



Board Report

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Agenda Number: 7.

AD HOC CONGESTION HIGHWAY AND ROADS COMMITTEE SEPTEMBER 20, 2017

SUBJECT: METRO EXPRESSLANES FISCAL YEAR (FY) 2017 OPERATIONS PERFORMANCE REPORT

ACTION: RECEIVE AND FILE

RECOMMENDATION

RECEIVE AND FILE the FY2017 Operations Performance Report (Attachment A) for the Metro ExpressLanes.

ISSUE

To ensure key performance goals are met, Metro ExpressLanes performance metrics are monitored on a continual basis. This report provides an update on the performance of the Metro ExpressLanes for FY 2017.

DISCUSSION

Since the inception of the ExpressLanes, more than 154 million trips have been taken (100.8 million on the I-110 ExpressLanes and 53.9 million on the I-10 ExpressLanes).

A total of 608,784 accounts have been opened, including 14,200 Low-Income-Assistance-Plan accounts.

Attachment A provides a detailed summary of the program's performance for Metro's Fiscal Year 2017 (July 1, 2016 to June 30, 2017). The following are highlights of the Metro ExpressLanes performance based upon data through June 30, 2017:

- Monthly average travel speeds on the ExpressLanes were 10% faster than the general purpose (GP) lanes. For the full length of each of the corridors, the average monthly speed exceeds 45 miles per hour (mph):
 - I-110 ExpressLanes average AM peak-period travel speeds were 52 mph, saving up to an average of 13 minutes compared to the GP lanes.
 - I-10 ExpressLanes average AM peak-period travel speeds were 54 mph, saving up to an average of 15 minutes compared to the GP lanes.
- 41.3 million vehicle trips in the ExpressLanes in FY17 is an increase of 9% compared to FY2016.
- 152,302 transponders were issued in FY17, an increase of 5% compared to FY2016.
- Low Income Assistance Plan account openings increased by 31.1% from FY2016.

- 79% of ExpressLanes users are satisfied with the amount of time saved relative to the toll paid.
- The top reasons for using the ExpressLanes: Travel Faster (55%), Avoid Traffic (42%), Feel Safer (3%).
- 15,479 ExpressLanes customers took advantage of an ExpressLanes partnership with Metrolink.

HOV Only Status and Travel Speeds the AM Peak Period

The ExpressLanes are operated on dynamic pricing principles designed to maintain travel speeds at or above 45mph. When vehicle travel speeds fall below 45 mph on a segment of the lanes, the lanes go into HOV Only status which means Single Occupant Vehicles (SOVs) are prohibited from entering the lanes at that segment to help alleviate the congestion and raise the speeds.

During FY 2017, a daily average of 29,229 vehicles traveled the I-110NB ExpressLanes, which is a 3% increase from the prior year. I-10WB had an average daily increase of 8%. With this continued increase in vehicle trips on the ExpressLanes in FY2017, refinements were made to the pricing algorithm to ensure minimal impacts to travel speeds.

In FY 2017, the I-110 was in HOV Only status a total of 21,140 minutes during the AM peak period. This is a 15% increase compared to FY 2016. Comparatively, the I-10 was in HOV Only status a total of 3,784 minutes, which 92% increase over FY2016. Due to the toll free status of HOV 2 customers and the higher number of vehicle trips on the northbound I-110 ExpressLanes, these lanes enter HOV Only status more frequently than the I-10 corridor.

Over the past couple of years we have seen a trend whereby HOV Only minutes are increasing. Despite efforts to improve the algorithm and raise the toll rates, HOV Only minutes continue to increase so additional measures must be pursued. To improve the performance of the ExpressLanes and reduce the number of HOV Only minutes during the AM peak, staff will be undertaking a number of projects to reduce the recurrence of HOV Only.

- Charge a toll to Clean Air Vehicles starting in December 2017 or January 2018;
- Offer a monetary incentive to customers to change their travel behavior and NOT travel during the peak hours called the “Peak of the Peak Incentive Program”;
- Implement an automated occupancy detection system to enforce payment of the tolls by solo drivers; and,
- Work with Caltrans to determine if it is necessary to raise the carpool minimum occupancy requirement.

FINANCIAL IMPACT

None

Impact to Budget

None

ALTERNATIVES CONSIDERED

N/A

NEXT STEPS

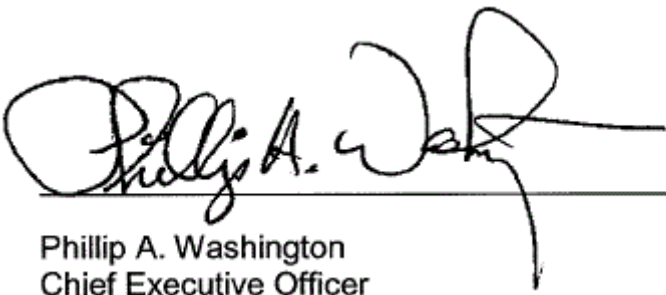
Staff will return to the Board in six months with the next performance report and will continue work on implementing the operational improvements listed in the report.

ATTACHMENTS

Attachment A - Metro ExpressLanes Performance Report: Fiscal Year 2017

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Phillip A. Washington
Chief Executive Officer

METRO EXPRESSLANES

OPERATIONS PERFORMANCE REPORT

FISCAL YEAR 2017 (ENDING JUNE, 30 2017)

SEPTEMBER 20, 2017



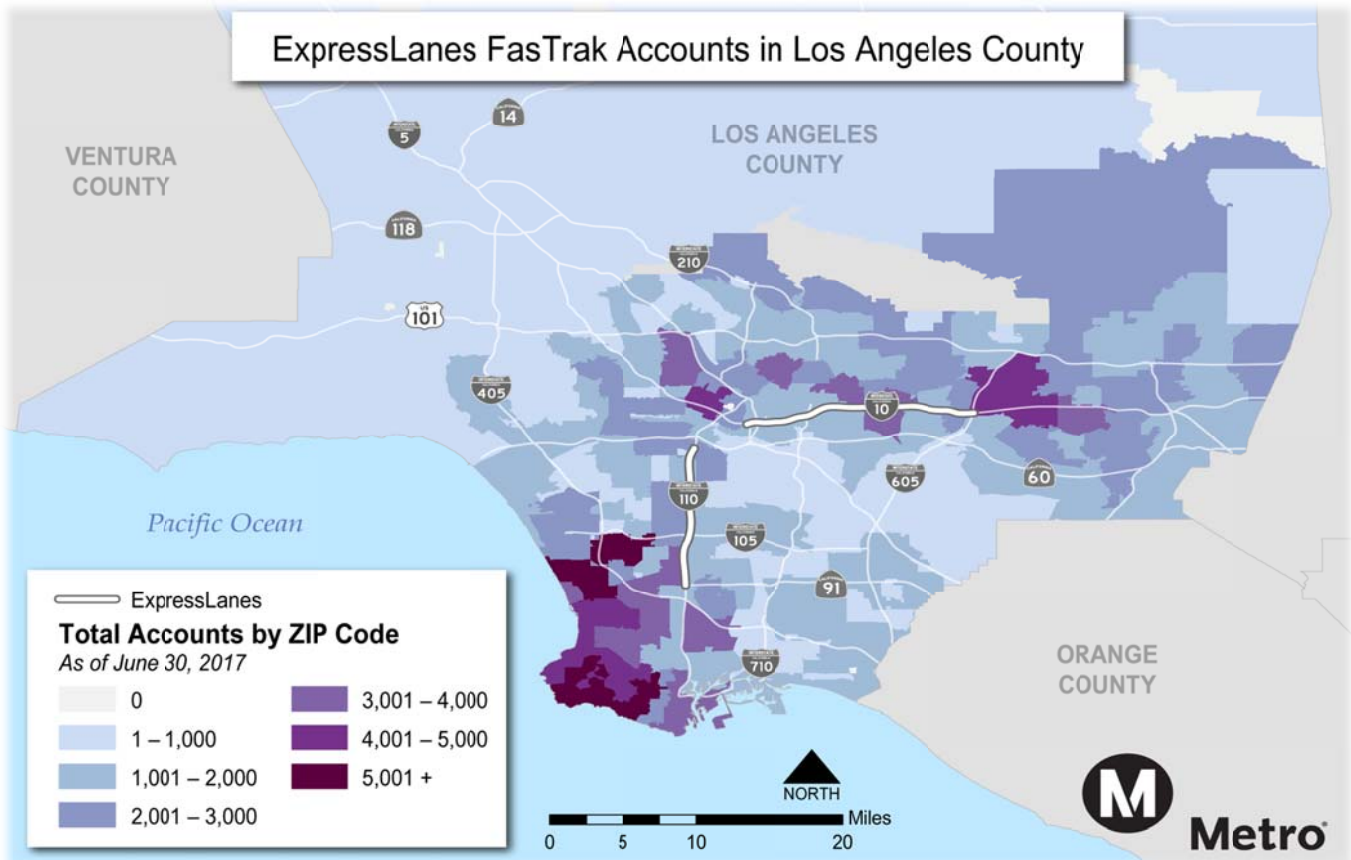


Program Highlights:

Operational Totals through June 30, 2017

TOTAL VEHICLE TRIPS.....	154,684,893	
	I-110 TRIPS: 100,791,323	I-10 TRIPS: 53,893,570
TOTAL PRELIMINARY REVENUE.....	\$248,817,919	
	I-110 TOTAL: \$155,569,782	I-10 TOTAL: \$93,248,137
TOTAL ACCOUNTS OPENED.....	608,784	
	LOW-INCOME ASSISTANCE PLAN ACCOUNTS.....	14,200
	TAP REWARDS REGISTERED ACCOUNTS.....	11,857
TOTAL TRANSPONDERS ISSUED.....	721,183	

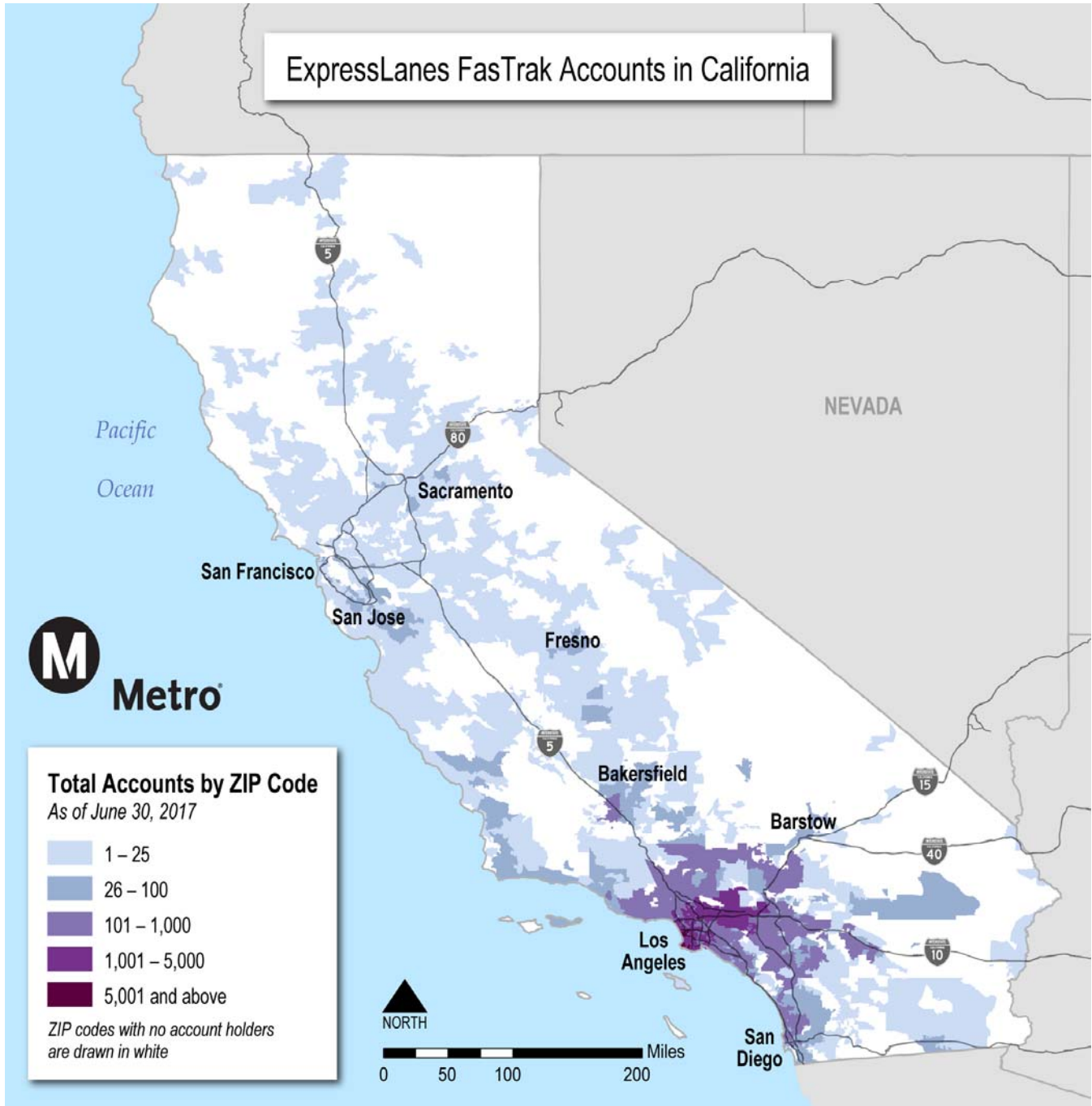
ExpressLanes Customers in Los Angeles County





