



Board Report

File #: 2018-0703, **File Type:** Motion / Motion Response

Agenda Number: 10.

AD HOC CONGESTION, HIGHWAY AND ROADS COMMITTEE JANUARY 16, 2019

SUBJECT: I-10 AND I-110 METRO EXPRESSLANES “PAY-AS-YOU-USE” MODEL

ACTION: APPROVE RECOMMENDATION

RECOMMENDATION

APPROVING a one-year pilot of the “Pay-as-You-Use” model.

ISSUE

At the April 26, 2018 Board meeting, Motion 42 by Director Hahn amended by Director Dupont-Walker (see Attachment A) was approved directing staff to report back on:

- The current performance of the ExpressLanes
- A comparison of the Metro ExpressLanes system to other major congestion-pricing toll systems in the country, with emphasis on those that exhibit demographic similarities to Metro’s ExpressLanes; and
- The viability of Metro ExpressLanes implementing a “Pay-as-You-Use” model eliminating the requirement of a transponder.

BACKGROUND

The Metro ExpressLanes program is designed to provide users with a safe, reliable, predictable trip. To facilitate traffic management, revenue collection, and enforcement of the ExpressLanes, a requirement that all vehicles have a properly mounted FasTrak Flex transponder was included in the current Toll Policy.

Those who travel the ExpressLanes without a transponder are sent a notice of toll evasion inclusive of the toll and an initial \$25 penalty. If they select to open an account, the \$25 penalty is waived and they are charged the toll only. If they do not open an account and fail to make payment within a month, an additional \$30 penalty accrues. Metro ExpressLanes penalty process and fees are consistent with other express lanes operators in California. On average, 47% of violations are paid on the first notice, 20% are paid on the second notice, and 31% are paid on the DMV Hold, with 1.5% not paid.

This motion is requesting staff to revisit this policy.

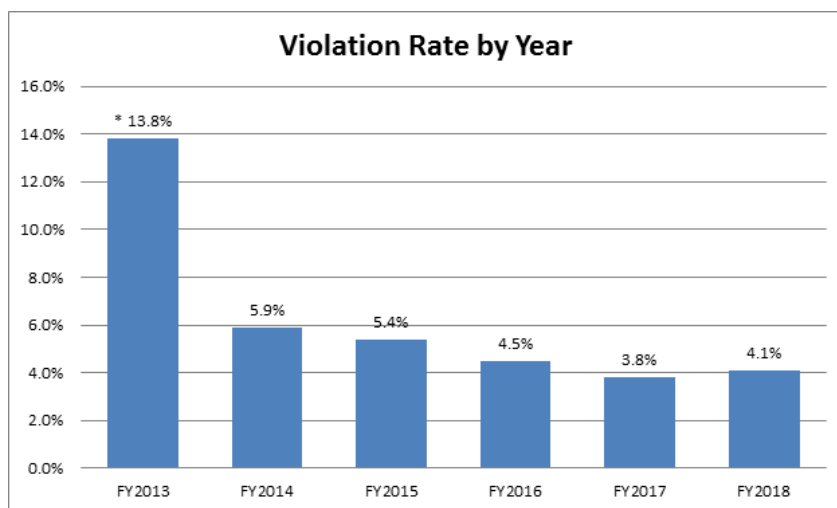
DISCUSSION

Current Performance of the Metro ExpressLanes

In FY 2018, ExpressLanes users took over 42 million vehicle trips on the I-10 and I-110 ExpressLanes; reflecting a 2% increase from FY17 and bringing the 5 year total to over 195 million vehicle trips. Metro ExpressLanes has issued 872,966 FasTrak transponders from inception through FY18, with over 150,000 transponders issued in FY18, a 21% increase from FY17. Approximately 44% of users on both corridors were SOV for FY18, but I-10 had 41% HOV3+ compared to 23% HOV3+ on the I-110. The number of HOV only minutes decreased for both corridors: approximately 6% on I-110 and 14% on I-10.

ExpressLanes users were able to save an average of 13 minutes during the AM commute and 7 minutes in the PM compared to the general purpose Lanes. In FY18 HOV2/3+ increased to 56% from 53% in FY17.

4.1% of all ExpressLanes trips are violation trips made by those without a FasTrak account. Overall, this percentage has decreased as the program has matured as indicated in the chart below.



* FY13 violation rate is for the first 7 months.

The annual customer survey based on 81,748 responses indicated that 89% of Metro ExpressLanes users are satisfied with their speed of travel while 90% are satisfied with time saved relative to toll paid. Respondents were very aware (93.37%) of the FasTrak requirements. 58.50% of our survey respondents knew about the HOV requirements. 57.51% knew that the FasTrak Flex was the switchable transponder. The 2018 Metro ExpressLanes Performance report is included as Attachment B.

Comparison of the Metro ExpressLanes System to Other Major Congestion-Pricing Toll Systems in the Country

Throughout the US, there are various toll roads and express lanes which operate under different

objectives, business rules, and pricing mechanisms.

- **Toll roads** are built to provide highway capacity to address congestion and to provide motorists with an option for relatively congestion free travel when needed most. With toll roads, motorists are given the option to pay a toll to access these lanes on a given trip regardless of vehicle occupancy. Tolls can vary by time of day or based on actual traffic conditions and are collected electronically via a transponder, license plate readers, or at toll booths. The following are a list of toll roads in Southern California.
 - SR 73 (The Toll Roads)
 - SR 133 (The Toll Roads)
 - SR 241 (The Toll Roads)
 - SR 261 (The Toll Roads)
 - SR 125 (SANDAG)
- **Express lanes** optimize lane utilization by selling the extra capacity not being used by carpools and transit vehicles to lower occupancy vehicles. Express lanes are specifically designated highway lanes that typically allow drivers to choose to pay a toll to use the lanes with other users such as carpools, motorcycles, buses, and vanpools that travel free. The benefits of express lanes are that they offer more choices to solo drivers and encourage carpooling. Express lanes often rely on dynamic pricing which helps manage the flow of traffic in which tolls are continually adjusted according to traffic conditions. The tolls are higher when there is more traffic in the express lane, and lower when the traffic is lighter. The following are a list of express lanes in Southern California.
 - I-10 (Metro)
 - I-110 (Metro)
 - I-15 (San Diego)
 - SR-91 (OCTA)
 - SR-91 (RCTC)

Demographics Comparisons

Based on an analysis of demographic data associated with each of the 13 major metropolitan regions in the country that have express lanes, the most similar regions to Los Angeles with respect to race and income distributions are listed below in descending order of similarity.

Race Distribution:

Rank	City, State	“Pay-as-You-Use” Offered	HOV Discount Offered for “Pay-as-You-Use”	Surcharge of Fee for “Pay-as-You-Use”
1	Seattle, WA	Yes	No	\$2
2	Minneapolis and St. Paul, MN	No	N/A	N/A
3	Austin, TX	Yes	No	\$1

Income Distribution:

Rank	City, State	“Pay-as-You-Use” Offered	HOV Discount Offered for “Pay-as-You-Use”	Surcharge of Fee for “Pay-as-You-Use”
1	Houston, TX	No	N/A	N/A
2	Denver, CO	Yes	No	\$5-10
3	Baltimore, MD	No	N/A	N/A

Altogether, these six regions contain a total of 18 express lanes. Additional details regarding the data sources, methodology, and findings are available in Attachment C: Demographic Analysis of Express Lane Regions.

Operational Comparison With Other Systems

Metro staff compiled operational data across all express lane facilities in the United States and across all toll road facilities in California to characterize industry practice. The summary chart is presented in Attachment D: Comparison Chart.

Of the 43 express lane facilities in the United States, 14 or 33% offer “Pay-as-You-Use” options to those who pay the full toll with none providing an HOV or any other discount for “Pay-as-You-Use” access. Furthermore, every facility that allows “Pay-as-You-Use” access imposes a surcharge or fee ranging between \$1 and \$10 for that option. While 36 of the 43 facilities or 84% offer some form of toll discount to HOVs, every one of these facilities requires that the user be an account holder with a transponder to be eligible to receive the discount.

When further focusing specifically on the 18 express lane facilities in the six regions that were found to be most similar to Metro ExpressLanes with respect to demographic characteristics, similar trends are revealed. Specifically, 7 out of 18 facilities (39%) offer a “Pay-as-You-Use” option. Of these 7 facilities, none offer an HOV discount to “Pay-as-You-Use” drivers, and all impose a surcharge or fee for “Pay-as-You-Use” access (\$1 to \$10). For account holders, 15 out of 18 facilities (83%) offer some form of discount to HOVs.

For further comparison and insight, of the 13 toll facilities in California, 6 or 46% offer a “Pay-as-You-

Use” option with none offering an HOV discount to “Pay-as-You-Use” drivers, and all impose a surcharge or fee for “Pay-as-You-Use” access. While 8 of the 13 (or 62%) of the facilities offer some form of toll discount to HOVs, they also require either that the HOVs be existing account holders, or require that the HOVs pay at staffed toll booths.

Note also that out of all the 55 express lanes and toll road agencies surveyed, Metro ExpressLanes was found to be the only agency to offer a Low-Income Assistance Plan to accommodate the specific needs of disadvantaged segments of the population. Furthermore, the Metro ExpressLanes Low Income Assistance Plan relies on account-based designations for qualifying members, and would be infeasible to implement through a plate-based tolling approach for non-account holders.

Viability of “Pay-as-You-Use” Model

Current System Requirements

The Metro ExpressLanes issuance of switchable transponders allows customers an easy means by which to declare the number of people in the vehicle enabling HOV/carpools to use the ExpressLanes toll free. These declarations are enforced through a combination of California Highway Patrol (CHP), a FasTrak transponder, and an automated license plate camera system.

