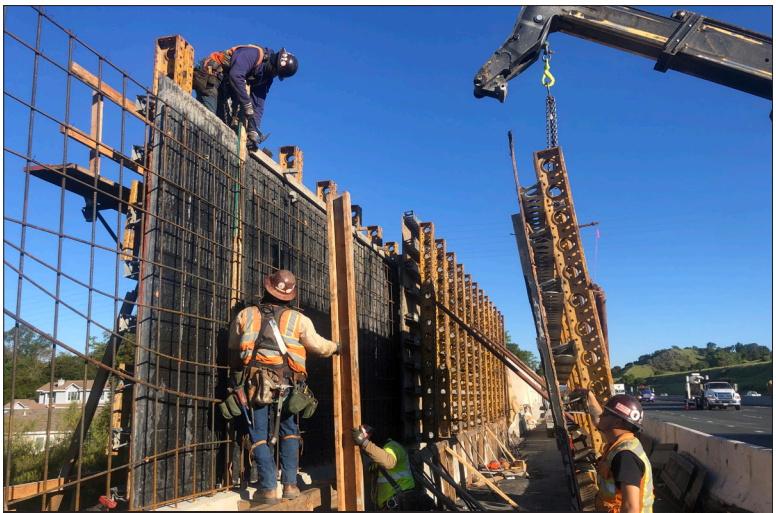
The cost estimate for this project includes planning, design, construction, utilities, backhaul communications and toll system integration.

(1) Total Cost Estimate represents current estimated cost to complete each project.

(2) Cost Estimate, Funded Phases represents current estimated cost to complete phases that are funded for each project.

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

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



Sound wall forming at retaining wall in Alamo

Concrete barrier removal from Walnut Creek to Alamo

Structure approach concrete pour in Walnut Creek

I-80 Solano (SOL-80)

Fairfield to Vacaville

Red Top Road to I-505

Total Cost Estimate

$274.9 million

Scheduled Open Date

2024, subject to funding

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. Conversion work includes striping lanes and installing sign gantries, signs, FasTrak® toll tag readers and traffic-monitoring video cameras.

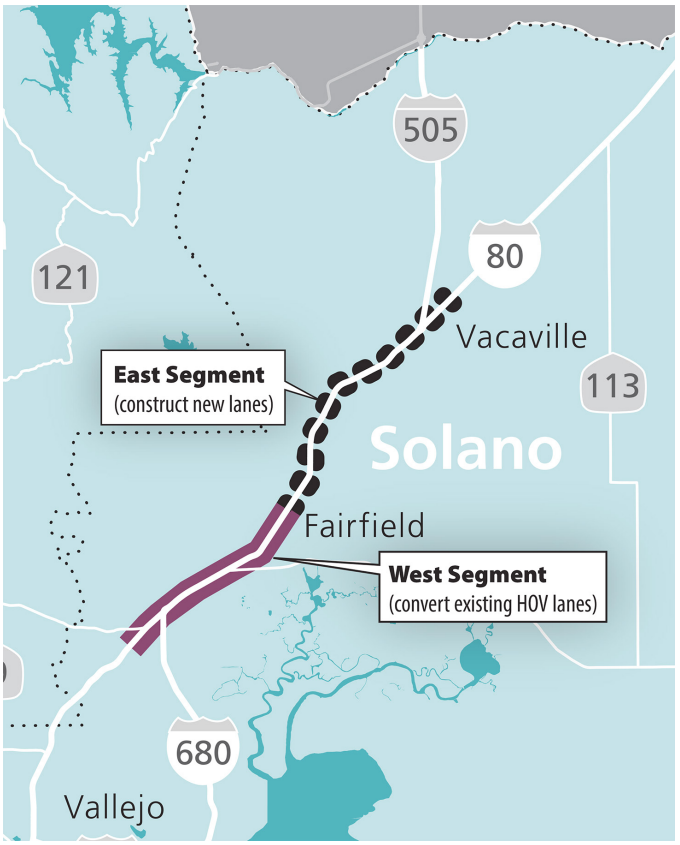
The project will also construct new eastbound and westbound lanes between Air Base Parkway and I-505 in Vacaville. In this section, the highway will be widened along with the installation of express lane striping, signage and equipment. The project will result in 36 miles of express lanes on I-80 in Solano County.