Metro ExpressLanes Accounts Statewide

The Metro ExpressLanes FasTrak[®] transponder is compatible with all toll facilities in California. This statewide acceptance allows our customers to use one device, and not have to open separate accounts with different toll facilities. As of June 30, 2017, 81% of all accounts are registered to an address in Los Angeles County.

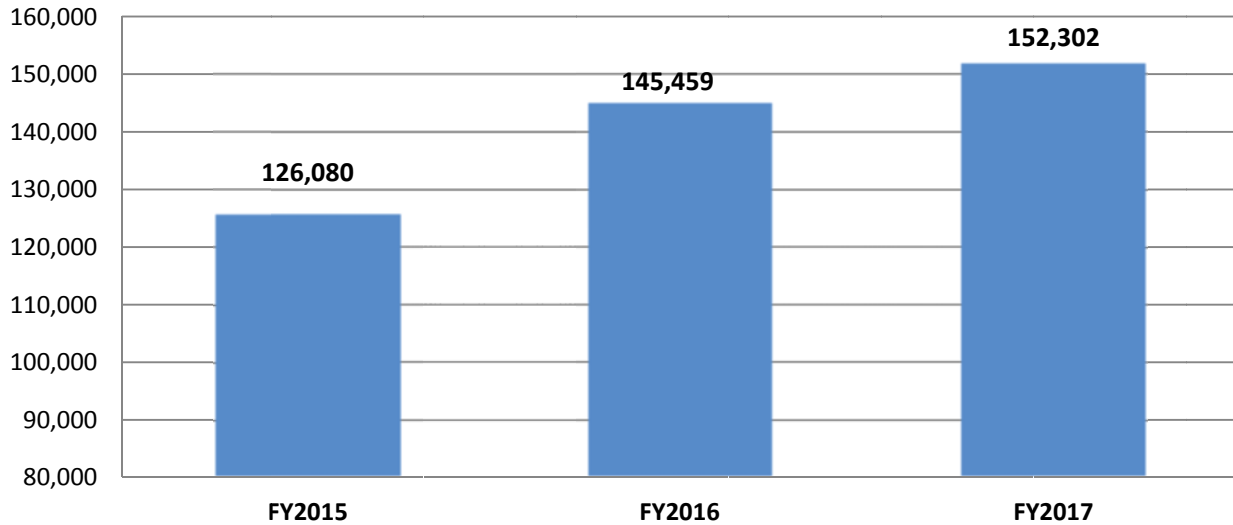




FasTrak® Transponder Adoption

The demand for Metro ExpressLanes FasTrak transponders continues to grow. Transponders issued to customers increased by 5% in FY17 compared to FY16.

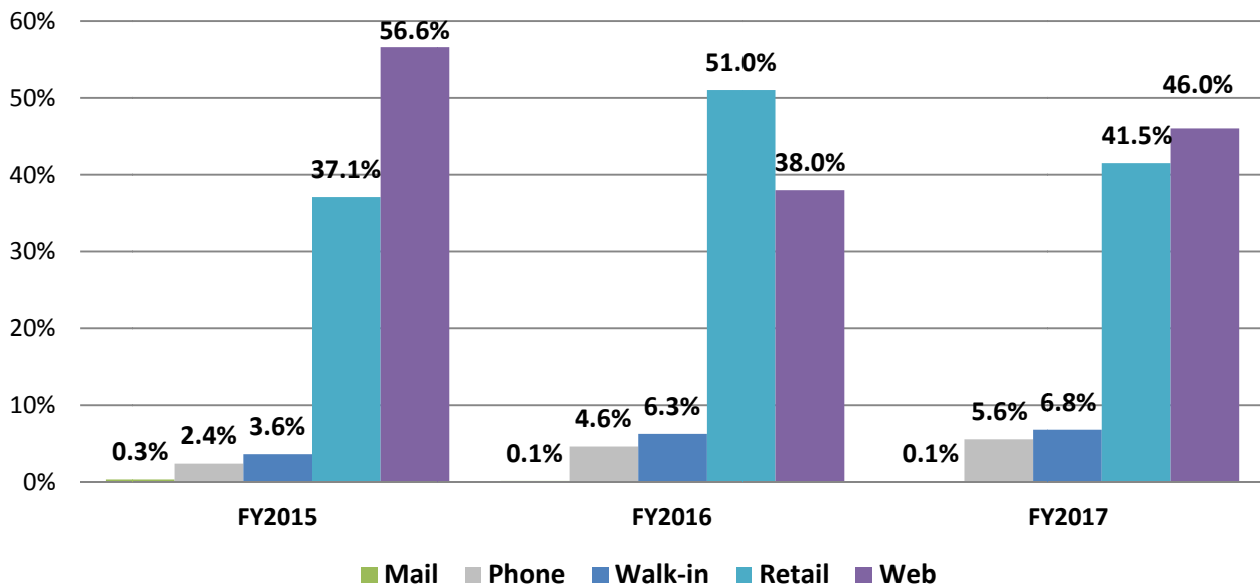
Newly Issued FasTrak® Transponders



Account Opening Channel

In FY17, our website metroexpreslanes.net, was the largest channel for transponder distribution, followed closely by our retail partners. Customers can purchase a FasTrak transponder at participating AAA, Costco, and Albertsons locations in Los Angeles County.

Percentage of Accounts Opened by Channel

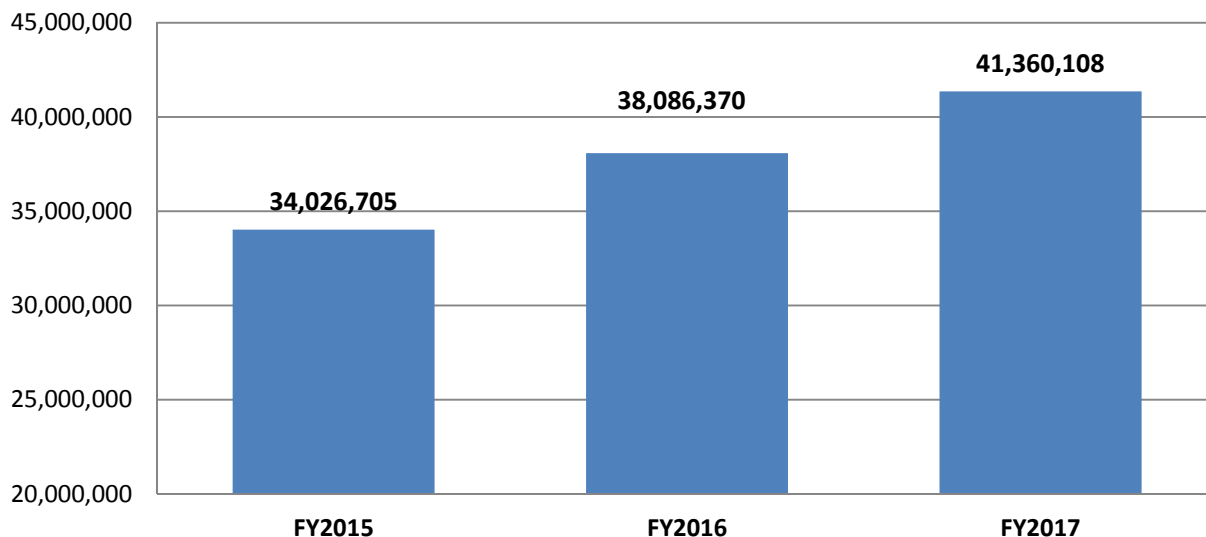




ExpressLanes Trips

ExpressLanes trips continue to increase. Total trips increased by 8.5% in FY17 compared to FY16.

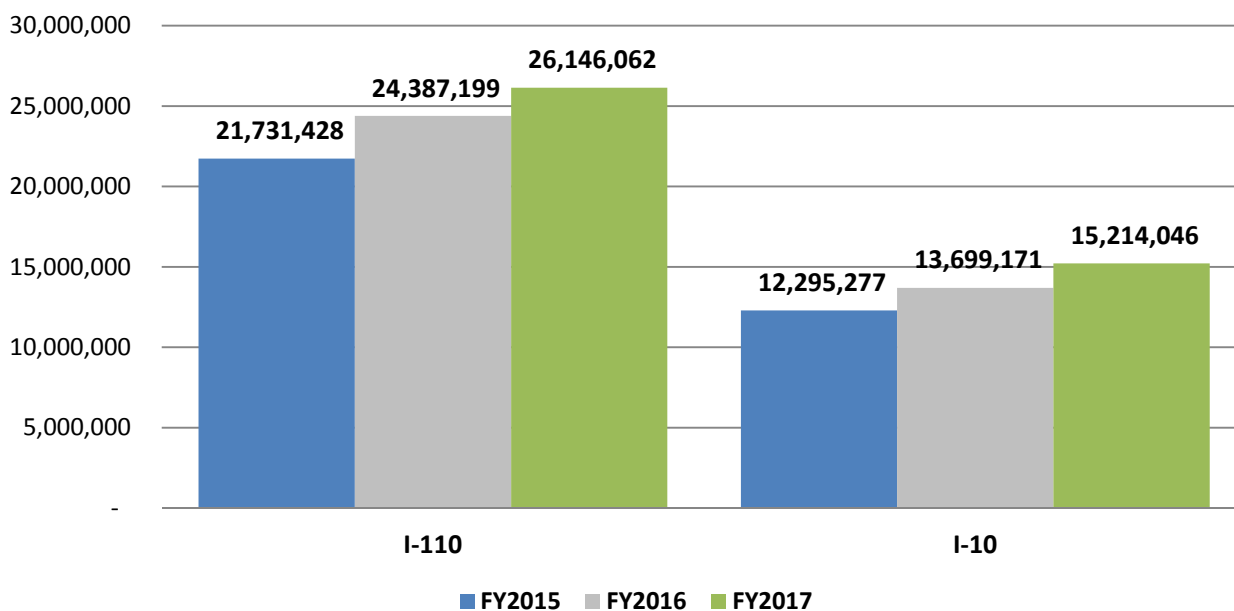
Total ExpressLanes Trips by Year



Trips by Corridor

The I-110 corridor continues to have higher trip volumes over the I-10 corridor. However, I-110 trips only increased by 7.2% in FY17 compared to an 11.1% increase on the I-10 corridor.