“Pay-as-You-Use” Model

The “Pay-as-You-Use” model would allow drivers to use the Metro ExpressLanes without a FasTrak transponder. Tolls would be assessed based on license plates. The registered owner of the vehicle on file with the Department of Motor Vehicles would be responsible for the toll payments. Customers would receive an invoice for their Metro ExpressLanes trip and would have the option to pay on the website, over the phone or at a customer service center. Any unpaid invoices would incur penalties for delinquency. With the “Pay-as-You-Use” model, customers would not be able to access other express lane or FasTrak facilities throughout the State unless the facility supports this model.

The table below captures the potential structure of a “Pay-as-You-Use” model if implemented at Metro:

	FasTrak Flex Account	“Pay-as-You-Use” Model
Transponder Required	Yes	No
Can drive throughout California FasTrak corridors	Yes	No
Option to pay with credit card	Yes	Yes
Option to pay cash	Yes	Yes
Account maintenance fee	Yes, \$1 a month	No
Additional surcharge for each Metro ExpressLanes trip	No	Yes

Program Limitations with “Pay-as-You-Use” model

Under the proposed scenario, “Pay-as-You-Use” customers would be charged the toll and an applicable surcharge. The use of a mobile application was evaluated and found to be infeasible as a method for offering HOV discounts to “Pay-as-You-Use” customers for the following reasons:

1. A mobile app would require user authentication to access the system, and this would require that the user be an existing account holder.
2. Roadside CHP enforcement of occupancy declaration would not be possible, as the system would not be able to read a given vehicle’s license plate quickly enough to identify it in real time (for CHP enforcement purposes) as it drove by.

Some agencies allow for drivers to pay online up to 4 or 5 days after they drive the lanes by entering license plate information. Generally, these agencies operate a full toll road or a bridge and rely on time of day pricing or set toll rates. Express lanes facilities typically do not have this option as the toll rates are calculated dynamically based on distance traveled requiring data from multiple gantries to be compiled into one trip that is then charged to a customer.

With transponder-based transactions, the trips can be calculated and posted to a customer account within the next day. However, with plate based express lane transactions it can take between 5-10 days to post a trip with the toll amount. This is due to the need for DMV determination of vehicle ownership as well as the manual image review process in which people view and key in license plates each time a plate is not readable by the automated system. Without this information, the system will not know how much and whom to charge.

Staff is not recommending the option of mobile app or pay within 5 days for the “Pay-as-You-Use” model, consistent with all other express lanes that utilize this model.

ExpressLanes Usage Considerations

To evaluate the potential operational impacts of the proposed “Pay-as-You-Use” model on the ExpressLanes, staff conducted a literature review of other agencies’ experiences with similar types of transitions. For additional insight, staff also performed its own original research and analysis of the impacts of such a policy change on the TCA Toll Roads when a “Pay-as-You-Use” model was implemented in early 2014. The results gathered from both the literature review and from the independent analysis were inconclusive with respect to the effects of a “Pay-as-You-Use” pricing model on trip volumes due to limited availability of past studies/data, and the presence of several variables that could not be controlled for in the data sets that did exist.

In the case of the TCA Toll Roads, for example, the implementation of its “Pay-as-You-Use” pricing model coincided with the decommissioning of all cash booths and the economic recession, which made it impossible to isolate the effect of the “Pay-as-You-Use” pricing strategy using the operational data that was available. Staff performed a preliminary internal qualitative assessment of the potential impacts associated with this policy change and anticipates an increase in ExpressLanes volume as a result of employing a “Pay-as-You-Use” model due to the removal of a potential barrier to entry for non-customers, although the magnitude of this increase cannot be estimated from the available data. Consequently, staff is recommending analysis of the results of the pilot to more accurately determine impacts.

Financial Considerations

The “Pay-as-You-Use” model may introduce some revenue leakage with a variety of causes. Industry standards have shown that transitioning to this model may increase revenue leakage because transaction volume increases while the rate of non-payment stays the same. Transponder based transactions hold an advantage over license plate based in processing costs and efficiency. It is estimated that license plate based tolling costs 3 times more to process when adding mailing costs, image/trip processing, revenue leakage, and customer service time.

Based on these factors, tolling operators who offer “Pay-as-You-Use” model charge an additional fee.

The “Pay-as-You-Use” model may lead to a reduction in violations fees or may lead to increased usage of the corridors and income from tolls plus fees. The pilot would enable evaluation of this potential impact on the I-10 and I-110 project.

2018 Customer Survey

To supplement efforts to develop a response to the Board motion, staff included a question related to the “Pay-as-You-Use” model in the 2018 customer survey. Please note that the survey was limited to current account holders. Approximately 45% of the respondents indicated that they would not be interested in a program that would allow use of ExpressLanes without transponders at a \$1 to \$2 surcharge. 66% and 77% of respondents indicated that they would not be interested in using the ExpressLanes without a transponder with a surcharge of \$3 to \$4 and \$5 to \$7 respectively. The expectation is that the customers who were surveyed would remain as customers and continue to use transponders as they were mostly not in favor of this model. However, this model does not

directly impact customers but is intended to enable those who are not registered customers with transponders to use the ExpressLanes without incurring a penalty.

Findings

The following summarizes the findings of the “Pay-as-You-Use” model.

1. This method allows customers to use the ExpressLanes without any advance interaction with the toll agency addressing the needs of visitors and infrequent users;
2. From a system perspective, the pay as you use model can be integrated into the current and new back office systems;
3. There is a potential increase in ExpressLanes volumes as a result of employing this model;
4. All users regardless of the number of occupants will have to pay a toll at all times (CAVs and HOVs) consistent with all other express lanes operators;
5. The Low-Income Assistance Plan can only be applied to account holders;
6. Billing process will not be as fast and efficient for “Pay-as-You-Use” as that for account holders;
7. An additional surcharge will be added to each transaction to supplement the additional staffing expense due to manual image review and transaction/mailling processing. All “Pay-as-You-Use” operators charge this surcharge;
8. The “Pay-as-You-Use” model will require changes to the existing signage and a regional outreach campaign;
9. This model may lead to revenue leakage or may lead to increased usage of the corridors and income from tolls plus fees which will be determined as part of the pilot.

Pilot of the “Pay-as-You-Use” Model

Given the potential and challenges of implementing this model and the inconclusive findings regarding impacts on congestion and revenue, staff recommends implementation of a one year limited pilot to enable assessment of the impacts with minimal changes to the system, signage, and marketing until after an evaluation is completed. Staff anticipates program impacts as summarized in the findings listed above. The pilot is expected to go-live within 9 months of board approval.

The pilot of this model will include the following:

Process Changes

The first notice will be issued to the registered owner of the vehicle with an option to pay the toll and a \$4 surcharge within 20 days and a \$25 penalty if paid between the 20th and 30th day. If the amount due is not paid within 30 days, an additional notice including an additional \$30 penalty will be sent. If an additional 60 days has passed without payment, a DMV registration hold will be placed on the vehicle. The analysis for the \$4 surcharge can be found in Attachment E.

Additionally, the following steps will be implemented prior to deployment.

- CHP will be notified that drivers without transponder should not be pulled over and cited.
- Limited campaign educating users that they can use the lanes without transponders.

System & Customer Service Changes

- The website will be modified to provide new information regarding the changes to this model.
- Transaction processing, and notice procedures will be updated to reflect the process above.
- Modifications will be made to customer communications, account statements, and other correspondence documents.
- Changes to the signage on the corridor will be completed by covering over the “ONLY” portion of the “FASTRAK ONLY” sign.

To accelerate implementation of the pilot and evaluate the results of this policy prior to full implementation, the following will be postponed.

- Regional education campaign to inform commuters about this policy change;
- New signage and upgrades to existing signage.

Following the 12 month pilot, a before and after evaluation will be developed to determine the impacts associated with this policy change and whether full implementation is warranted.

Required Operational Changes for Full Deployment after Pilot Evaluation

This model would require system and process modifications. There would be impacts to the back office system, roadside, and customer service procedures.

- **Back office system changes include:**
 - The website and Interactive Voice Response (IVR) telephone systems require modifications to provide new information and call trees regarding the changes to this model.
 - Transaction processing, violation notice procedures, and invoice generation will need to be modified.
- **Customer service changes include:**
 - Modifications would have to be made to customer communications, account statements, and other correspondence documents.
 - A regional education campaign to inform commuters about this policy change must be

undertaken.

- **Roadside changes include:**

- Changes to lane enforcement routines and procedures would need to be communicated to CHP.
- At the lane level, roadside signs would require new messages to communicate the new pricing model and requirements to motorists. For example, all FasTrak Only signs will need to be replaced. New signs need to be installed to communicate that motorists can use the lanes under the “Pay-as-You-Use” model. These new signs are not part of the standard Federal Manual on Uniform Traffic Control Devices for Streets and Highways signage, which will require approval from Caltrans and potentially from Federal Highway Administration which could take up to eighteen months.

The rough order of magnitude cost impact associated with full deployment is estimated at approximately \$6.6 million.

FINANCIAL IMPACT

Funding for implementation of the pilot is anticipated to be approximately \$750,000 and is available in the FY19 budget in cost center 2220. Because this is a multi-year program, the cost center manager and the Executive Officer of the Congestion Reduction Department Programs will be responsible for budgeting for future years.

Impact to Budget

The funding for this action will come from toll revenues generated from the Metro ExpressLanes operations. No other funds were considered for this activity. This funding is not eligible for bus/rail operating and capital expenses.

IMPLEMENTATION OF STRATEGIC PLAN GOALS

The Response to this Motion aligns with Strategic Goal 1: Provide high-quality mobility options that enable people to spend less time traveling. ExpressLanes provide drivers with the option of a more reliable trip while improving the overall operational efficiency of the freeway network.

ALTERNATIVES CONSIDERED

The Board may choose not to move forward with this recommendation. If no action is taken, the current noticing structure will remain. This alternative is not recommended since piloting the “Pay-as-You-Use” model will enable us to evaluate this alternative payment method.