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

Caltrans will advertise and award the construction contract, and a blended Caltrans/STA team will administer construction. MTC will install toll and communications equipment and will operate the express lanes.

Project Highlights and Progress

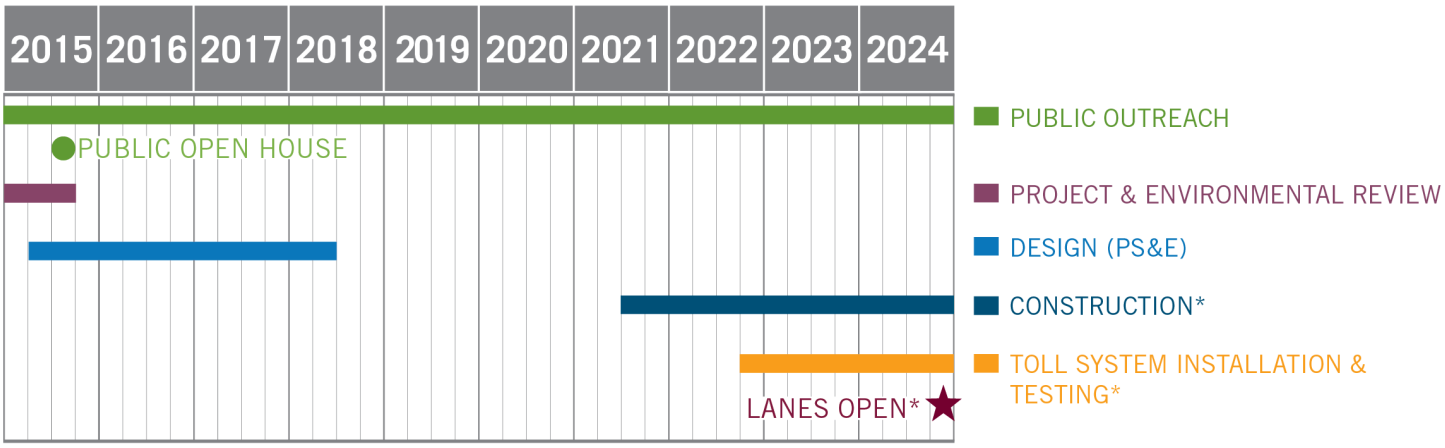
- A public open house was held in August 2015.
- The preliminary engineering report and environmental document were completed in December 2015.
- The final design document was approved by Caltrans in March 2018.
- The project reached the Ready-to-List milestone in April 2018.
- Caltrans submitted this project for a Federal INFRA grant in March 2019, but it was not selected by the US Department of Transportation.



Current Project Activities

- The project is shelf-ready should construction funds become available.
- In May 2020, MTC programmed $85 million of Regional Measure 3 Express Lane Program funds to the project, subject to the successful conclusion of litigation of Regional Measure 3. MTC also endorsed an application for $123 million of Senate Bill 1 competitive funds for the project. Staff anticipates learning whether the California Transportation Commission recommends the project for funds in late fall 2020.

Project Schedule by Phase



* Funding for these activities is not yet secured.

Project Cost

Total Cost Estimate[1]	Cost Estimate, Funded Phases[2]	Regional Measure 2 Funds (allocated)	Other Funding (allocated)	BAIFA Express Lane Funds[3]			Percent Complete as of 3/31/20[4]
				July 2018 Amendment	Sept. 2018 Amendment	Expended as of 3/31/20	
274.9	32.5	14.4		19.0	18.1	11.6	20%

Costs shown in millions of escalated dollars.