ExpressLanes Trips by Corridor

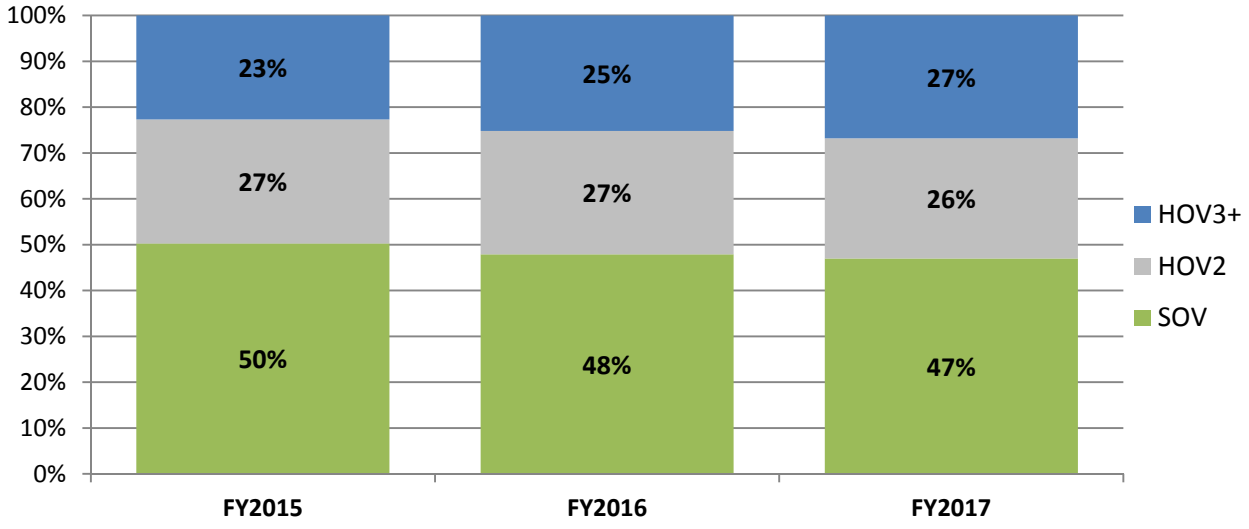




Mode Split

In FY17 HOV2 and HOV3+ trips continued to slightly increase over Single Occupant (SOV) trips.

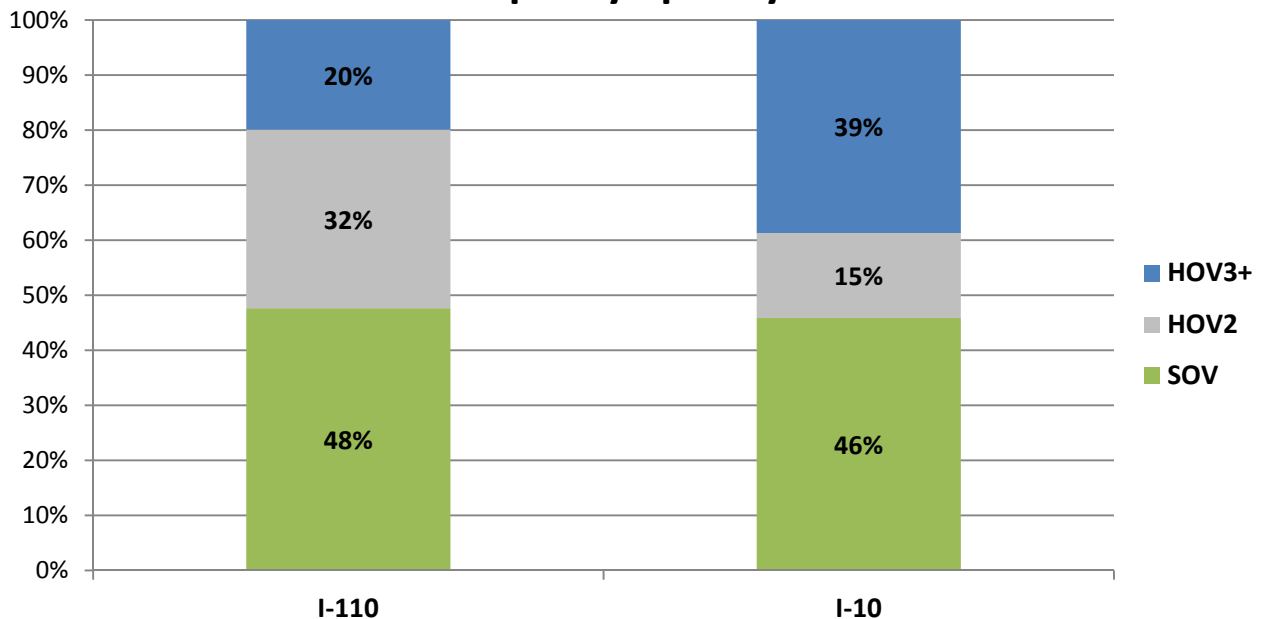
Occupancy Split by Year



Mode Split by Corridor

The I-110 corridor has a significantly lower percentage of HOV3+ trips than the I-10 corridor. This is most likely due the toll-free status of HOV2 customers on the I-110 at all times compared to HOV2 customers paying a toll during AM and PM peak times on the I-10.

FY17 Occupancy Split by Corridor

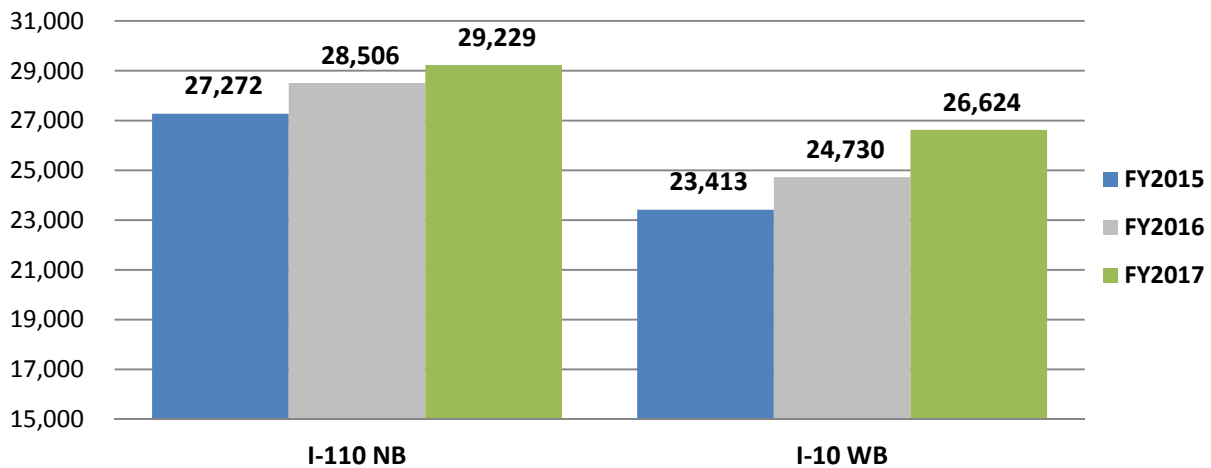




ExpressLanes Average Vehicle Volumes during Morning Peak

Average vehicle volumes during the morning peak have continued to increase year over year. Average vehicle volume in the I-110 ExpressLanes increased by 2.5% in FY17 compared to a 7.6% increase in volumes on the I-10 ExpressLanes.

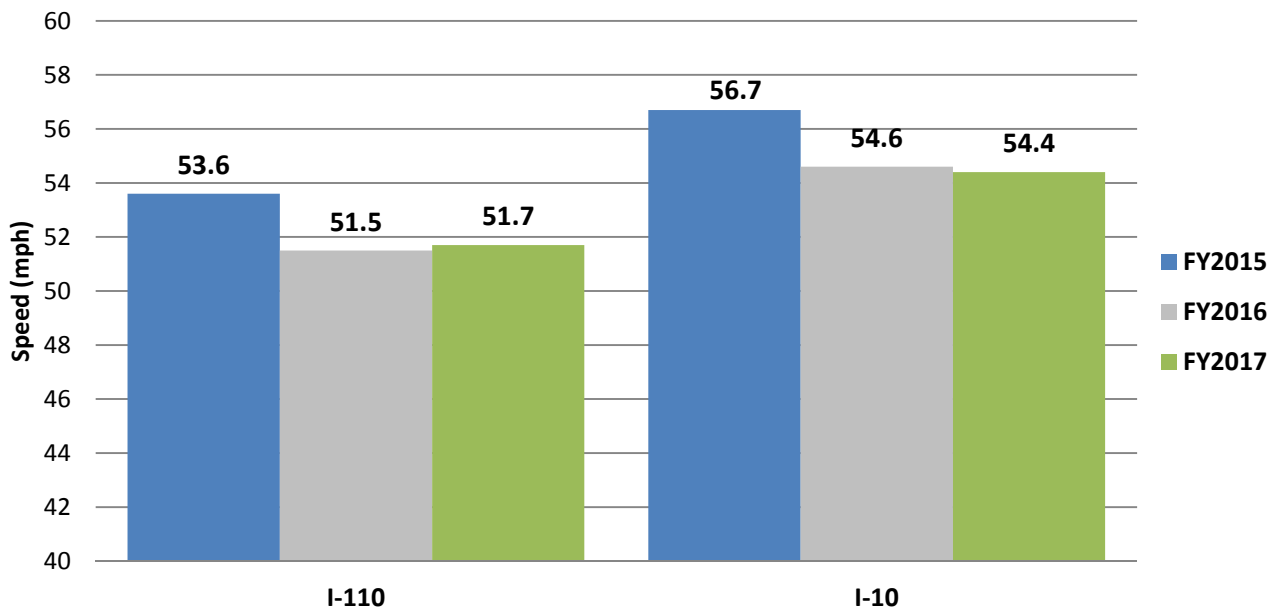
ExpressLanes Average Vehicle Volumes during AM Peak



ExpressLanes Average Travel Speeds during Morning Peak

Average travel speeds during the morning peak have remained above 45mph for full length trips. Average speeds along the I-110 ExpressLanes average slightly less than the I-10 ExpressLanes which can be attributed to the higher vehicle volumes that travel on the I-110 as compared to the I-10.