NEXT STEPS

If the Board directs staff to implement a “Pay-as-You-Use” model, a detailed plan, cost estimate,

necessary resources, and schedule will be developed for the pilot; staff will return to the Board as necessary regarding progress toward implementation.

Staff will continue to monitor the performance of the corridor and will address alternative payment models as part of a larger Metro ExpressLanes policy review as necessary unless otherwise directed by the Board

ATTACHMENTS

Attachment A - Board Motion 42

Attachment B - FY18 Performance Report

Attachment C - Demographic Analysis of Express Lane Regions

Attachment D - Comparison Chart

Attachment E - Surcharge Assumptions and Costs

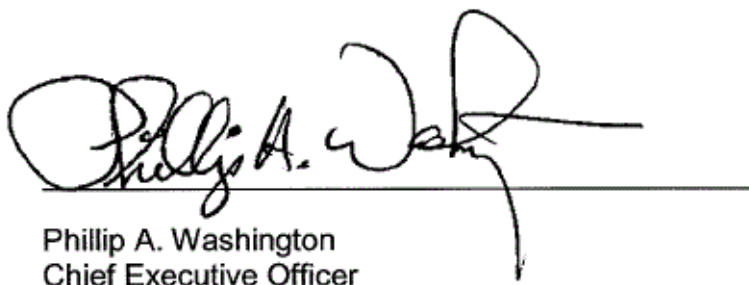
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Phillip A. Washington
Chief Executive Officer



Board Report

File #: 2018-0194, **File Type:** Motion / Motion Response

Agenda Number: 42.

**REGULAR BOARD MEETING
APRIL 26, 2018**

Motion by:

HAHN as amended by DUPONT-WALKER

Metro ExpressLanes officially began with a US Department of Transportation Grant in April 2008, which would convert existing High Occupancy Vehicle (HOV) lanes into dynamically-priced high-occupancy toll (HOT) lanes. This initial congestion pricing pilot project was specifically designed to reduce congestion along two of the Los Angeles region's most impacted freeways: the I-110 and I-10. Metro ensures the ExpressLanes maintain traffic flow, prevent them from being overloaded, and maintain a federally mandated minimum speed of 45 miles per hour.

Many of Metro's goals - expanding the rail and bus network, investing in active transportation, and connecting us throughout the Los Angeles region, aim to achieve some level of reduced congestion and fewer vehicle miles traveled. Metro is now looking at expanding the ExpressLanes to the I-105 Freeway.

I believe that Metro should continue to review the Express Lanes program and ensure it continues to meet its commitment to ease freeway congestion and improve the quality of life for Los Angeles County residents. Metro should also study toll systems in other large jurisdictions, giving priority to those with similar demographics; and explore ways that the Express Lanes can be made available to more drivers.

**SUBJECT: MOTION BY HAHN AS AMENDED BY DUPONT-WALKER
FEASIBILITY STUDY ON EXPRESSLANES**

APPROVE Motion by Hahn as amended by Dupont-Walker that the CEO report back in 180 days to the Board on:

- A. The current performance of the ExpressLanes;
- B. A comparison of the Metro ExpressLanes system to other major congestion-pricing toll systems in the country; and
- C. The viability of Metro ExpressLanes implementing a "Pay-as-You-Use" model for all drivers.

METRO EXPRESSLANES

Operations Performance Report

FISCAL YEAR 2018
(ENDING JUNE 30, 2018)



Metro®

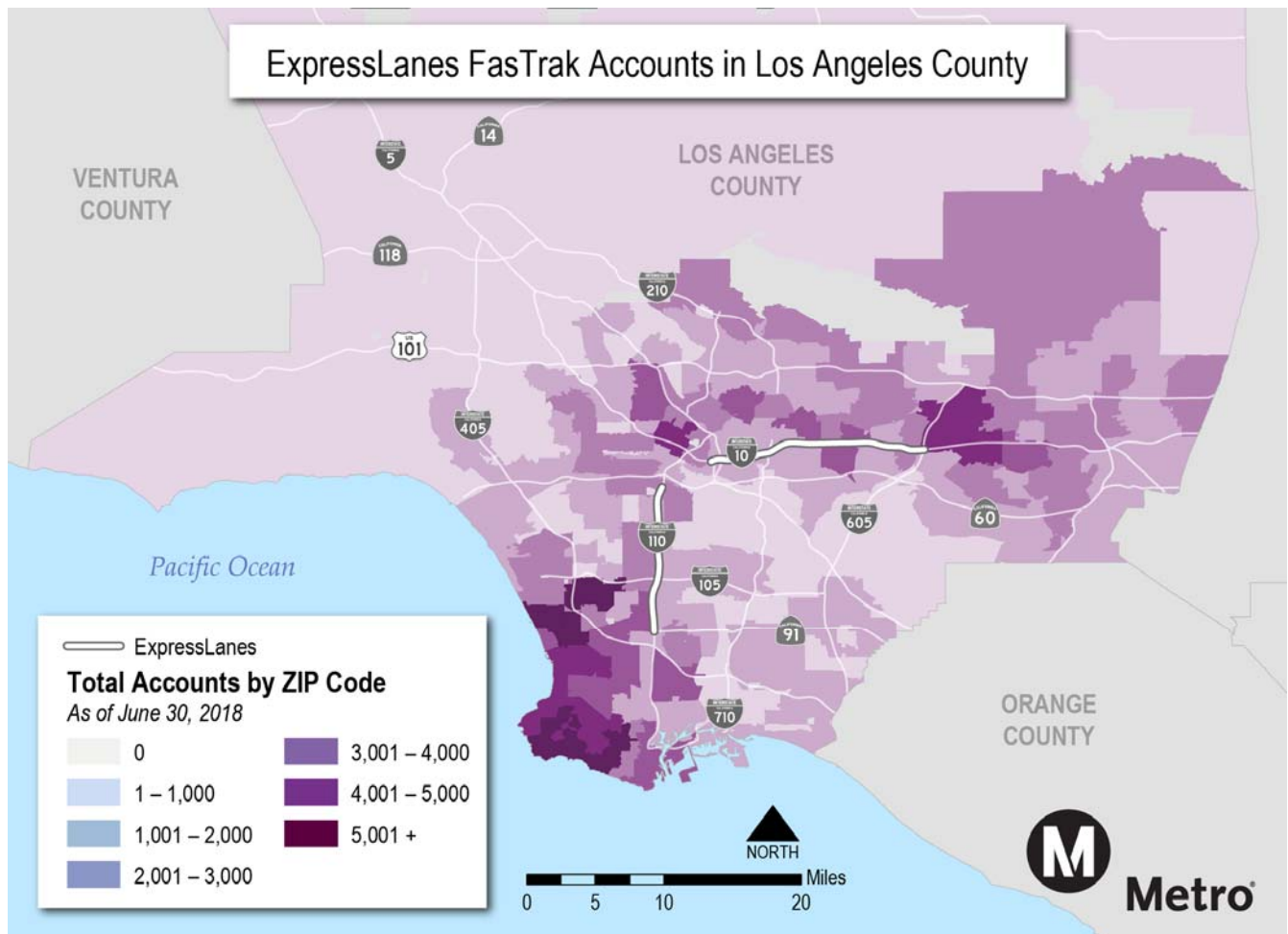


Program Highlights

Operational Totals through June 30, 2018

TOTAL VEHICLE TRIPS		195,331,723
	I-110 TRIPS: 125,407,606	I-10 TRIPS: 69,924,117
TOTAL ACCOUNTS OPENED		702,500
	LOW-INCOME ASSISTANCE PLAN ACCOUNTS	17,049
	TAP REWARDS REGISTERED ACCOUNTS	18,384
TOTAL TRANSPONDERS ISSUED		872,966

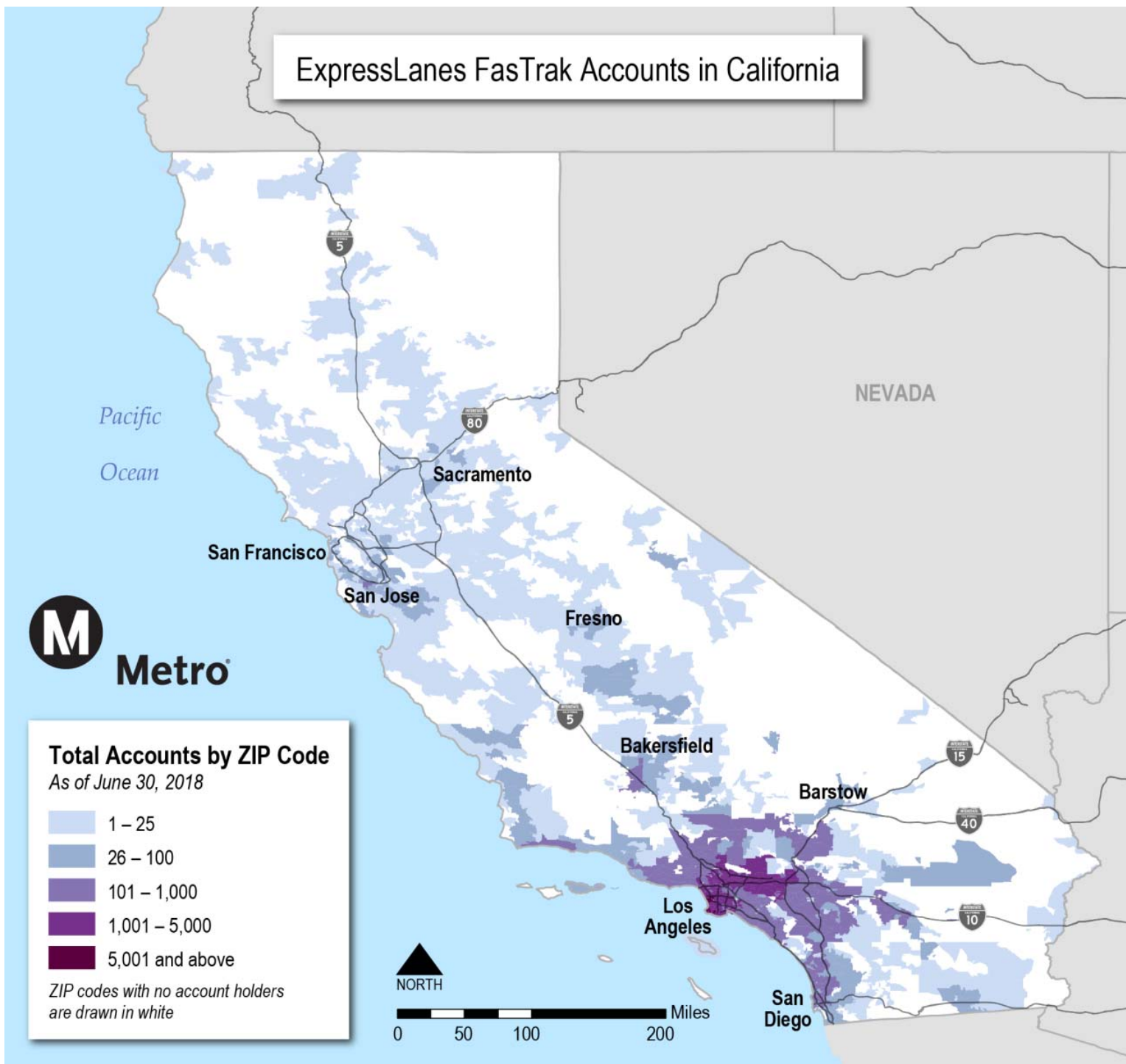
ExpressLanes Customers in Los Angeles County





