



FY2013-14

SUNOL SMART CARPOOL LANE JOINT POWERS AUTHORITY

The I-680 Southbound Express Lane



Annual Report



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Message from the Chair

The I-680 Southbound Express Lane along the Sunol Grade opened on September 20, 2010, becoming the first operational express lane in Northern California, and our region's first example of using technology to help maximize the efficiency of our existing highway infrastructure.

Since opening, 2 million solo drivers have chosen to use the I-680 Express Lane, reaching their destinations at speeds generally 16 mph faster than speeds motorists experience in the general purpose lanes during peak commute hours. Along several segments within the 14-mile corridor, express lane users experience speeds over 26 mph faster than drivers in the general lanes. In addition to providing drivers with reliable drive times, I am pleased to report that every year the lane proves it optimizes capacity and reduces congestion in all lanes along the corridor.

The Sunol Smart Carpool Lane Joint Powers Authority, with our partners the Alameda County Transportation Commission and the Santa Clara Valley Transportation Authority, are proud of the success of this lane — success that has become even more important as the regional economy has improved and traffic has increased. This success sets the stage for the regionwide Bay Area Express Lanes, a planned 550-mile network of managed lanes that includes future express lanes on I-580 in the Tri-Valley in Alameda County, I-680 Northbound (parallel to the existing express lane along the Sunol Grade) and along I-680 in Contra Costa County.



Together, we are providing the region with improved travel choices.

– **Bill Harrison**, *Chair*
Sunol Smart Carpool Lane
Joint Powers Authority (JPA)

“Express lanes are a successful strategy to make our infrastructure more efficient and our drive times more reliable. I’m glad we are replicating this model throughout the Bay Area and that the businesses and residents who use I-580 in the Tri-Valley will experience the benefits of express lanes beginning in late 2015.”

— **Mayor Jerry Thorne**,
JPA Vice Chair



The I-680 Southbound Express Lane

Since it opened to traffic in September 2010 as Northern California's first high-occupancy toll or express lane facility, 2 million solo drivers have chosen to get to their destination faster by using the I-680 Southbound Express Lane. Located on a 14-mile stretch of southbound Interstate 680 from Highway 84 south of Pleasanton to Highway 237 in Milpitas, the express lane was designed to manage growing traffic congestion on I-680 and to provide drivers with a new commute choice between the East Bay and Silicon Valley.

This express lane is governed by the Sunol Smart Carpool Lane Joint Powers Authority and was funded with federal, state and local funds, including \$19.7 million from Measure B, Alameda County's local transportation sales tax measure approved by 81.5 percent of voters in 2000.

The I-680 Express Lane project launched a new era of congestion relief for drivers in Northern California, giving solo drivers the choice to pay a toll for access into the high-occupancy vehicle (HOV) lane, when there is excess capacity. Carpool lane users continue to enjoy the benefits of sharing rides at no cost — and can enjoy the benefits of the express lane, since access to the lane is regulated to ensure reliable travel times.












Usage of the toll lane has increased steadily since its inception — it has seen an average 49 percent increase in the number of monthly toll-paying users from 2010 to 2014. During fiscal year 2013-2014 (FY2013-14), more than 686,000 toll payers used the express lane, with an average peak hour (5-11 a.m.) toll of \$2.43 per trip and non-peak (11 a.m.-8 p.m.) toll of \$1.26.

“Bay Area drivers are increasingly interested in having express lanes as an option. How do we know this? The single most frequent question we get about the I-680 Express Lane: When will we open one on I-680 Northbound?”

— **Scott Haggerty**,
JPA Chair 2010-2012



I-680 Southbound Express Lane Key Milestones

- • **1990s** • • • • •
Sunol Grade becomes one of the top three most-congested commute corridors in the Bay Area.

- • **1998** • • • • •
Solutions on Sunol Coalition forms to address congestion issues.

- • **2001** • • • • •
New I-680 southbound auxiliary lane opens.

- • **2002** • • • • •
New 14-mile I-680 southbound HOV lane opens.

- • **2004** • • • • •
State legislature authorizes two pilot express lanes in Northern California; I-680 Southbound Express Lane was the first to open.

- • **2008** • • • • •
I-680 Express Lane construction begins.

- • **2009** • • • • •
Pre-implementation traffic study is complete.