Average Travel Speeds - AM Peak

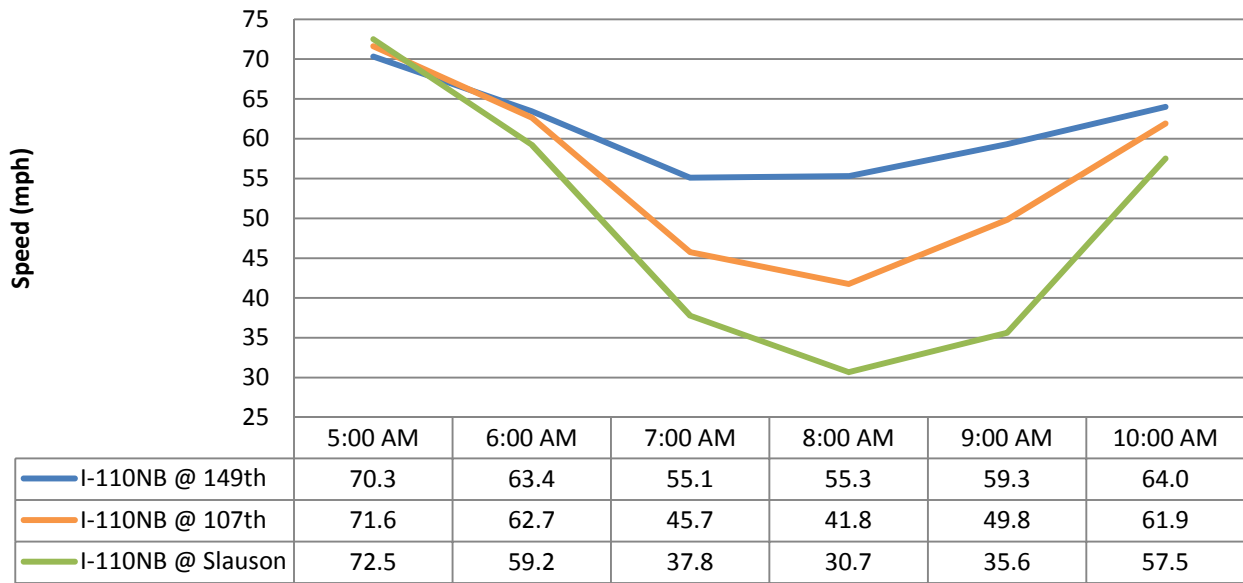




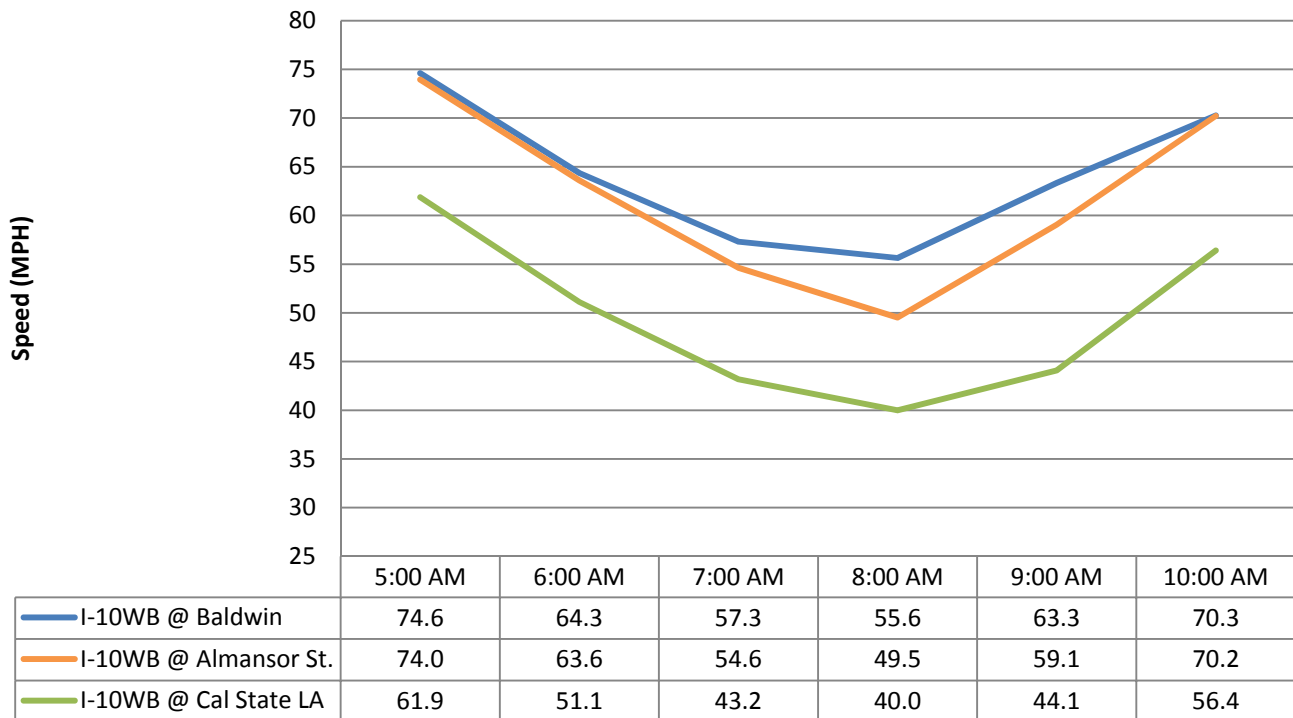
FY17 I-110NB and I-10WB Average Travel Speeds during Morning Peak

Average speeds fluctuate during the morning peak depending on the location and time on both corridors. The number of vehicles in the ExpressLanes increases closer to downtown Los Angeles and between the hours of 7:00AM and 9:00AM causing speeds to decrease.

FY17 Average I-110NB AM Peak Speeds by Location



FY17 Average I-10WB AM Peak Speeds by Location

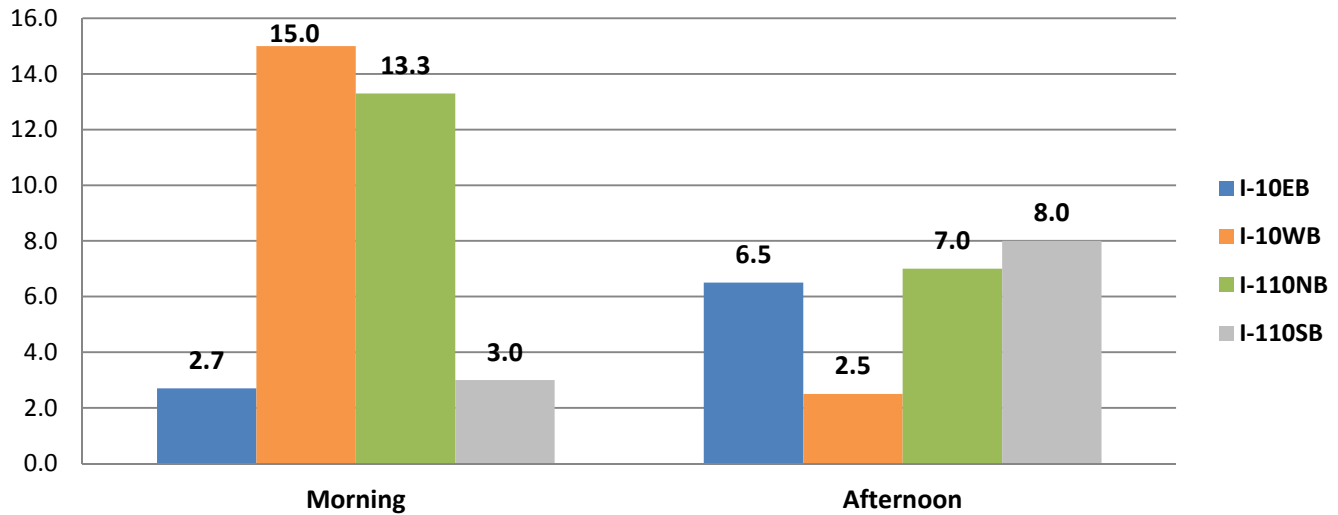




ExpressLanes Travel Times Savings over General Purpose Lanes

Average speeds in the ExpressLanes remain higher than the average speeds in the General Purpose (GP) Lanes. Travel time tests were performed on the ExpressLanes in the morning and afternoon peak times. Morning peak travel saved up to an average of 15 minutes when in the ExpressLanes compared to the GP lanes. Afternoon travel saved up to an average of 8 minutes in the ExpressLanes compared to the GP lanes.

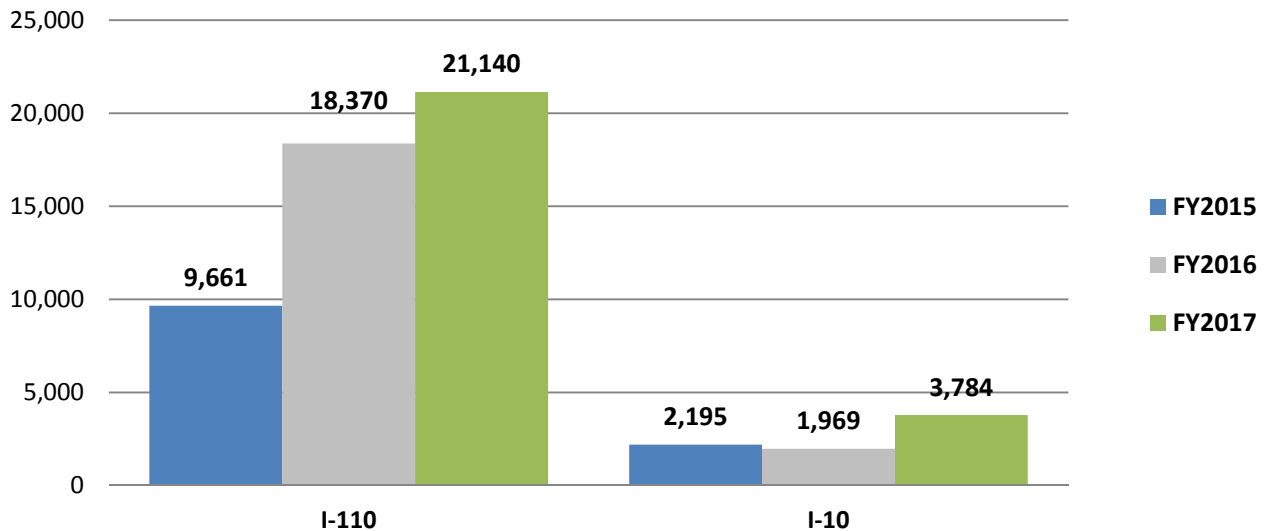
FY17 Average Travel Time Savings (Minutes)



HOV Only Status in the AM Peak

When the average vehicle speed begins to fall below 45mph on a segment of the lanes, the lanes go into HOV only status, not allowing SOV drivers into the lanes to help alleviate some congestion. Due to the higher vehicle volumes and lower HOV requirement, the I-110NB goes into HOV only status more frequently than the I-10WB.

HOV Only Minutes by Year





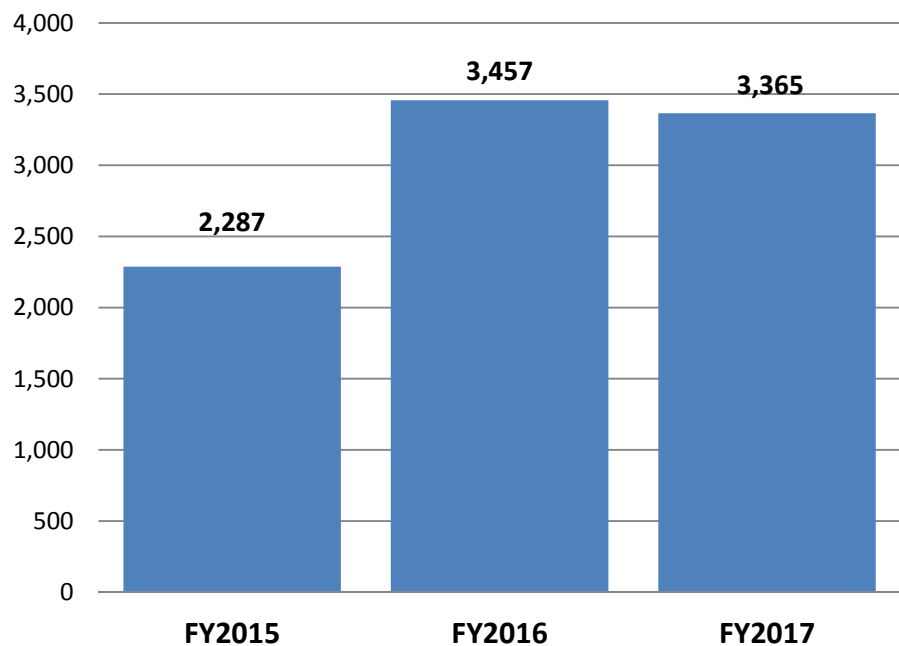
ExpressLanes Customer Incentives – Low Income Assistance Plan

Residents of Los Angeles County with an annual household income equal to or less than the double the federal poverty level qualify for a one-time credit of \$25 and an automatic waiver of the monthly account maintenance fee.

Metro ExpressLanes provides outreach at different community events, festivals, and transportation workshops throughout the year to promote the plan. Also, the program is advertised on bus cards, billboards, and online ads. In FY17 the number of new accounts increased by 31% over FY16 to a total of 14,200 accounts opened.