ExpressLanes Customers in California

ExpressLanes FasTrak Accounts in California

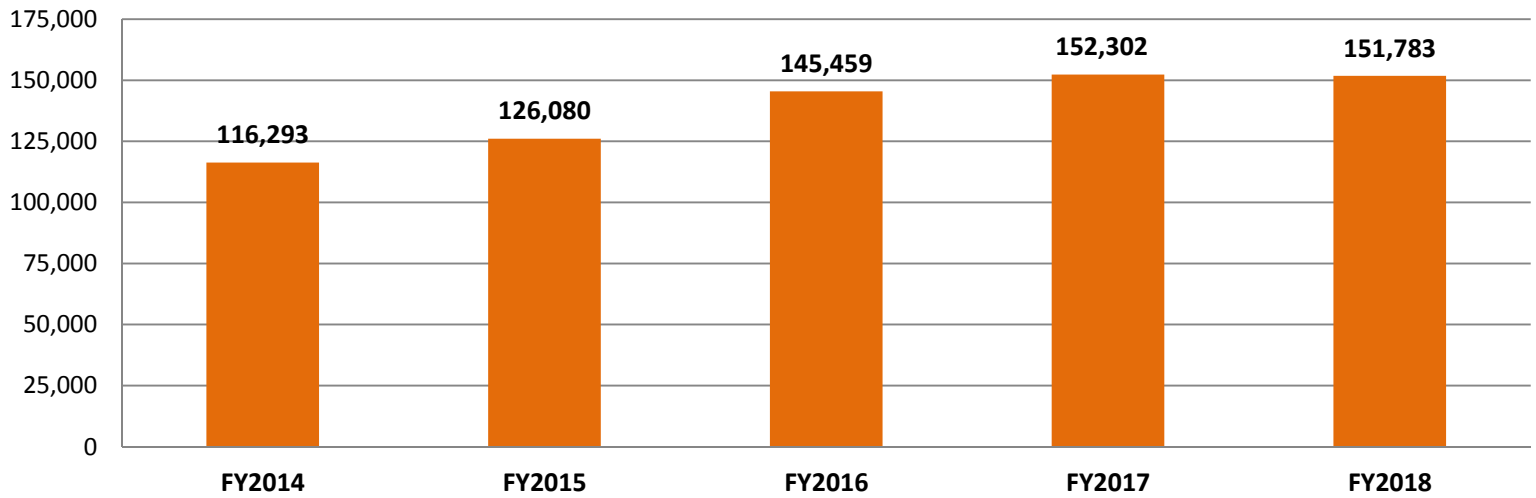




FasTrak® Transponder Adoption

The demand for Metro ExpressLanes FasTrak® transponders continues to grow. A total of 872,966 transponders have been issued through June 30, 2018 and a total of 702,500 accounts have been opened. In 2018, transponder adoption was at the second highest level in the 5 full years of operations.

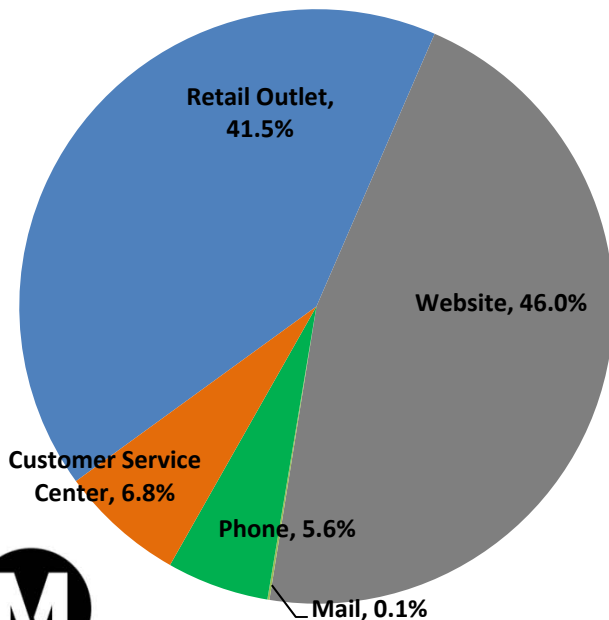
Newly Issued FasTrak® Transponders



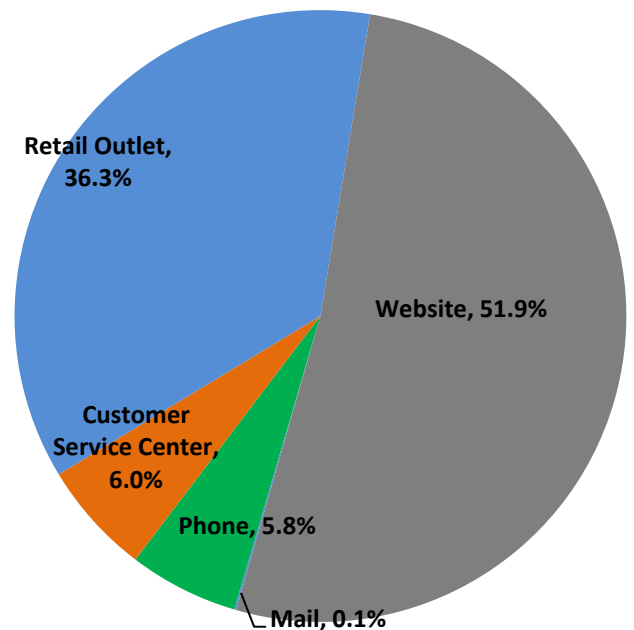
Account Opening Channel

In FY18 our website, metroexpresslanes.net, was the largest channel for transponder distribution, followed by our retail partners. Customers can purchase a FasTrak® transponder at participating AAA, Costco, and Albertsons locations in Los Angeles County. Account openings on the web saw an increase from 2017 to 2018, with almost 52% of accounts opened on the website.

FY17 Accounts Opened by Channel



FY18 Accounts Opened by Channel



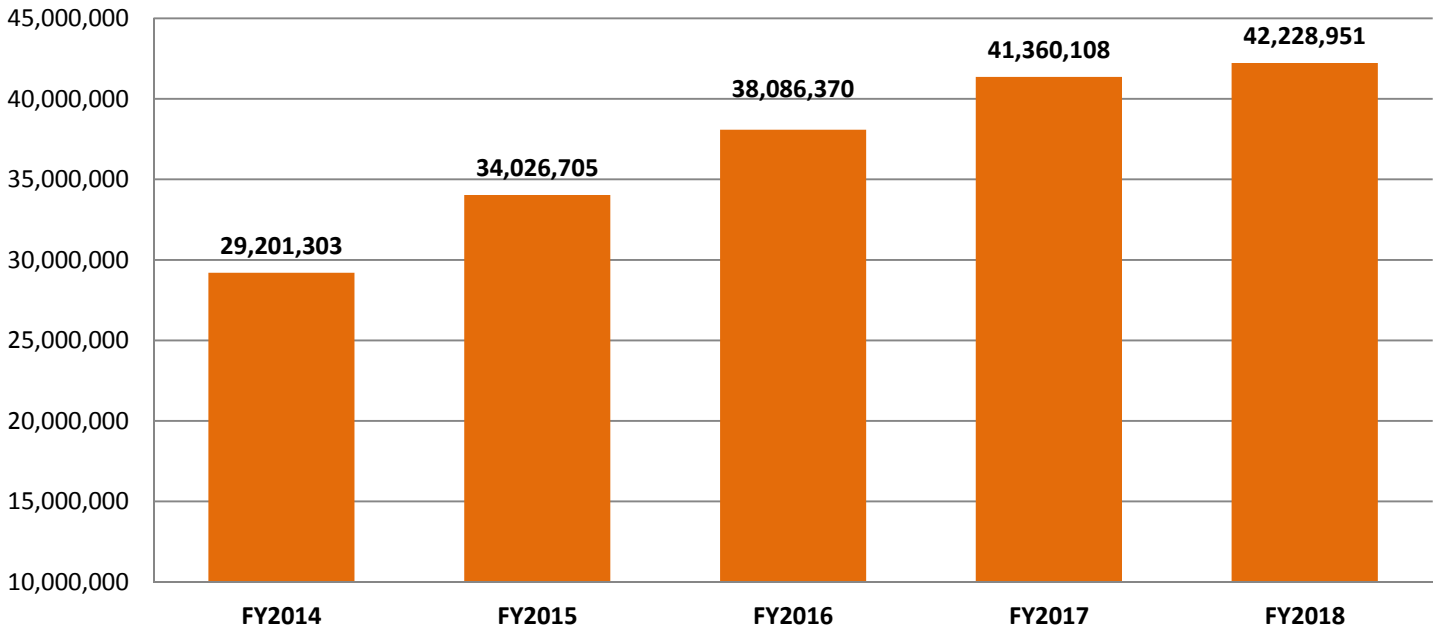
Metro



ExpressLanes Trips

Vehicle trips on the ExpressLanes increased by 2.1% in FY18 compared to FY17. A total of 195,331,723 trips have been taken on the ExpressLanes from opening November 10, 2012 through June 30, 2018.