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

(1) Total Cost Estimate represents current estimated cost to complete each project.

(2) Cost Estimate, Funded Phases represents current estimated cost to complete phases that are funded for each project.

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

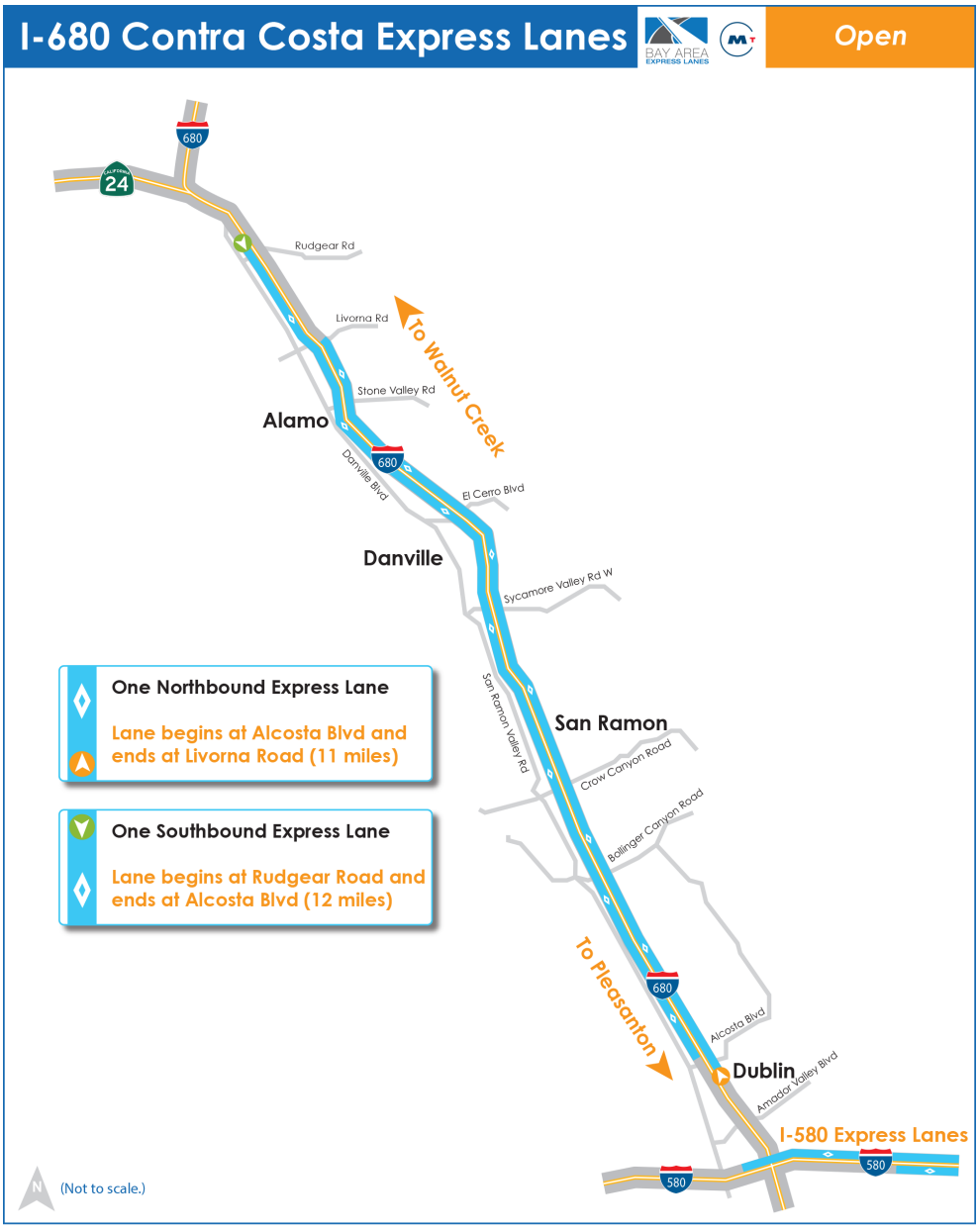
(4) Percent complete shown is based on the achievement of major milestones whether those milestones were completed using BAIFA funds or other funds.