Newly Opened Low Income Assistance Plan Accounts



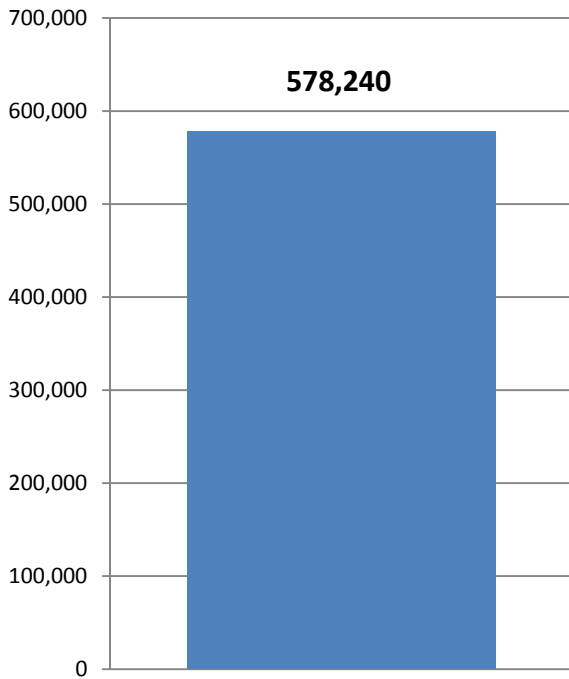


ExpressLanes Customer Incentives – Transit Rewards

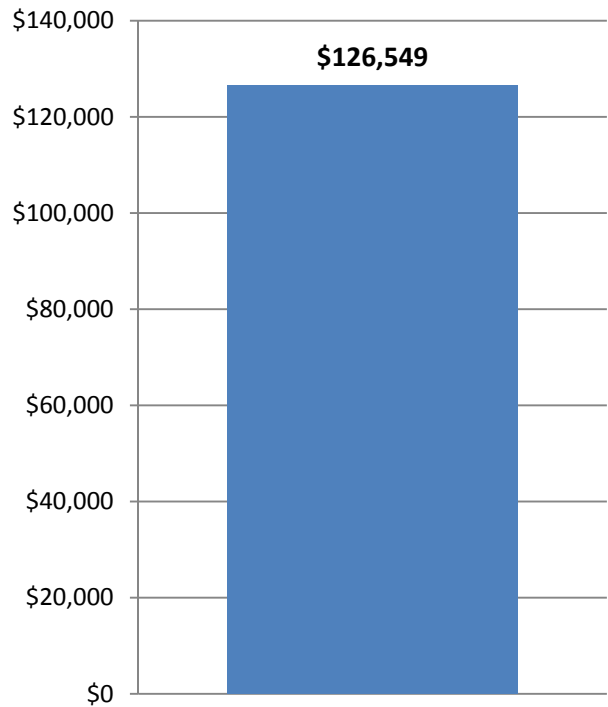
Transit riders that register a TAP card on their ExpressLanes account can earn a \$5 toll credit each time they take 16 one-way transit trips during peak hours on the I-110 Harbor Transitway or the I-10 El Monte Busway. Over 578,000 qualifying transit trips have been taken since opening of the ExpressLanes



Qualifying Transit Trips Taken Since Program Inception



Toll Credits Issued Since Program Inception





ExpressLanes Customer Incentives – Metrolink Rewards

To increase customer awareness of available transit alternatives, Metro ExpressLanes and Metrolink partnered in May 2017 to offer our ExpressLanes customers two free roundtrip tickets on Metrolink. 15,479 ExpressLanes Customers redeemed the offer as of June 30, 2017.



ExpressLanes Customer Incentives – Carpool Loyalty

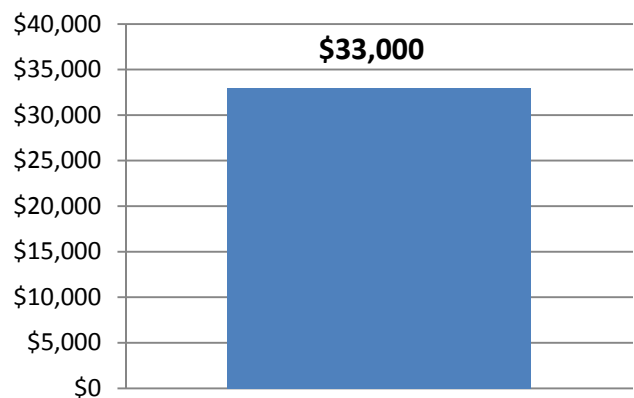
The Carpool Loyalty Program automatically enters Metro ExpressLanes customers into a monthly drawing for a chance to win gift cards when they use the ExpressLanes with a FasTrak® set to HOV2 or HOV3 status. Since the inception of the program \$33,000 in gift cards have been given to carpoolers.

**START A CARPOOL,
GET REWARDED.**

For more info on our Carpool Loyalty Program, visit metroexpresslanes.net.




**Carpool Rewards Given as of
June 30, 2017**

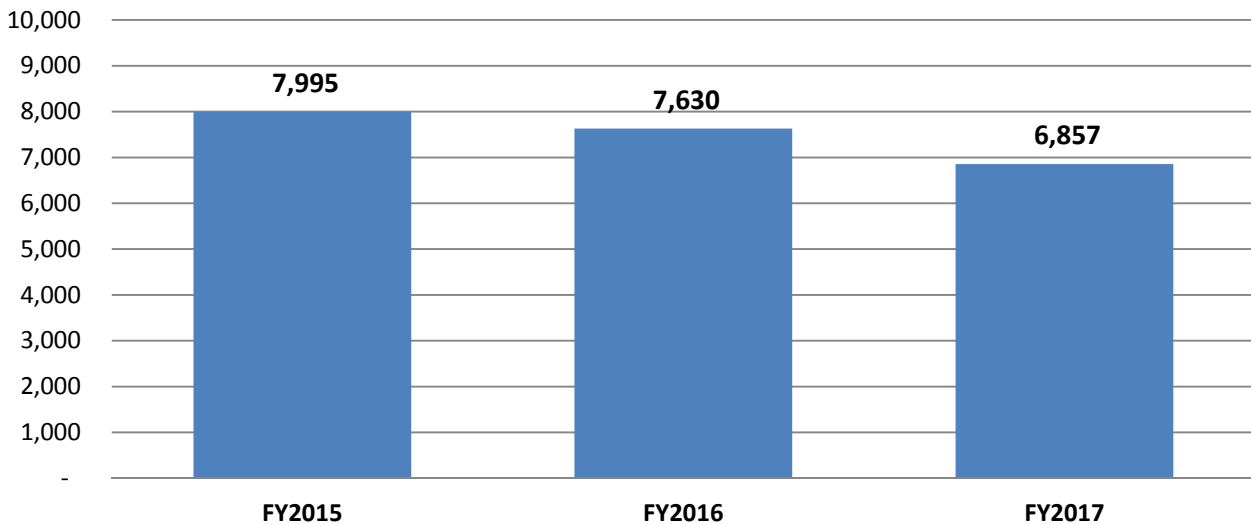




Silver Line Transit Ridership

The Metro Silver Line operates as a Bus Rapid Transit (BRT) system on the I-110 and I-10 ExpressLanes. Silver Line ridership on the ExpressLanes during the peak periods has decreased by 10%, which is similar to the overall ridership declines on other Metro bus lines. While ridership is down year-over-year, Silver Line ridership has increased by 6% from the inception of the Expresslanes.

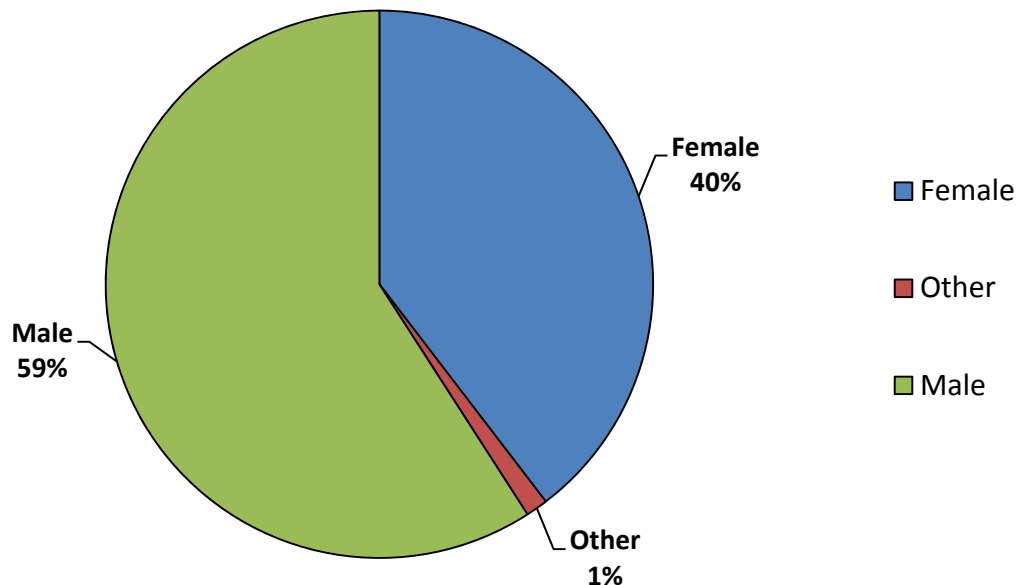
Silver Line Average Peak Daily ExpressLanes Ridership



Metro ExpressLanes User Profile

ExpressLanes customers were surveyed in FY17 to gain insight on our customers’ demographics, satisfaction, and usage preferences.

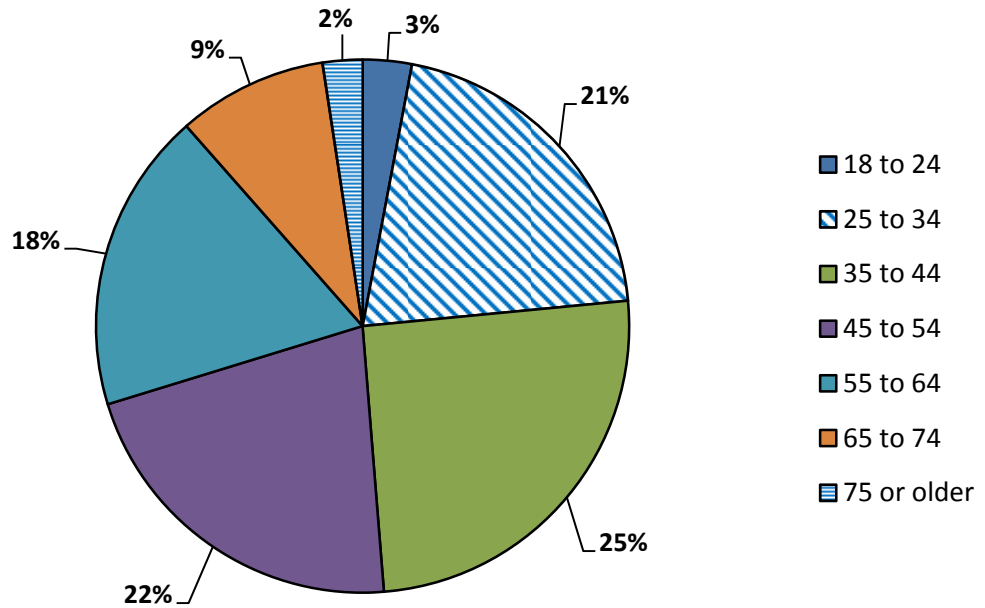
Primary ExpressLanes User Gender





Metro ExpressLanes User Profile...continued.