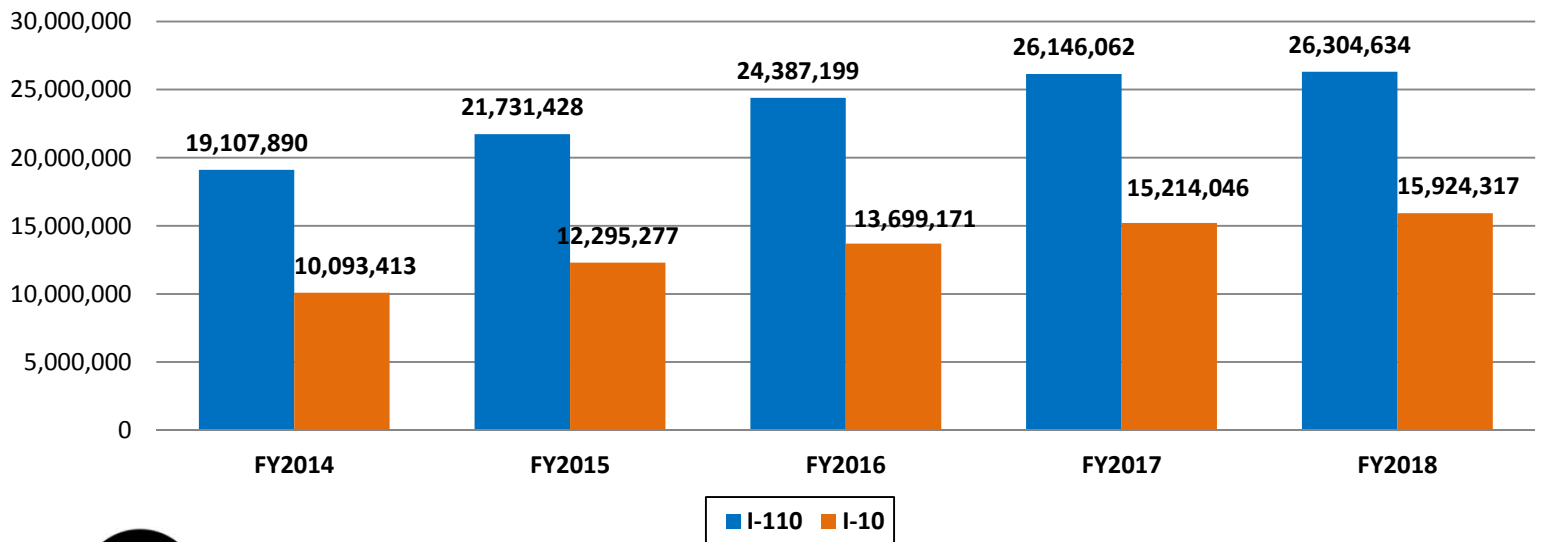
Total ExpressLanes Trips by Year



Trips by Corridor

The I-110 corridor continues to have higher trip volumes than the I-10 corridor. However, I-110 trips only increased by .61% in FY18 compared to a 4.67% increase on the I-10 corridor.

ExpressLanes Trips by Corridor

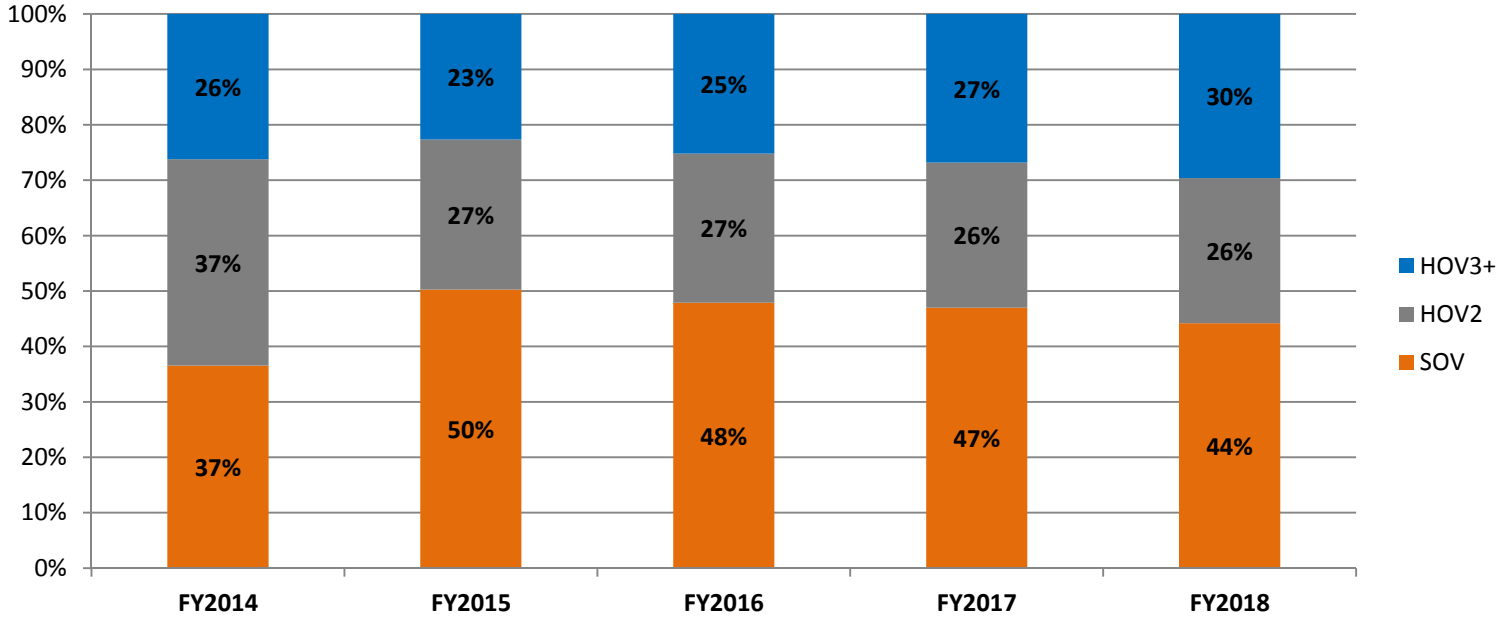




Mode Split

In FY18 HOV2 and HOV3+ continued to slightly increase over Single Occupant (SOV) trips.