IV. OPERATIONS

I-680 Contra Costa Express Lanes

The I-680 Contra Costa Express Lanes opened October 9, 2017. The lanes run 11 miles northbound from Alcosta Boulevard to Livorna Road and 12 miles southbound from Rudgear Road to Alcosta Boulevard. Regional Operations Center staff monitor equipment and lane performance, make toll rate adjustments, and coordinate with the California Highway Patrol (CHP) and Caltrans on incident management. The FasTrak® Customer Service Center issues toll tags, handles toll invoicing and collections, and provides customer service. Toll tag and vehicle occupancy requirements are enforced automatically by the toll system and manually by the CHP under contract to BAIFA. A 'backhaul' fiber network and supplemental leased-line services offer fast and secure transfer of tolling data. Roadway maintenance is also funded by the express lanes. Program and contractor staff perform public outreach and education, track and report on program performance and analyze traffic, and support operations in other ways as needed. Operating revenue and expenses are reported quarterly to BAIFA.

See **Appendix C** for a summary of this quarter's express lanes performance.



expresslanes.511.org • mtc.ca.gov/express-lanes

Rules of the Road

- Hours are Monday through Friday, 5 a.m. – 8 p.m.
- Tolls change based on traffic congestion; there is no maximum toll
- All vehicles in the express lane must use a FasTrak® or FasTrak Flex® toll tag
- Carpools of 2 or more people, eligible clean air vehicles, motorcycles and transit buses travel toll-free with a properly set FasTrak Flex® toll tag
- Learn more at expresslanes.511.org

APPENDICES

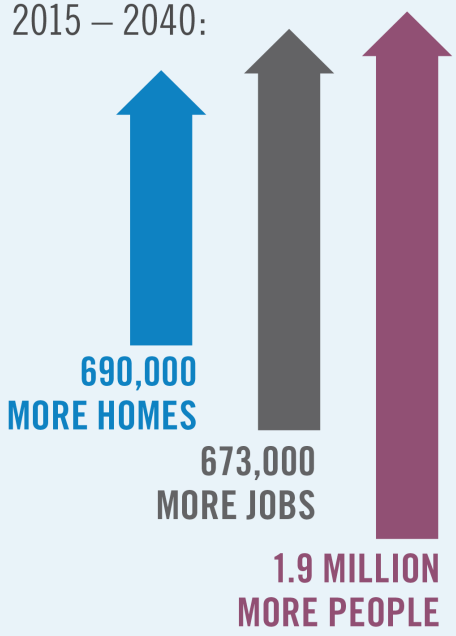
APPENDIX A

Express Lanes Overview

1. Why Express Lanes?

The Bay Area lacks the necessary transportation funding and land to build enough transportation capacity to keep up with regional growth. 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.

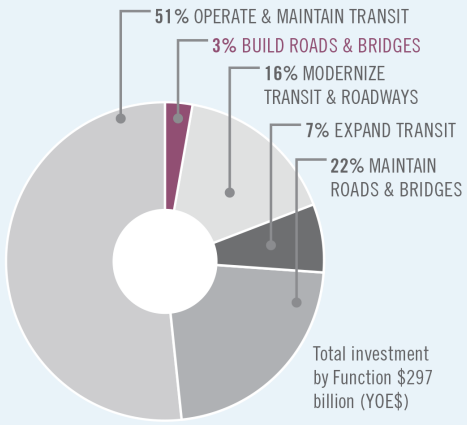
REGIONAL GROWTH 2015 – 2040:



Data Source: Plan Bay Area 2040 (2017).