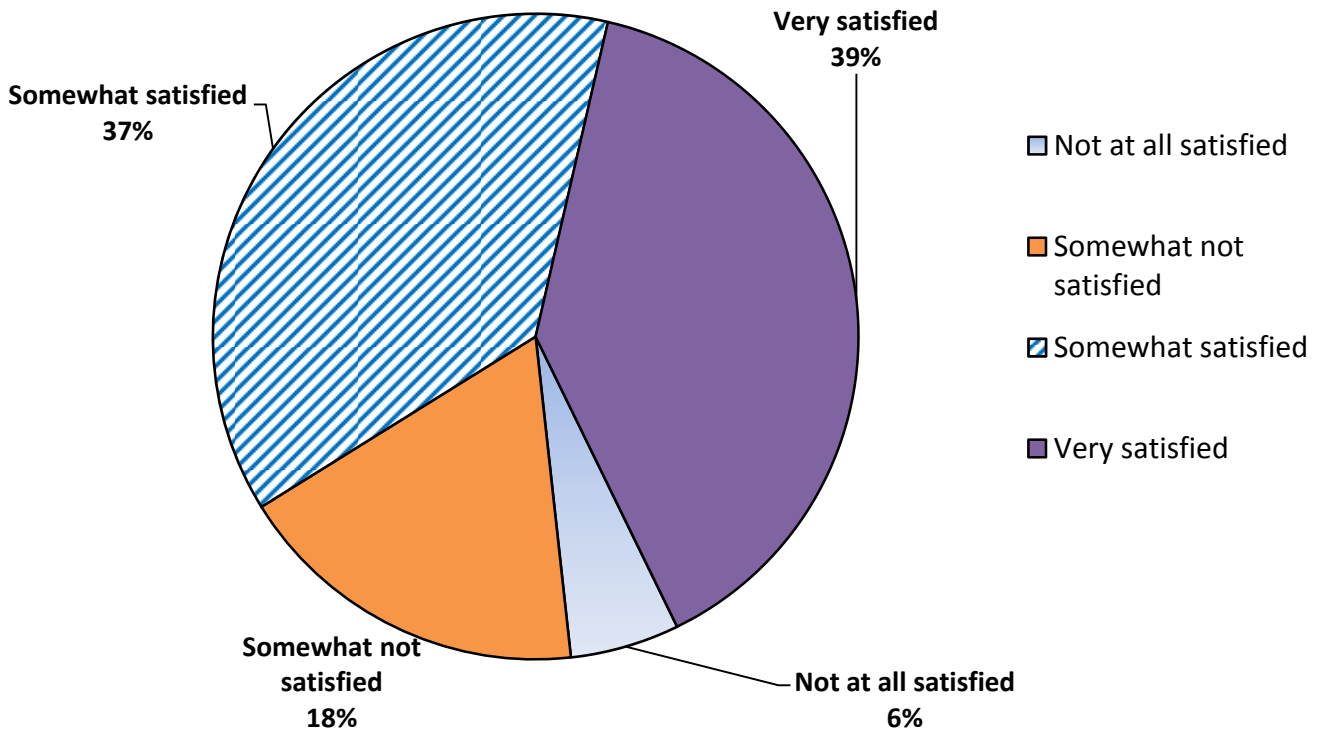
Primary ExpressLanes User Age



Metro ExpressLanes User Profile - Customer Satisfaction

Customers were asked: 'How satisfied are you with?'

The Amount of Time Saved Relative to the Toll Paid

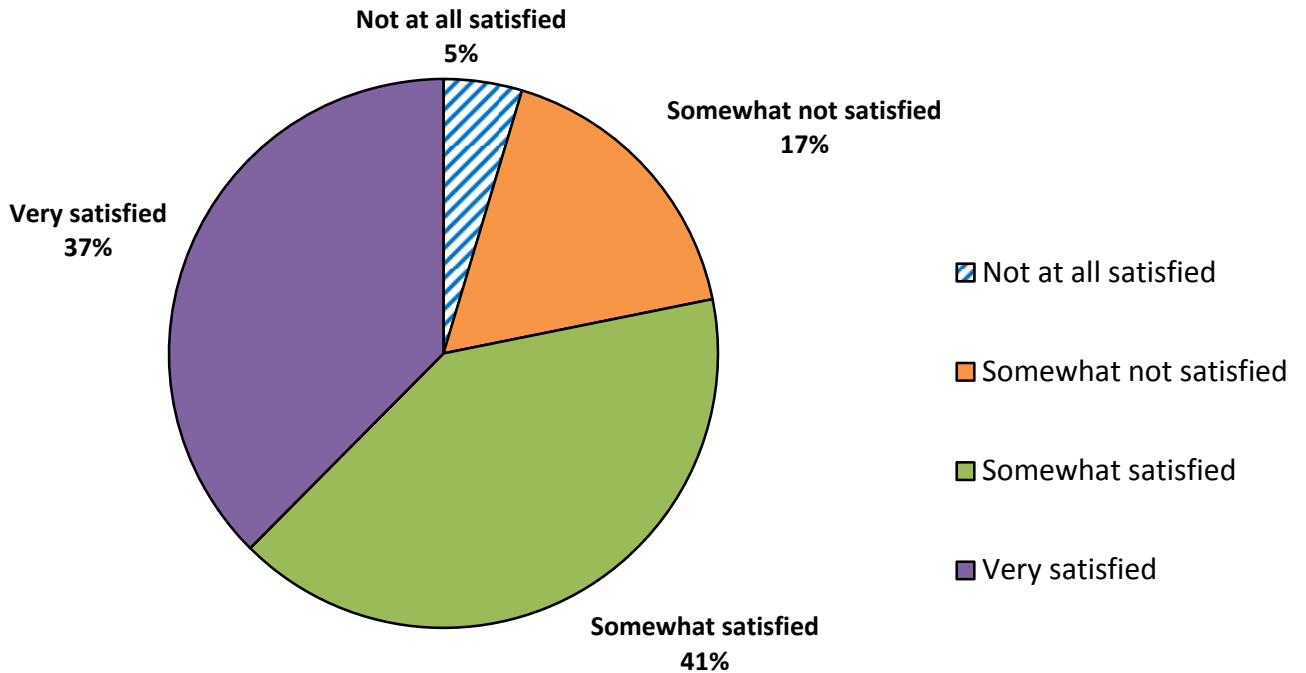




Metro ExpressLanes User Profile - Customer Satisfaction

Customers were asked: 'How satisfied are you with?'

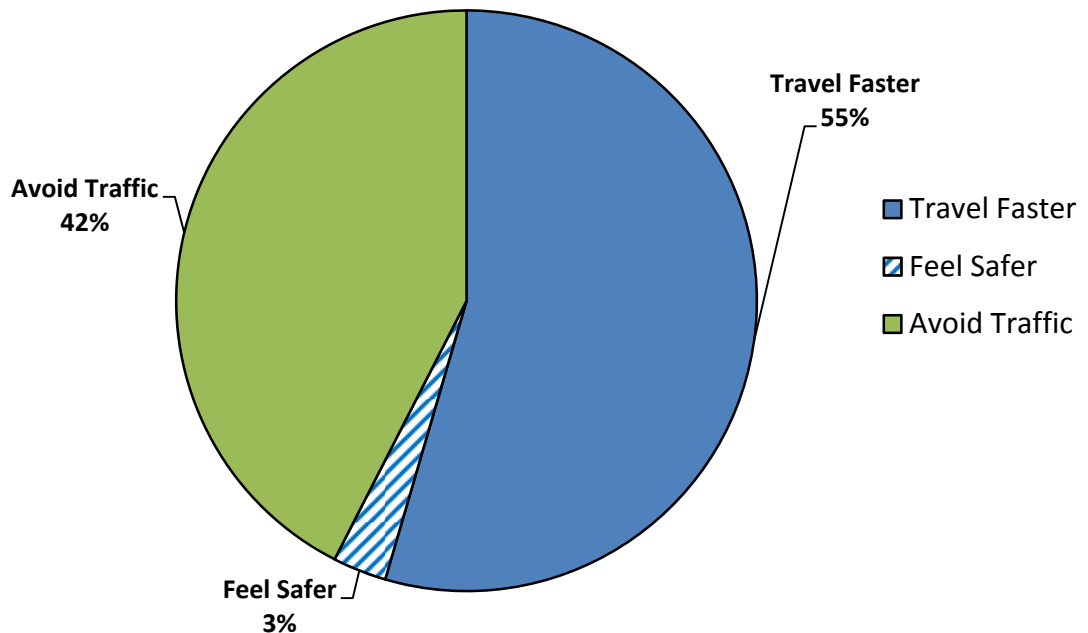
The Speed I can Maintain on the Expresslanes



Metro ExpressLanes User Profile – Customer Motivation

Customers were asked: 'What is the top reason you use ExpressLanes?'

The Top Reason for using the Expresslanes

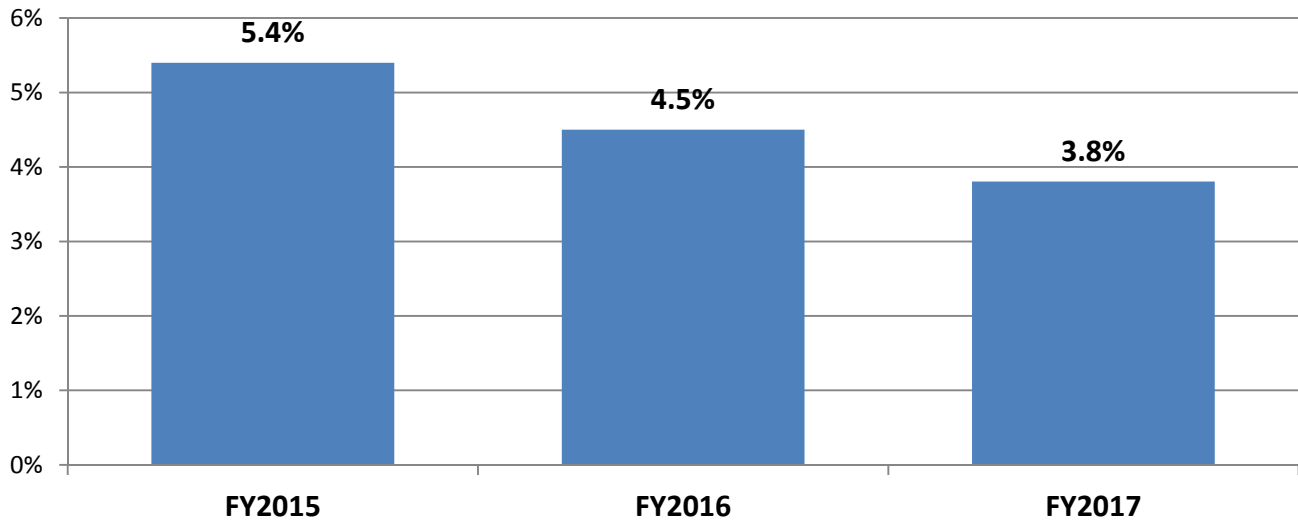




ExpressLanes Safety & Enforcement – Violations Issued

Metro ExpressLanes issues a notice of toll evasion violation when vehicles travel the ExpressLanes without a valid FasTrak® transponder. As public awareness of the ExpressLanes increases, the percentage of violations issued decreases.