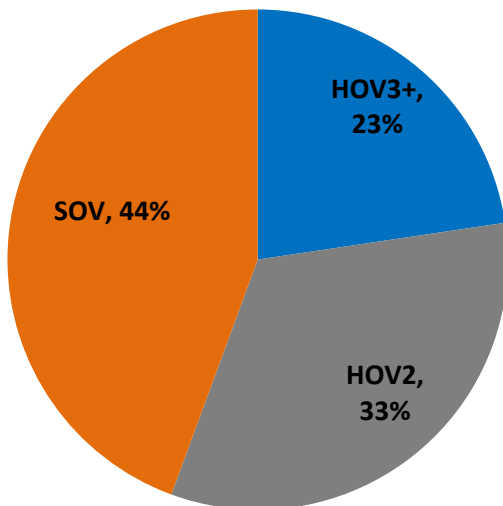
ExpressLanes Occupancy Split by Year



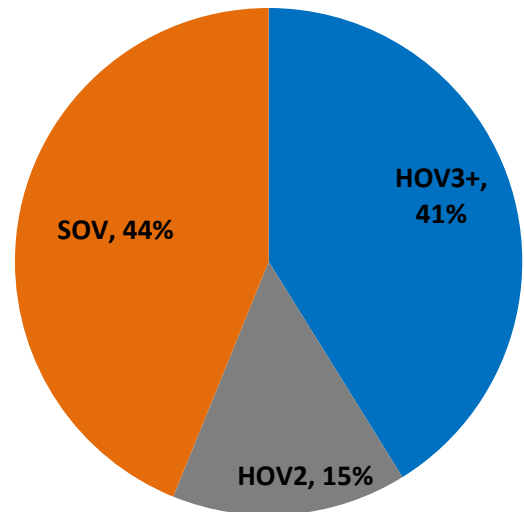
Mode Split by Corridor

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

I-110 FY18 Occupancy Split



I-10 FY18 Occupancy Split

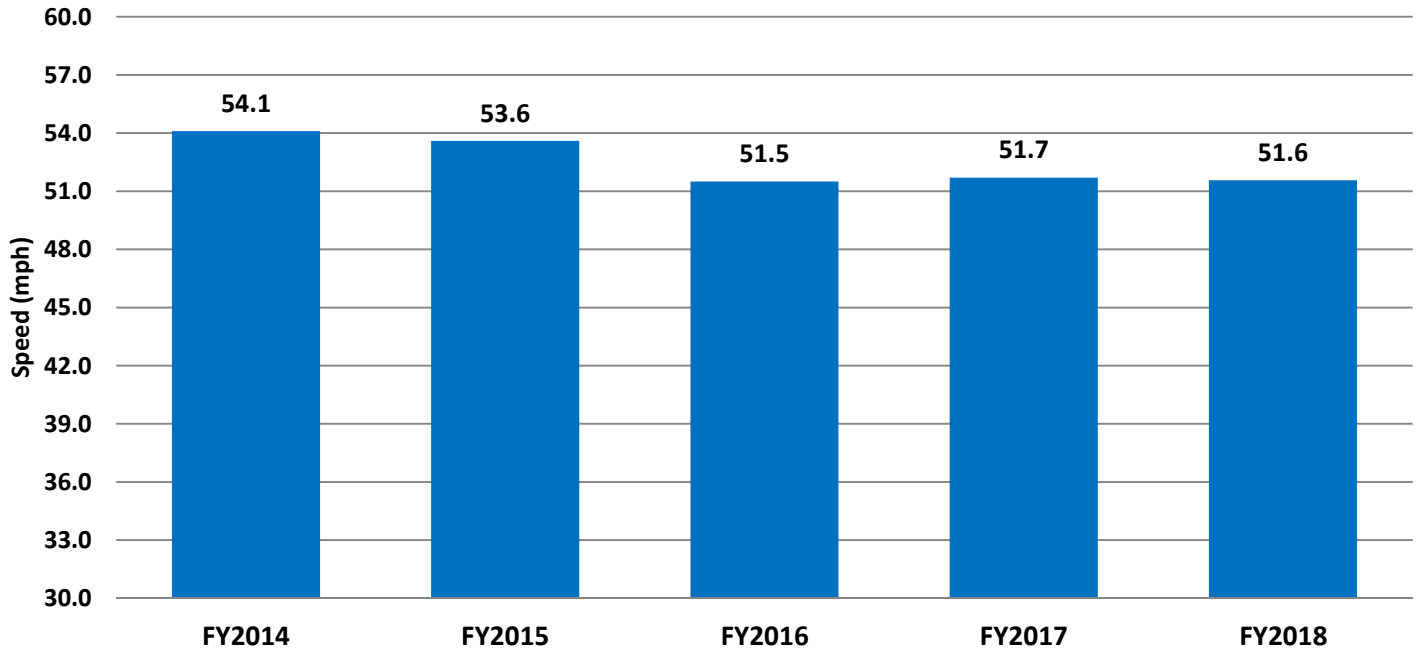




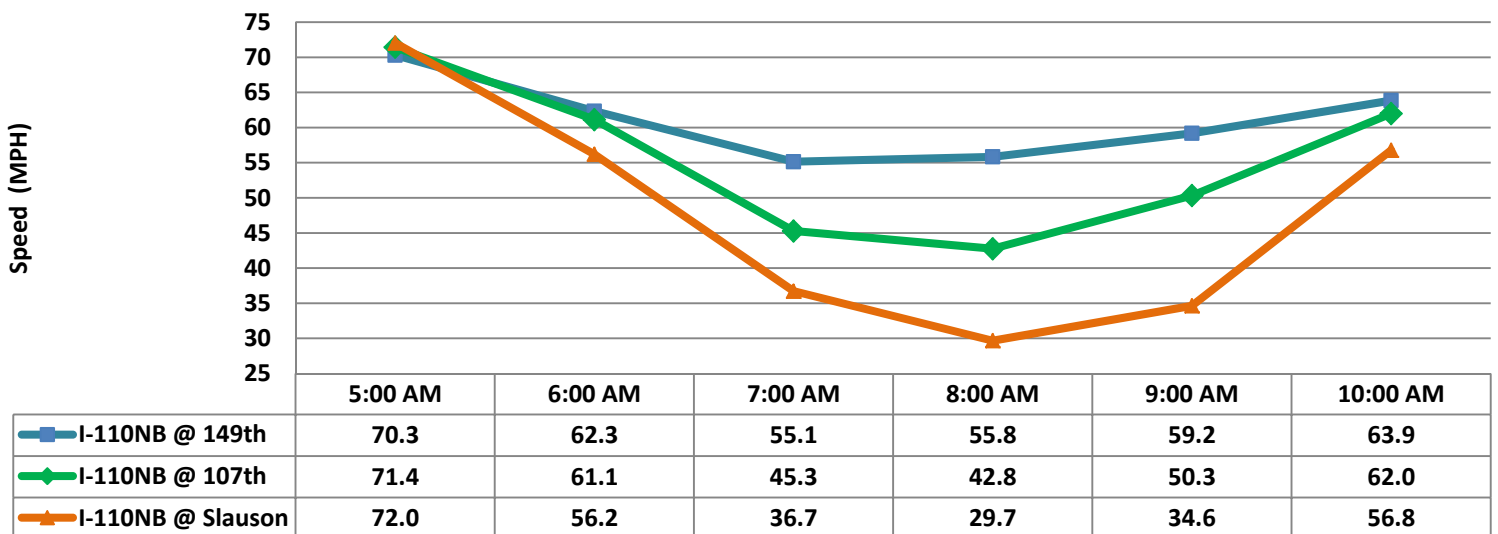
I-110 ExpressLanes Average Travel Speeds During Morning Peak

Average travel speeds during the year have remained above 45mph for the entire AM peak period. In FY18, speeds remained relatively unchanged from FY17 on the I-110 northbound. However, average speeds fluctuated during the morning peak depending upon the location and time. The number of vehicles in the ExpressLanes increases closer to downtown Los Angeles and between the hours of 7:00 AM and 9:00 AM causing speeds to decrease. In FY18, speeds were slowest near Slauson Avenue around 8:00 AM.

I-110NB Average Travel Speeds - AM Peak



FY18 Average I-110NB AM Peak Speeds by Time and Location

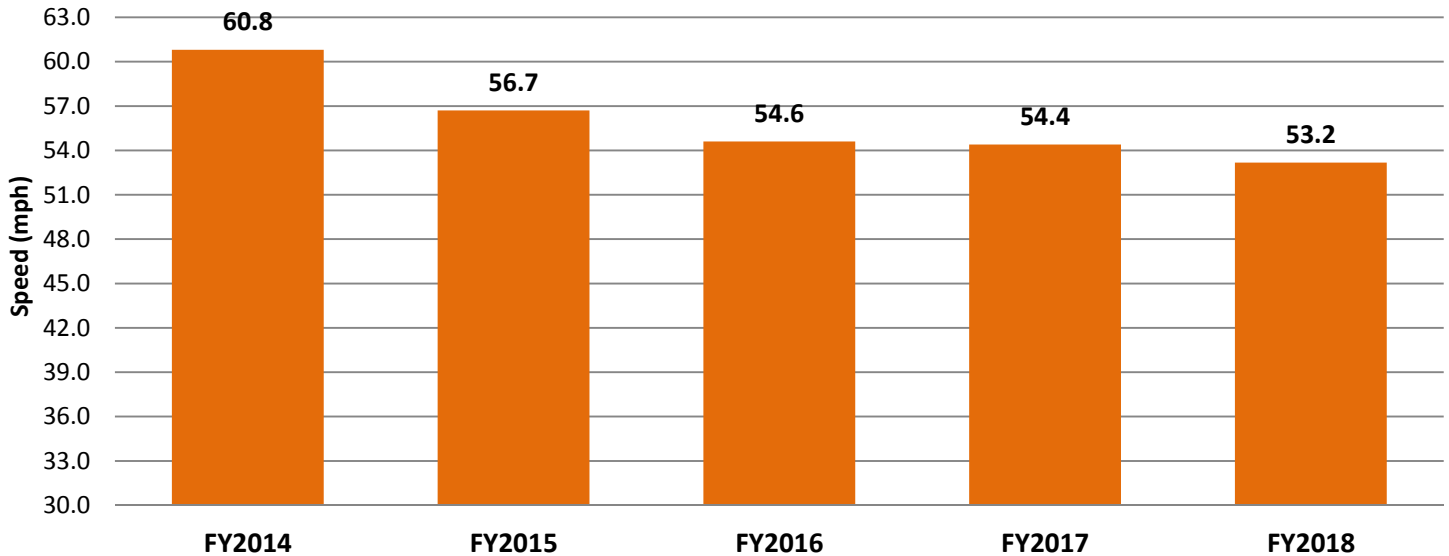




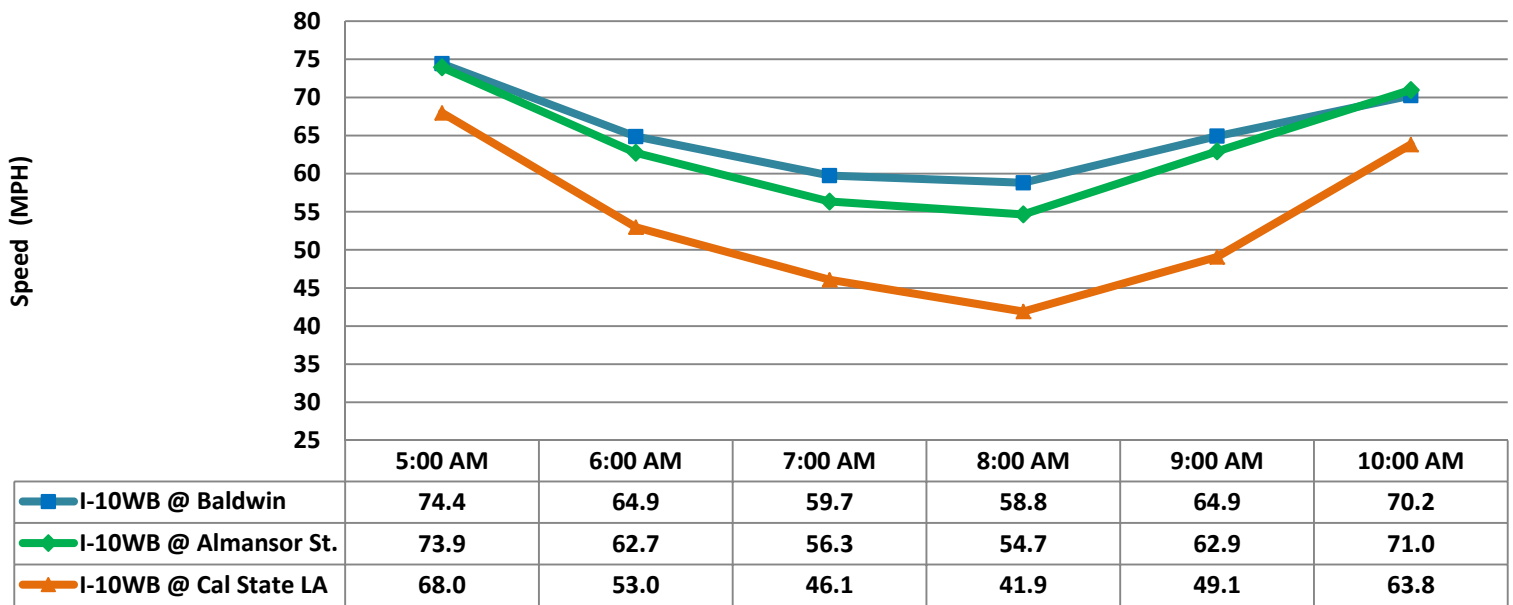
I-10 ExpressLanes Average Travel Speeds During Morning Peak