- • **2010** • • • • •
Sunol Smart Carpool Lane Joint Powers Authority forms; I-680 Southbound Express Lane opens.

- • **2012** • • • • •
I-680 Express Lane celebrates two years of operation.

- • **2013** • • • • •
1 millionth solo driver uses express lane; post-implementation traffic study is submitted to state legislature.

- • **2014** • • • • •
2 millionth solo driver uses express lane.




History

The I-680 Corridor between Pleasanton and Milpitas in eastern Alameda County, known as the Sunol Grade, is a major commute route connecting the Tri-Valley Area (Dublin, Livermore and Pleasanton) in Alameda County with South Bay cities in Santa Clara County and Silicon Valley businesses. In 1998, this corridor was one of the top three most-congested corridors in the Bay Area, prompting a group of elected officials, agencies and businesses to form the Solutions on Sunol Coalition to address and find solutions to this congestion. A transportation systems management report identified the need for operational improvements in both directions of Interstate 680 along the Sunol Grade. By the end of 2002, a 14-mile southbound HOV lane opened between Route 84 and Route 237 as a first step to manage congestion.

Next, studies were conducted to determine whether the southbound HOV lane could be converted to a high-occupancy toll (HOT), or express lane facility. Express lanes offer the option to better utilize the existing HOV lane capacity, giving solo drivers the option to pay a toll to use the express lane and avoid congestion. This reduces congestion in general-purpose lanes, thus improving overall corridor performance.

After the successful implementation of express lanes in Southern California, the state legislature passed Assembly Bill 2032 in 2004 that authorized the Alameda County Transportation Commission (Alameda CTC) to conduct, operate and administer a value-pricing program (express lane) within two corridors in Alameda County, including the Sunol Grade Corridor.

Conversion of the I-680 southbound HOV lane into an express lane began in 2008. Construction included widening the roadway to accommodate a new two-foot buffer that separates the lane from the general purpose lanes, installing electronic toll collection equipment, repaving the entire roadway and adding soundwalls in locations as identified through noise studies.



The legislation that authorized the I-680 Express Lanes, California Assembly Bill 2032, required a post-implementation traffic study to evaluate the operational benefits of the express lane. The study was completed in summer 2013, and results are available at www.AlamedaCTC.org/ExpressLanes.



How Does the Express Lane Work?

The I-680 Express Lane operates Mondays through Friday from 5 a.m. to 8 p.m. Solo drivers who want to use the lane need a FasTrak® transponder. Each time drivers use the express lane, the toll amount is deducted from their FasTrak account balance. The operation is fully electronic, with no tollbooths or tollgates, so customers do not need to slow down or stop to pay.

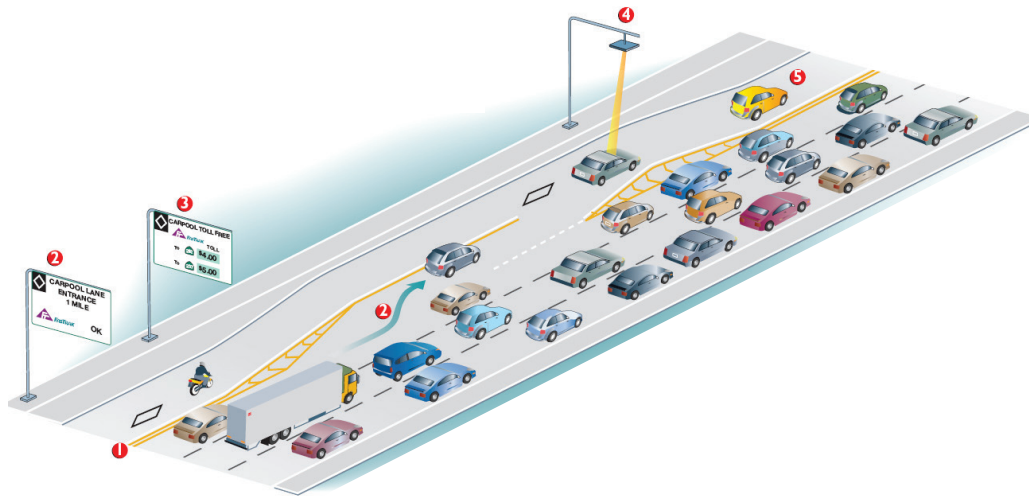
Dynamic pricing: The I-680 Southbound Express Lane was one of the first managed lanes in the nation to deploy a full dynamic pricing system, which ensures a consistent and reliable travel time in the express lane. Dynamic pricing means that tolls vary based on real-time traffic conditions in the corridor, i.e., pricing increases when congestion is heavier and decreases when traffic is lighter. The goal is to keep the express lane

operating at a reliable level of service, which requires a minimum speed of 45 mph.