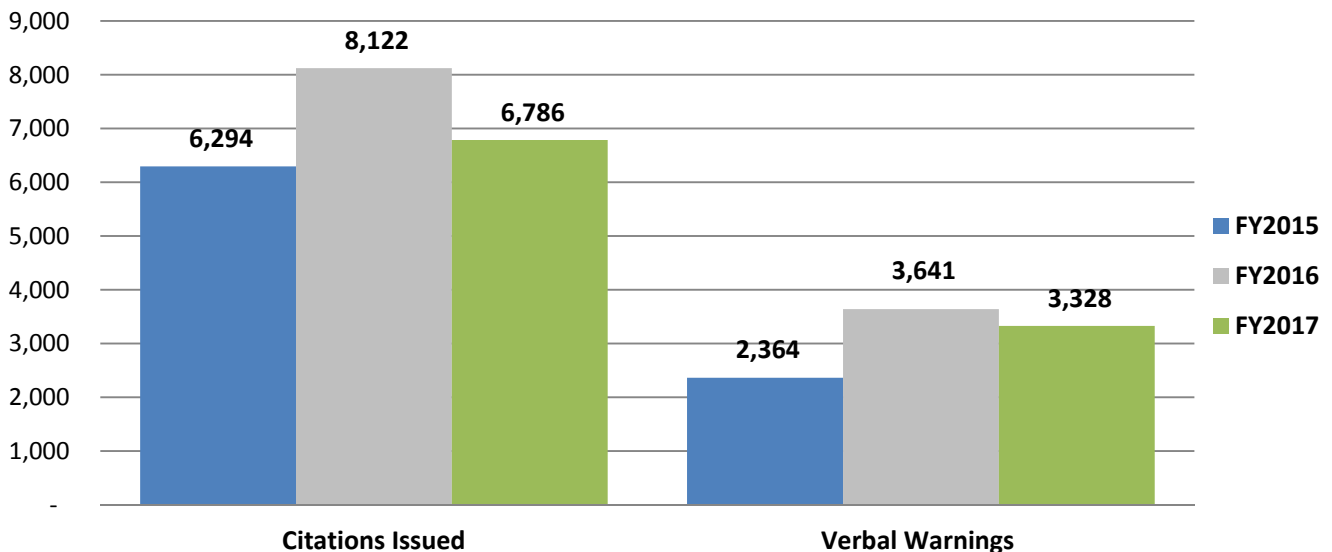
Violation Rate by Year



ExpressLanes Safety & Enforcement – CHP Activity

CHP officers are contracted to provide additional visual enforcement. CHP issues a toll/transponder related citation when a non-exempt vehicle is observed using the ExpressLanes without a transponder or the transponder switch setting does not match the observed vehicle occupancy.

CHP Issued Citations & Verbal Warnings





Metro will implement the following operational improvements to reduce congestion on the ExpressLanes during the remainder FY18 and into FY19:

- Occupancy Detection:** ExpressLanes is evaluating the feasibility of installing vehicle occupancy detection systems to reduce the occurrence of inaccurate occupancy declarations by customers (which are currently based on self-declared transponder switch settings). Implementation is expected by 4th quarter FY18.
- Mobile app:** ExpressLanes is developing a mobile app to address an issue with vehicles with Metal Oxide windshields. Drivers of these vehicles are currently unable to use their in-vehicle transponders to declare occupancy. The mobile app will give these affected customers an alternate method for declaring their vehicle occupancy for a given trip. Implementation is expected by March 2018.
- Occupancy Enforcement Beacon lights:** The overhead indicator lights used by CHP to check whether a given vehicle’s transponder setting accurately reflects the current occupancy level of the vehicle is being upgraded. The current indicator lights flash different color combinations to indicate a given vehicle’s transponder switch setting. The upgraded indicators will be digital panels that display numeric values corresponding to the vehicle’s transponder switch setting. Implementation is expected by April 2018.
- EarthCam:** Three new CCTV cameras will be installed to improve real time traffic and incident monitoring. Installation is expected by November 2017.
- New toll gantries:** ExpressLanes is evaluating the feasibility of installing four additional toll gantries to improve toll collection and violation enforcement. The toll gantries will strategically target current coverage gaps in the system and will better equip Metro to manage congestion and facilitate enforcement. Implementation is expected by the 2nd quarter of FY19.
- Improved Lane Access Management:** To reduce the occurrence of unsafe and illegal maneuvers into and out of the ExpressLanes between the designated entrances/exits, channelizers are being installed between the general purpose lanes and the ExpressLanes on segments that have a high occurrence of vehicles crossing the double-white solid line pavement markings. Implementation is expected in September 2017 for I-110, and in early 2018 for I-10.
- Metro ExpressLanes will be celebrating its 5 year Anniversary:** The I-110 anniversary will be Friday November 10, 2017. The I-10 anniversary will be Friday February 23, 2018. In recognition of this milestone staff has planned a social media campaign to gather testimonials highlighting customer experience and feedback. Rewards and marketing incentives will be given to existing customers for their loyalty.

Metro ExpressLanes FY17 Performance Report (July 1, 2016 to June 30, 2017)

**Agenda Item #7
September 20, 2017**



Metro

Performance Report Summary

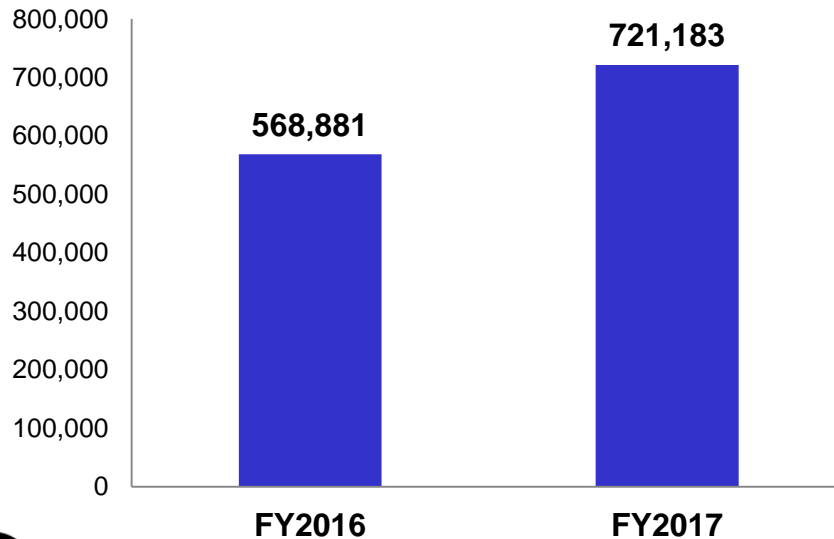
- The report summarizes ExpressLanes performance for Fiscal Year 2017 (FY17)
- Key Findings:
 - ExpressLanes trips are steadily increasing
 - Increased congestion on the 110 Northbound and 10 Westbound during the AM Peak
 - Average corridor travel speeds in the ExpressLanes remain above 45 mph and are 10% higher than the general purpose lane speeds
 - Average Silver Line ridership is down 10% during the AM & PM Peak periods in FY17; however ridership is up 6% since opening the ExpressLanes



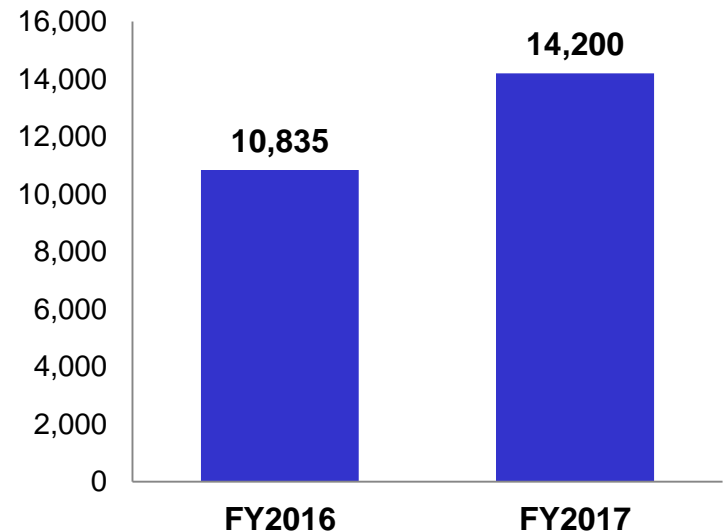
Transponders and New Accounts

- **721,183 transponders issued from inception through June 30, 2017**
 - 152,302 were issued in FY17, a 5% increase over FY16
- **608,784 total accounts opened since inception of the program**
- **14,200 total Low-Income Assistance Plan accounts opened, a 31% increase over FY16**

FasTrak Transponders Issued



Low Income Assistance Plan Accounts Opened

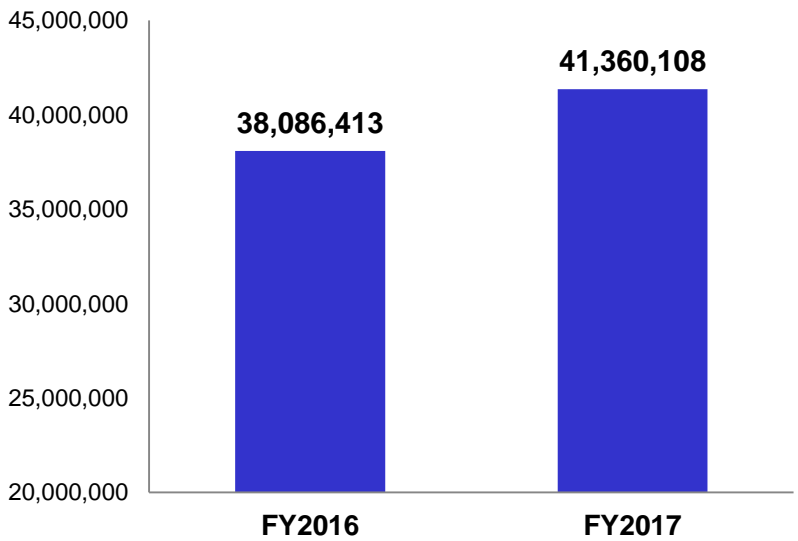


ExpressLanes Trips

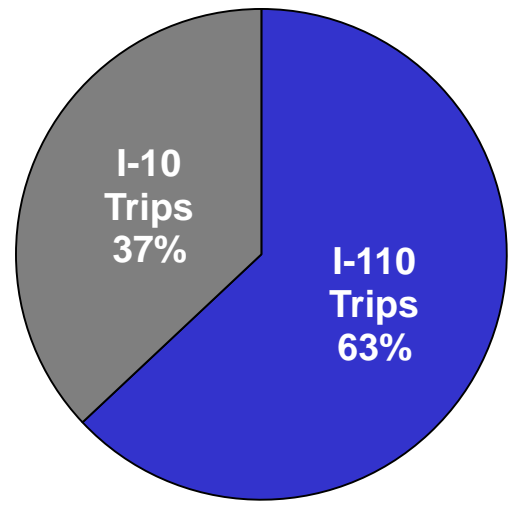
FY17 vehicle trips exceeded 41 million trips; a 9% increase over FY16

- A 7% increase on the I-110 corridor
- An 11% increase on the I-10 corridor

Total ExpressLanes Trips



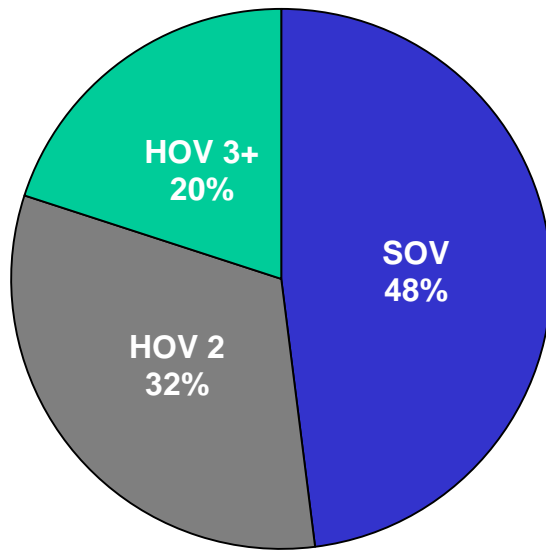
FY17 ExpressLanes Trips by Corridor



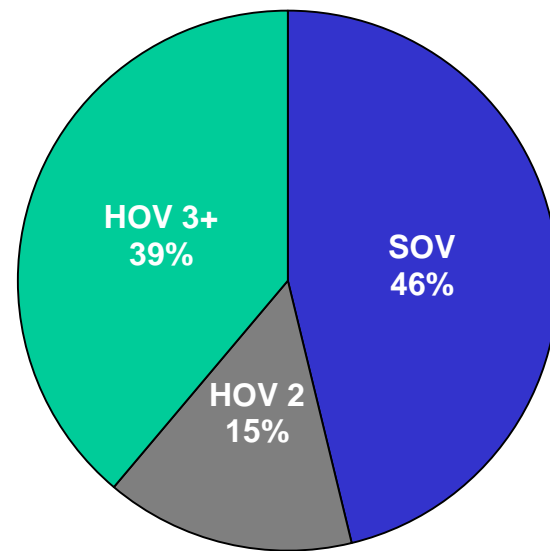
Mode Split

- Most trips in FY17 were carpool trips
- I-10 had a higher percentage of HOV3+ trips