Average travel speeds during the year have remained above 45mph for the entire AM peak period. In FY18, speeds decreased by 2% from FY17 on the I-10 westbound. Average speeds fluctuate during the morning peak depending upon the location and time. The number of vehicles in the ExpressLanes increases closer to downtown Los Angeles and between the hours of 7:00 AM and 9:00 AM causing speeds to decrease. In FY18, speeds were slowest near the Cal State Los Angeles exit around 8:00 AM.

I-10WB Average Travel Speeds - AM Peak



FY18 Average I-10WB AM Peak Speeds by Time and Location

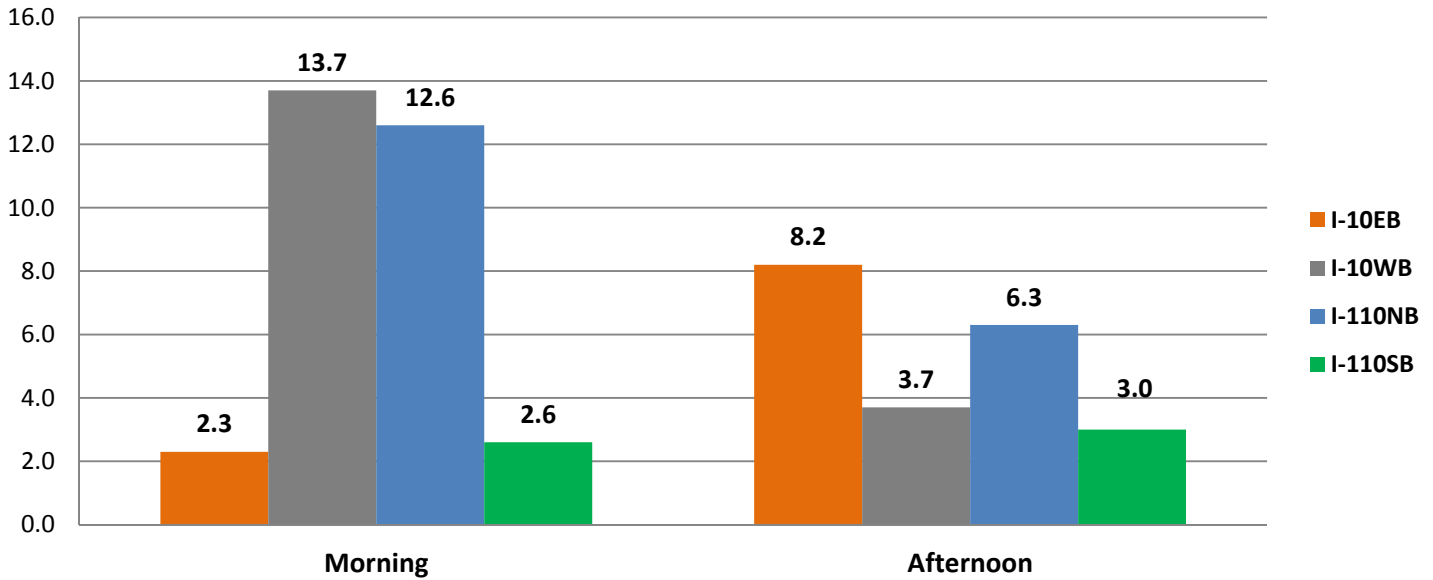




ExpressLanes Travel Times Savings Over General Purpose Lanes

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 travelers saved up to an average of over 13 minutes when in the ExpressLanes compared to the GP lanes. Afternoon travelers saved up to an average of 8 minutes in the ExpressLanes compared to the GP lanes.

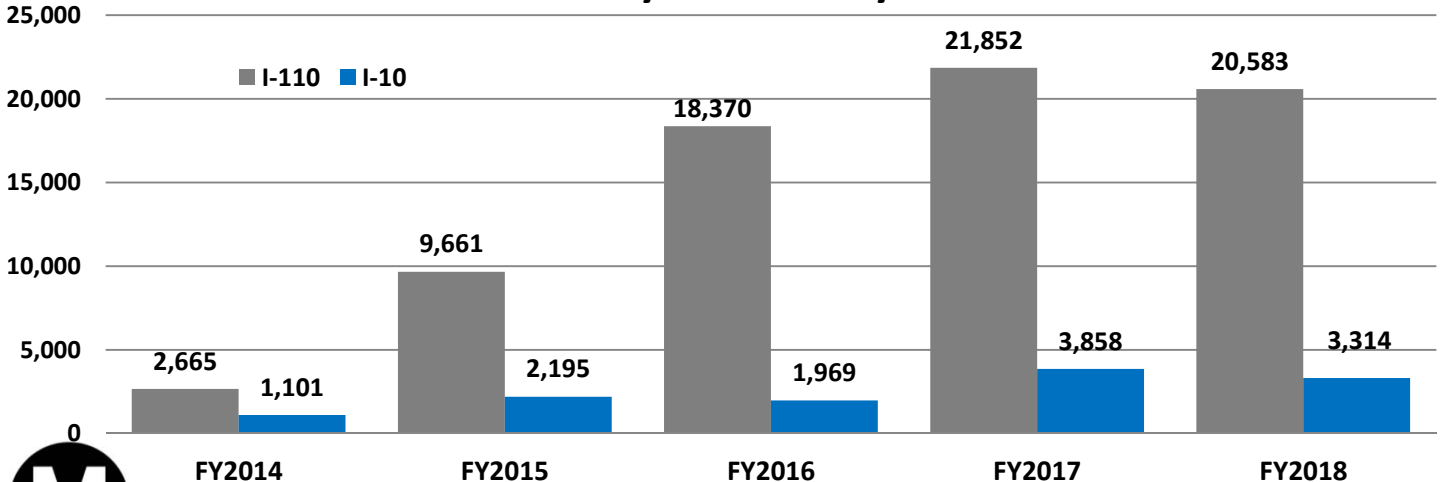
FY18 Average Travel Time Savings (Minutes)



HOV Only Status

When the average vehicle speed begins to fall below 45mph on a segment of the lanes, the lanes go into HOV Only status, precluding SOV drivers from entering 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. FY18 HOV Only minutes decreased by 5.8% on the I-110 and 14.1% on the I-10 due to further refinement of the dynamic pricing algorithm.

HOV Only Minutes by Year

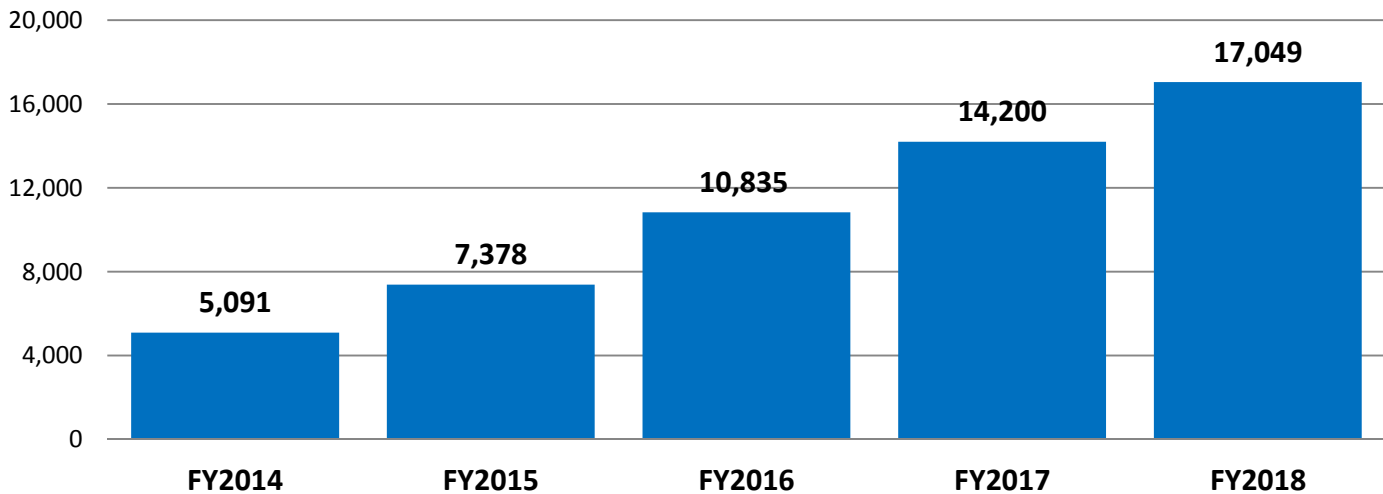




ExpressLanes Customer Incentives – Low Income Assistance Plan

Residents of Los Angeles County with an annual household income equal to or less than double the federal poverty level qualify for a one-time credit of \$25 and an automatic waiver of the monthly account maintenance fee. Although the number of new accounts opened was less in FY18 than FY17, the total number of accounts increased by 20% to 17,049. Increased outreach and marketing is planned for FY19 in an effort to increase customer participation in the program.