Electronic tolling: Tolls on the I-680 Express Lane can range from \$0.30 during off-peak hours to a maximum of \$7.50 during the most congested commute times, with an average-peak-hour toll during 2014 of \$2.43. Tolls are calculated every three minutes.

Three entry and exit points: The express lane has three entry points and three exit points. One half-mile before each entry point, an overhead electronic sign displays the current toll rate. Solo drivers have a choice to pay the current toll to use the express lane. The amount drivers pay is the price displayed at their entry point, even if toll rates change while they are in the express lane. Carpools with two

Since 2010, 2 million solo drivers have used the express lane, and the lane has experienced an approximately 49 percent increase in monthly solo users from 2010 to 2014.



- Express lane operation is fully electronic, with no tollbooths or tollgates, so customers do not need to slow down or stop to pay.
- Carpools, motorcycles, transit vehicles and permitted zero- and low-emission vehicles use the express lane for free.
- The I-680 Express Lane is priced to ensure capacity for carpool and transit users, and so the average speed through the corridor does not go below 45 mph.



Corridor Revenue and Investments

When the Sunol Smart Carpool Lane Joint Powers Authority was formed in 2010, the Authority agreed to reinvest the net revenues derived from the express lanes directly back into the project corridor. Toll revenues are used to first pay for operating and

maintaining the I-680 Express Lane, and then fund additional transportation projects such as a future HOV/express lane project on northbound I-680 and transit operations along the corridor, including express bus and other transit service.

Figure 1. Total Express Lane Revenue Trips

(October 2010 to June 2014)

Use of the express lane has risen since its inception in 2010. During FY2013-14, the number of trips totaled approximately 686,000.

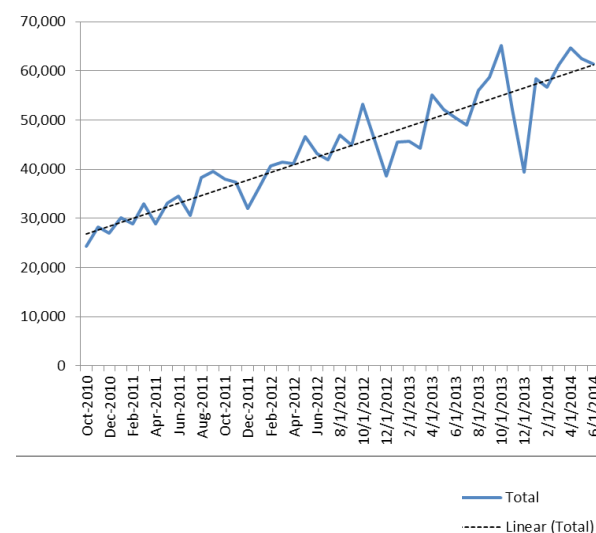
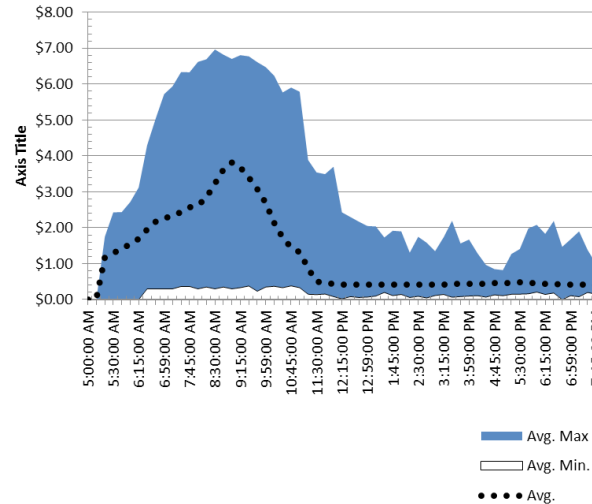


Figure 2. Average Daily Toll Rate

(5 a.m. to 8 p.m. from October 2010 to June 2014)

The average-peak-hour toll during FY2013-14 was \$2.43. The average Monday-Friday non-peak time toll was \$1.26. Tolls are calculated every three minutes.