I-110 ExpressLanes



I-10 ExpressLanes



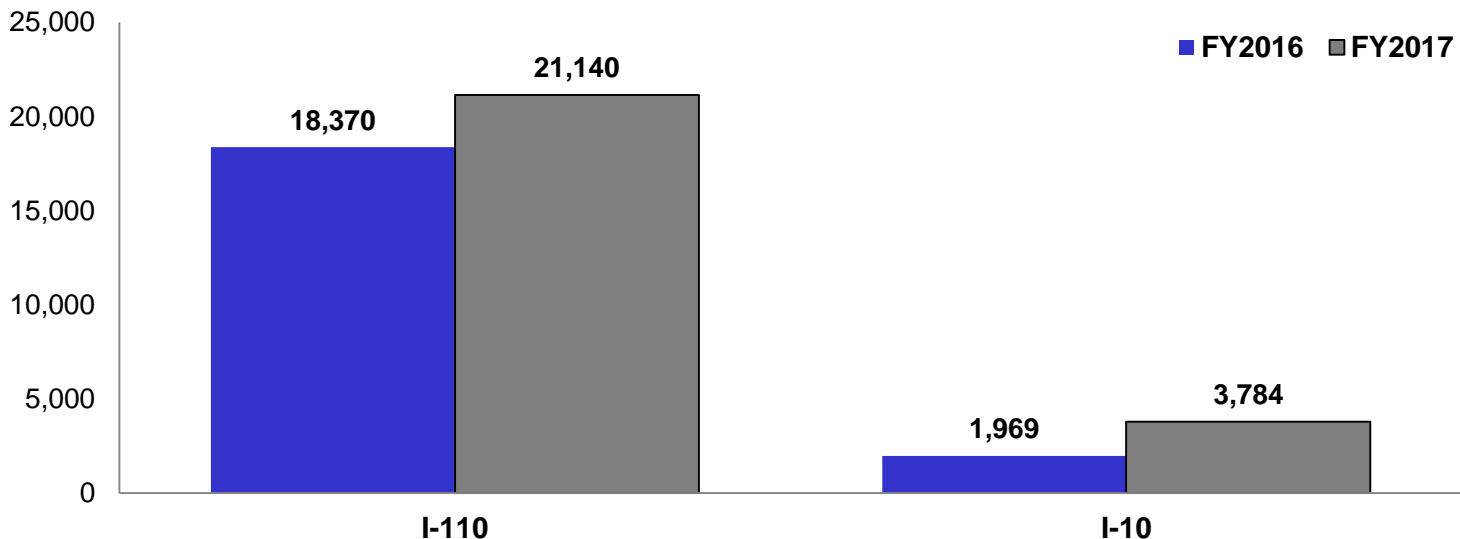
HOV Only Status

AM Peak Period (5AM – 9AM)

To alleviate congestion, the lanes go into ‘HOV Only’ status when vehicle volumes increase to the point where travel speeds fall below 45 mph

- In FY17, the I-110 went into HOV Only status a total of 21,140 minutes, which is a 15% increase over FY16
- In FY17, the HOV Only occurrences on I-10 increased by 92%

HOV Only Minutes by Corridor



HOV Only Status: Improvement Strategies

- To improve the performance of the ExpressLanes during the AM peak, staff will be undertaking a number of projects to reduce the recurrence of HOV Only:
 - Charge a toll to Clean Air Vehicles starting in December 2017 or January 2018;
 - Offer a “Peak of the Peak Incentive Program”; to incentivize customers to change their travel behavior and NOT travel during the peak times;
 - Implement an automated occupancy detection system to ensure consistency between declared occupancy and actual occupancy , expected in FY18 4th quarter;
 - Continue to raise the toll rate, per the Board approved toll policy;
 - Work with Caltrans to determine if it is necessary to raise the carpool minimum occupancy requirement.

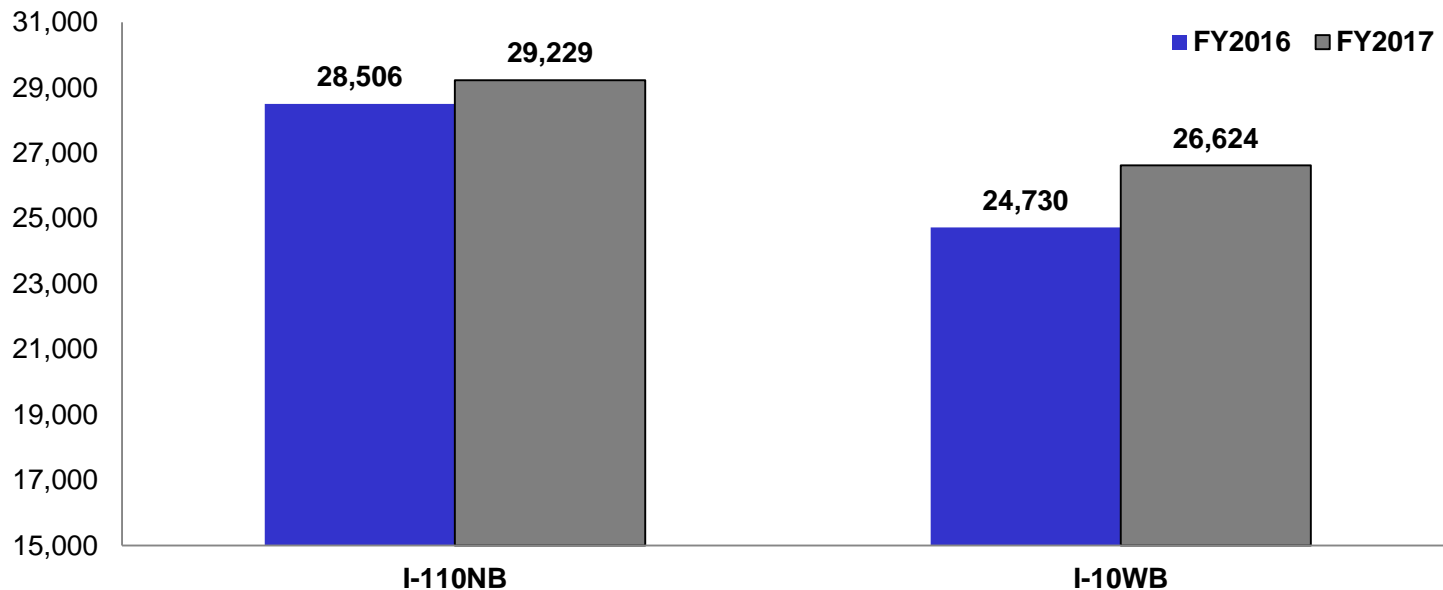
Average Daily Volumes

AM Peak Period (5AM – 9AM)

Average daily vehicle volumes increased by 5% during the AM Peak Period in the Peak Directions

- 3% increase on I-110NB
- 8% increase on I-10WB

ExpressLanes Average AM Peak Vehicle Volume - Peak Directions

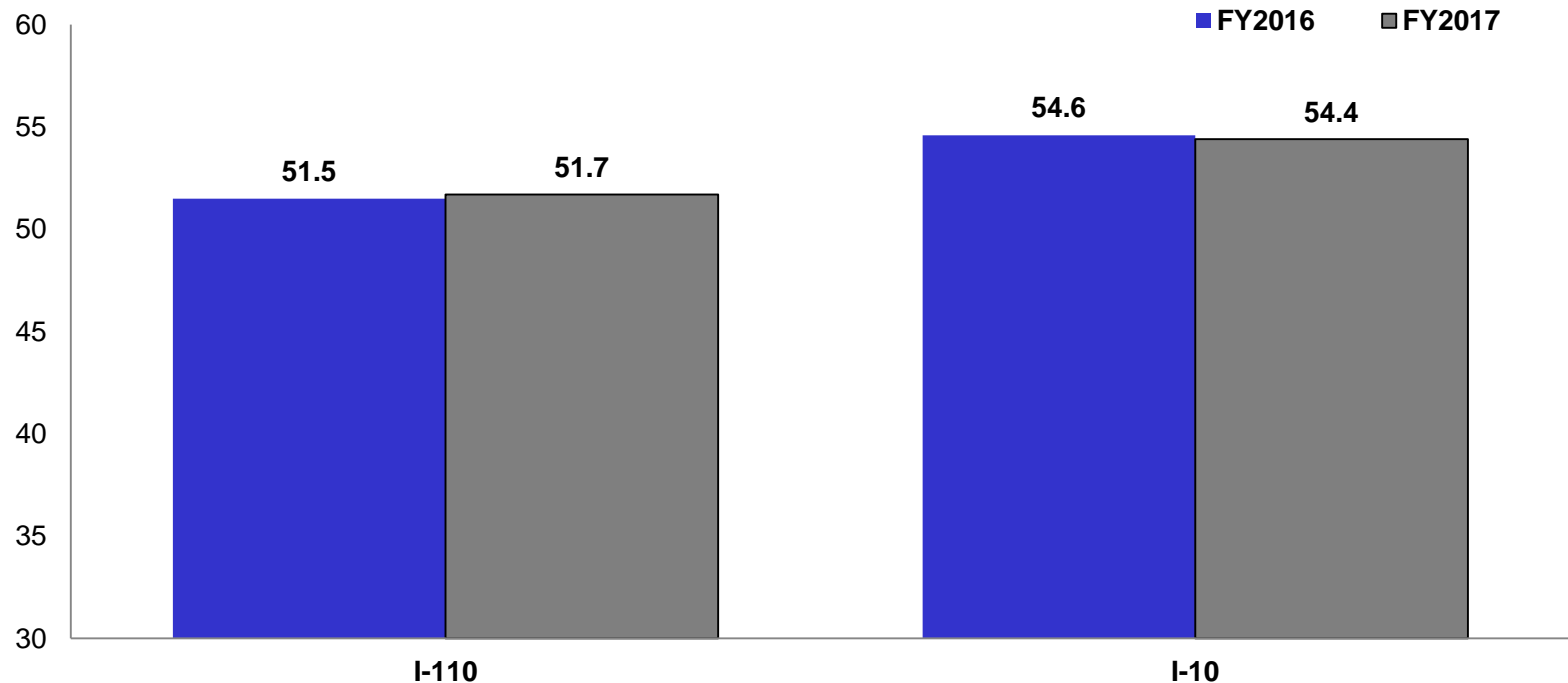


ExpressLanes Travel Speeds

AM Peak Period (5AM – 9AM)

Average weekday AM Peak Period travel speeds were maintained in FY17 despite increased vehicle volumes

Average ExpressLanes Speeds (mph) – AM Peak Period



Next Steps

- **Additional operational improvements Metro will implement to reduce congestion on the ExpressLanes:**
 - Mobile App development to allow customers with Metal Oxide windshields to declare occupancy (3rd quarter FY18)
 - Occupancy Enforcement Beacon lights will be upgraded to aid CHP in enforcement (4th quarter FY18)
 - New CCTV Cameras will be installed to improve real-time traffic monitoring (2nd quarter FY18)
 - New toll gantries to improve toll collection and violation enforcement (2nd quarter FY19)
 - Channelizers (tall pylons) to improve lane access management to reduce the occurrence of unsafe and illegal maneuvers into and out of the ExpressLanes (1st quarter FY18 for I-110; 3rd quarter FY18 for I-10)