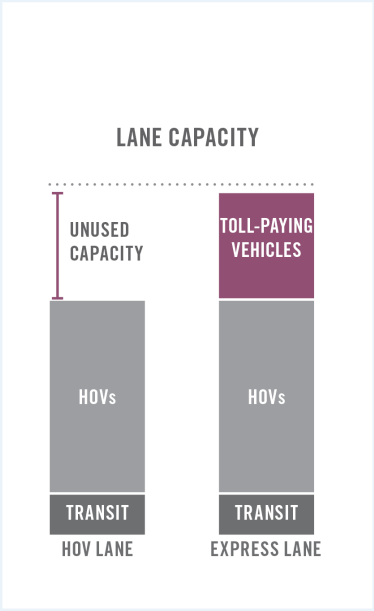
REGIONAL INVESTMENT BY 2040:

ONLY 3% OF THE REGION'S TRANSPORTATION DOLLARS WILL BE USED TO BUILD NEW ROADS.



Data Source: Plan Bay Area 2040 (2017).

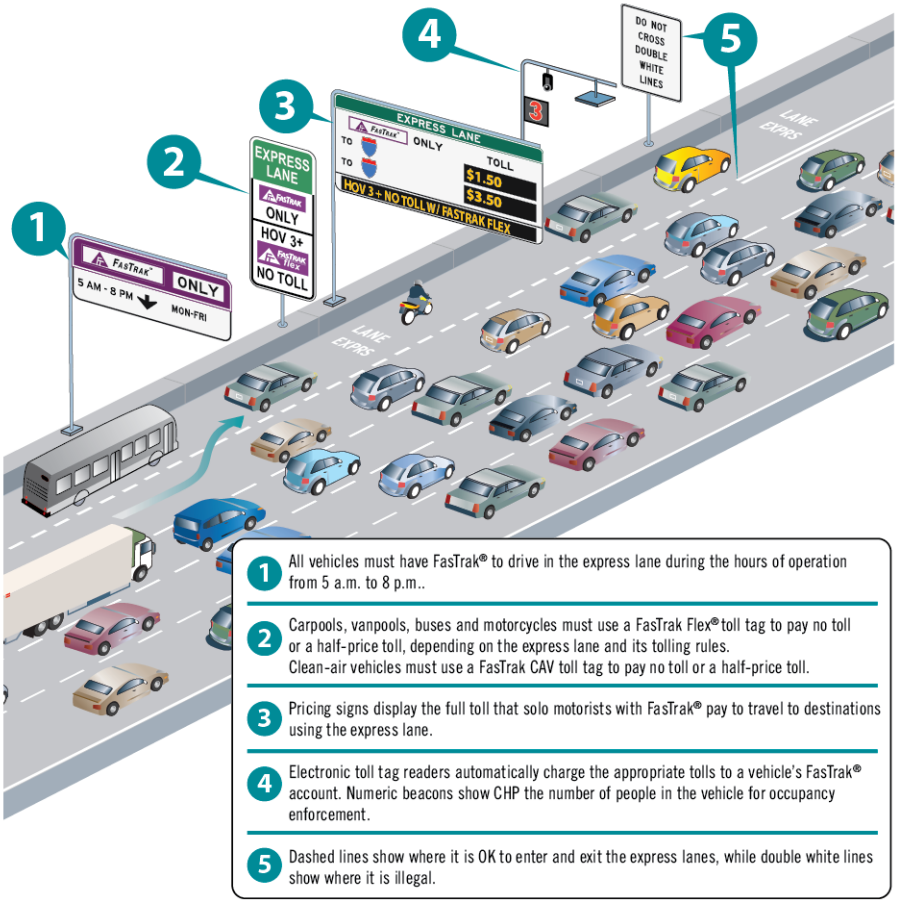
HOW EXPRESS LANES HELP:



2. How Express Lanes Work

MTC Express Lanes give everyone with FasTrak® the option for a more reliable and faster trip than regular highway lanes. Overhead electronic pricing signs display toll rates, which may change every few minutes with traffic. Tolls are collected electronically, the same as on Bay Area toll bridges.