“The success of the I-680 Southbound Express Lane demonstrates that increasing the efficiency of our existing infrastructure improves travel reliability and travel times. It also reduces congestion.”

— **Arthur L. Dao**, Alameda CTC Executive Director

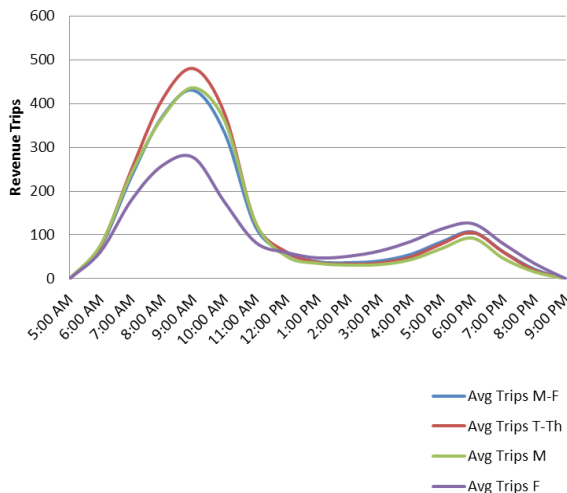


Figure 3. Average Daily Toll-paying Trips per Hour (October 2010 to June 2014)

Drivers use the I-680 Express Lane most frequently Monday through Thursday, between 6 a.m. and 10:30 a.m. The lane operates Mondays through Friday from 5 a.m. to 8 p.m.



Toll Enforcement

Express lane tolls are collected via FasTrak® transponders, which are required for any solo driver to use the lane. The California Highway Patrol (CHP) provides toll enforcement on the I-680 Express Lane, employing both the normal patrols provided on other Bay Area freeways as well as officers contracted for additional enforcement to prevent access and toll violations. The I-680 Express Lane has FasTrak readers at five locations: three at each toll zone, and two at stand-alone enforcement zones. The enforcement zone readers are used as an aid to the CHP enforcement and determine if a vehicle has a valid FasTrak transponder.

The facility has a two-foot buffer stripe separating the general purpose and express lanes. Crossing the double lanes to enter the I-680 Express Lane is a driving violation. Additional violations include solo drivers avoiding the toll

readers, straddling double white lines and traveling in the toll lane without a working FasTrak transponder.

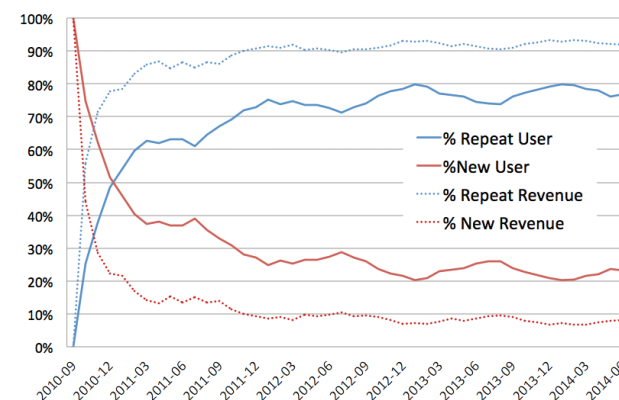


Figure 4. New and Repeat Toll-paying Express Lane Users
(based on transponder statistics)

On the I-680 Express Lane, 77 percent of total FasTrak transponder users are repeat customers, and they represent about 92 percent of all revenue generated. CHP provides enforcement to prevent and address toll violations.

The Future of Bay Area Express Lanes: A Regional Express Lane Network

The I-680 Southbound Express Lane is part of the Bay Area Express Lanes Network envisioned to provide increased travel reliability and efficiency, and to improve connectivity throughout the region. On completion in 2035, the Bay Area will have 550 miles of express lanes operated by the Metropolitan Transportation Commission (MTC), Santa Clara Valley Transportation Authority (VTA) and Alameda CTC. These agencies, as well as the Contra Costa Transportation Authority and the Solano Transportation Authority, are working together to convert existing carpool lanes into express lanes and to close gaps in the carpool network.