Solo motorists pay tolls with either a standard FasTrak® toll tag or a FasTrak Flex® toll tag set to "1" person. Carpools, vanpools and buses must use a FasTrak Flex® toll tag set to "2" or "3+" people to pay no toll or a half-price toll, depending on the express lane and its tolling rules. Motorcycles must use a FasTrak Flex toll tag set to "3+" people to pay no toll. Effective when the I-880 Express Lanes open, qualifying clean air vehicles (CAV) must use a FasTrak CAV toll tag set to the number of people in the vehicle to pay no toll or a half-price toll. Drivers should always set the switch before driving.



The figure to the left explains how to use Bay Area Express Lanes. MTC Express Lanes will be "open" access to the extent possible, meaning drivers will enter and exit the express lanes similar to how they enter and exit HOV lanes today. Areas prone to excessive weaving or other safety concerns may have access restrictions to control entry and exit at these locations. Signage and lane striping will identify these entry and exit locations. Limiting access is a way to improve travel speeds in express lanes..

3. 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

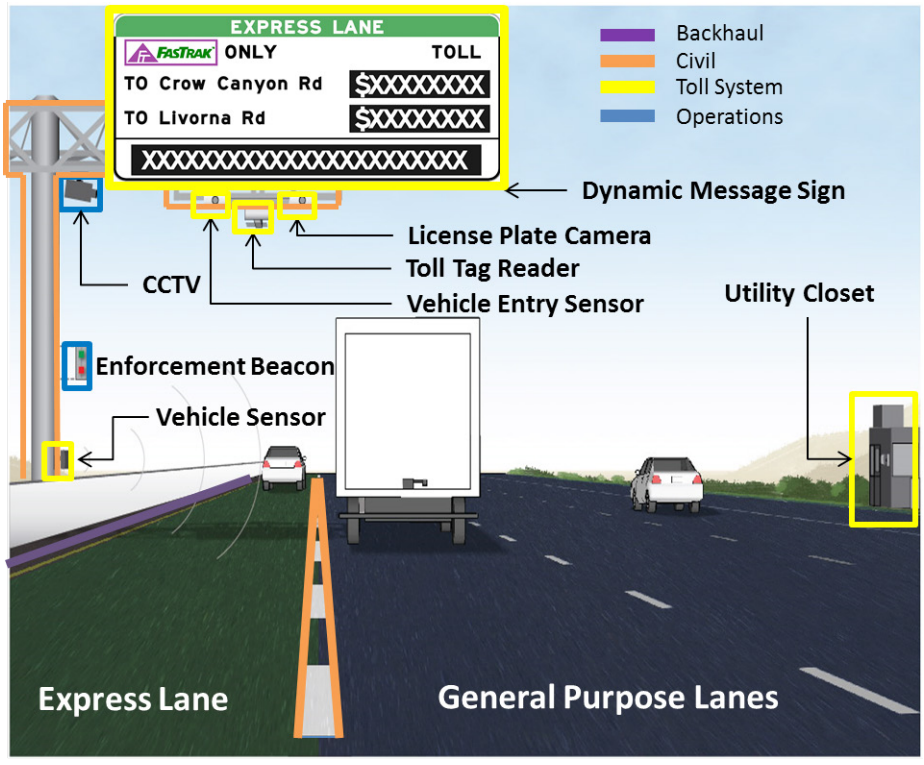
The toll system consists of two components, the in-lane system and the back-end "host" system. The lane system consists of all the equipment on the highway needed to operate the toll system including toll tag readers, cameras and vehicle detection. The host system serves as the brain of the toll system, 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 network 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 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 ongoing maintenance. An express lanes Regional Operations Center has been established in the Bay Area Metrocenter building in San Francisco where operators 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

APPENDIX B

Completed Capital Project Summaries

I-680 Contra Costa Southern Segment (CC-680 South)