Alameda CTC and VTA anticipate operating a total of 280 miles of express lanes. Alameda CTC's lanes include the existing Southbound I-680 Express Lane, the I-580 Express Lanes in eastern Alameda County opening fall 2015 and

a future express lane in the northbound direction of the I-680 over the Sunol Grade. VTA operates the SR 237 Express Lanes in Milpitas and will add express lanes on U.S. 101 and Route 85 in Santa Clara County, as well as expand express lane miles on Route 237.

MTC plans to operate 270 miles of express 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.



The I-680 Southbound Express Lane sparked the initiation of a regionwide express lane network– the Bay Area Express Lanes – that will include 550 miles of managed lanes in the San Francisco Bay Area in coming years.

Visit www.bayareaexpresslanes.org for more information.

Sunol Smart Carpool Lane JPA Members

Chair: Bill Harrison, City of Fremont
Mayor, Alameda CTC Commissioner

Vice Chair: Jerry Thorne, City of
Pleasanton Mayor, Alameda CTC
Commissioner

Scott Haggerty: Alameda County
Supervisor, District 1, Alameda CTC
Chair

Gail Price, City of Palo Alto
Councilmember, Santa Clara VTA
Board Member

David Haubert: City of Dublin
Mayor, Alameda CTC Commissioner

Staff Liaisons

Arthur L. Dao, Alameda CTC
Executive Director

Stewart D. Ng, Alameda CTC
Deputy Director of Projects and
Programming

Express Lanes Website

[http://www.alamedactc.org/
ExpressLanes](http://www.alamedactc.org/ExpressLanes)

Sunol Smart Carpool Lane Joint Powers Authority

The Sunol Smart Carpool Lane Joint Powers Authority (JPA) is an independent joint powers authority created to operate the I-680 Express Lane. Its board of directors consists of five elected officials, four voting members from Alameda County and one voting member from Santa Clara County. Voting rights were determined based on each county's share of road miles within the corridor (approximately one-fifth of corridor miles are within Santa Clara County).

The Authority meets monthly, and meetings are open to the public. Meeting agendas and minutes are posted on the Alameda CTC website at www.alamedactc.org/calendar.

Partnerships

The Alameda County Transportation Commission, the California Department of Transportation and the California Highway Patrol provide services to the Authority contractually. For toll collection, the Authority has an agreement with the Bay Area Toll Authority to use its FasTrak® electronic toll-collection system.

Financial Information, Fiscal Year 2013-14

Toll revenues received on the I-680 Southbound Express Lane are used to pay for operations and maintenance of the express lane. Currently, revenues do not exceed operating costs, and the express lane is subsidized by grant funding for the I-680 Southbound HOT Lane Project. When the express lane becomes sustainable and revenues exceed operations and maintenance costs, net revenues will be reinvested in the project corridor. The Sunol Smart Carpool Lane JPA Board of Directors will determine how to reinvest these funds.

An Expenditure Plan is adopted biennially, and revenues may be used for the construction of HOV facilities including the I-680 Northbound Sunol Smart Carpool Lane project or for transit services (funds are eligible for capital and operations) that directly serve this corridor.

In FY2013-14, the number of toll-paying trips was approximately 686,000. The average peak time toll was \$2.43, reaching an average high of \$5.09, and the average Monday-Friday non-peak time toll was \$1.26.

- Total net position decreased by \$0.1 million or 3.6 percent from \$4.0 million to \$3.9 million as of June 30, 2014 compared to June 30, 2013. This decrease is mostly related to capital asset depreciation. Capital assets comprised \$2.1 million or 55.6 percent of the total net position at June 30, 2014.
- As of June 30, 2014, cash and cash equivalents increased by \$0.5 million or 24.2 percent from \$2.1 million to \$2.6 million. This increase can largely be attributed to an increase in operating revenue over FY2012-13.

- Operating revenue was \$2.0 million during FY2013-14, an increase of \$0.7 million or 51.3 percent over FY2012-13.
- During FY2013-14, the total facility operating expenses were \$2.1 million, an increase of \$0.5 million or 24.3 percent over FY2012-13. This increase is largely due to a change in methodology used to report operations and maintenance costs, which were subsidized with grant funding from Alameda CTC's I-680 Southbound HOT Lane Project. Operating expenses for FY2013-14 are primarily comprised of \$1.9 million of program management operations and maintenance costs.

For more information about the I-680 Express Lane and future express lane projects, visit <http://www.alamedactc.org/ExpressLanes>.



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