Walnut Creek to San Ramon

Livorna Road/Rudgear Road to Alcosta Boulevard

Total Program Estimate

$55.6 million

Open Date

Fall 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

- Public open house was held in March 2014.
- Preliminary engineering report and environmental document were completed in August 2014.
- Final design for both the backhaul communication network and the toll system were completed in December 2015.
- Final roadway design was completed in April 2015. Civil construction was completed in May 2017.
- Backhaul contractor completed installation of 26 miles of fiber optic cable in June 2017.
- Corridor Testing was completed in August 2017.
- Toll system equipment and software was finalized and tested in September 2017.

- Backhaul operations and maintenance started in October 2017.
- The toll system went live to the public on October 9, 2017.

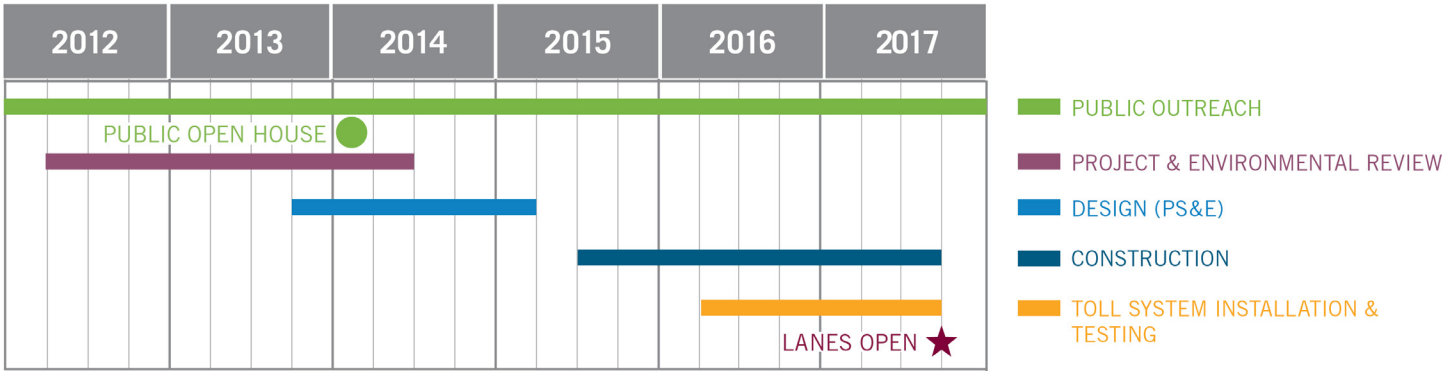
Current Project Activities

- The integrator is fine tuning field equipment and addressing punch list items in preparation for Operations Testing in summer of 2018. This test verifies the toll system meets all specifications and leads to the maintenance phase of operations.
- The Backhaul contractor completed project 'as-built' documentation and is performing ongoing operations of the communications network.
- Beginning in this Quarterly Report, since civil construction is complete and the express lanes are open, this capital project will be archived in Appendix B and no further updates will be made to the project summary.

I-680 Contra Costa Express Lanes regulatory sign.

Photos courtesy of Noah Berger.

Project Schedule by Phase



Project Cost

Program Estimate[1]	Cost Forecast[2]	Regional Measure 2 Funds (allocated)	BAIFA Express Lane Funds[3]			Physical % Complete[4]
			Dec. 2015 Amendment	June 2017 Amendment	Expended through 3/31/18	
55.6	55.6		55.6	55.6	49.7	98%

Costs shown in millions 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) BAIFA Express Lane Funds represent the funds that have been allocated from the BAIFA 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.

APPENDIX C

I-680 Contra Costa Express Lanes Operations Report

Note: Due to COVID-19 shelter-in-place restrictions, toll operations ceased in mid-March and resumed on June 1, 2020. June 2020 express lanes trips and tolls were significantly below historical trends, and will be reported in the next quarterly report.