Total Low Income Assistance Plan Accounts



Low Income Assistance Plan Outreach

Metro ExpressLanes provides outreach at different community events, festivals, and transportation workshops throughout the year to promote the plan. During FY18 multiple campaigns advertised the program on bus cards (spring 2018), billboards (spring 2018), and online ads (winter 2017 to spring 2018).



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METRO EXPRESSLANES



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. Since the opening of the ExpressLanes, 749,000 qualifying transit trips have been taken and \$179,960 in rewards have been issued.

FASTRAK EXPRESS LANES

**WE DRIVE.
YOU SAVE.**

**METRO EXPRESSLANES
TRANSIT REWARDS**

M Metro

FASTRAK

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 and toll credits when they use the ExpressLanes with a FasTrak® set to HOV2 or HOV3 status. Since the inception of the program, \$45,000 in gift cards and toll credits have been given to carpoolers.

**START A
CARPOOL, GET
REWARDED.**

M Metro

FASTRAK

**METRO EXPRESSLANES
CARPOOL LOYALTY
PROGRAM**





ExpressLanes Customer Appreciation – 5th Year Anniversary

The Metro ExpressLanes celebrated the 5th anniversary of operations in FY18. The I-110 ExpressLanes opened November 10, 2012 and the I-10 on February 23, 2013. In appreciation of our customers, all tolls were reversed for trips taken on the anniversary date of each corridor. In addition, Metro ExpressLanes staff recognized customers with the longest active accounts; provided all Low-Income Assistance Program participants with toll credits; and with support from Metro Operations, provided transit riders at the El Monte and Harbor Gateway Transit centers with ExpressLanes branded giveaways.



Metro ExpressLanes giveaways were provided to transit riders at the Harbor Gateway Transit Station November 6-9, 2017. (Above)



Messaging signs on the ExpressLanes had an appreciation message for customers on the I-110 and I-10 anniversary dates. (Above)



Transit riders were able to learn more about Metro ExpressLanes and receive giveaways at the El Monte Station February 19-23, 2018. (Left)

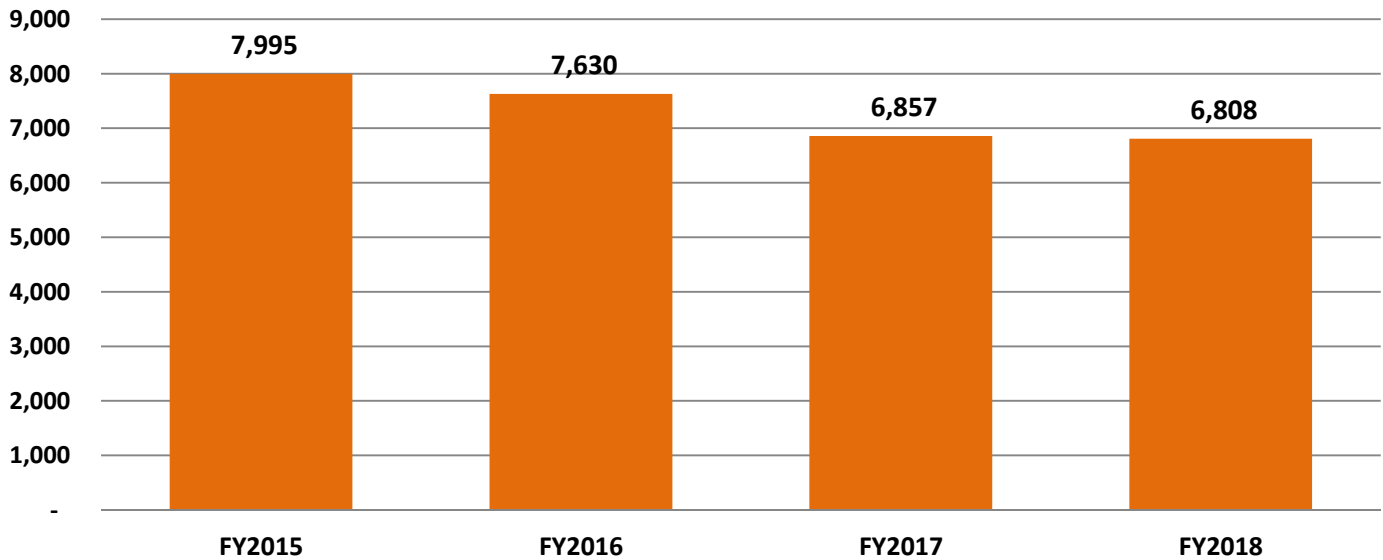




Silver Line Transit Ridership on the ExpressLanes

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 0.71%, compared to overall Silver Line ridership increase of 2.3% in FY18.

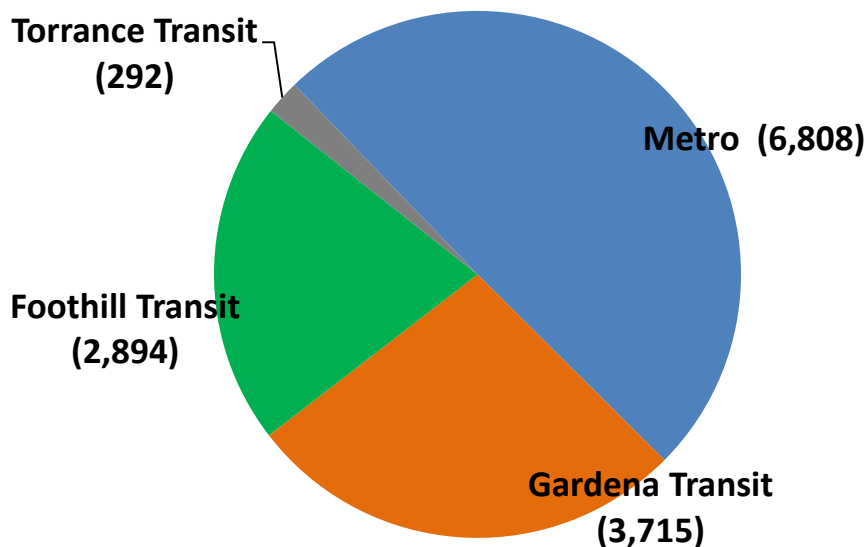
Silver Line Average AM and PM Peak Daily ExpressLanes Ridership



FY18 Transit Ridership on the ExpressLanes

In addition to the Metro Silver Line, Foothill Transit, Gardena Transit and Torrance Transit operate on the I-110 and I-10 ExpressLanes. In FY18 an average of 13,709 passengers were transported by these agencies during the AM and PM peak periods.

FY18 ExpressLanes Average AM and PM Peak Daily Transit Ridership

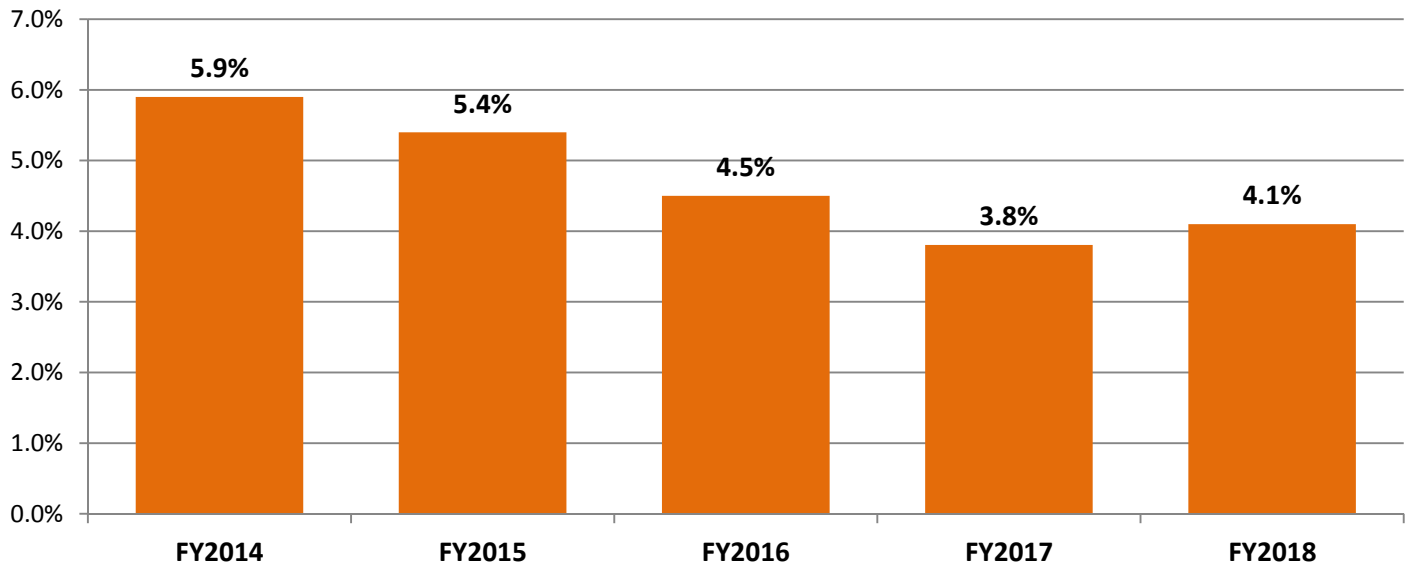




ExpressLanes Safety & Enforcement – Violations Issued

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. There was a slight increase in the percentage of violations between FY17 and FY18. Nevertheless, the violation percentage is consistent with programs at the same level of maturity at the 5 year mark.

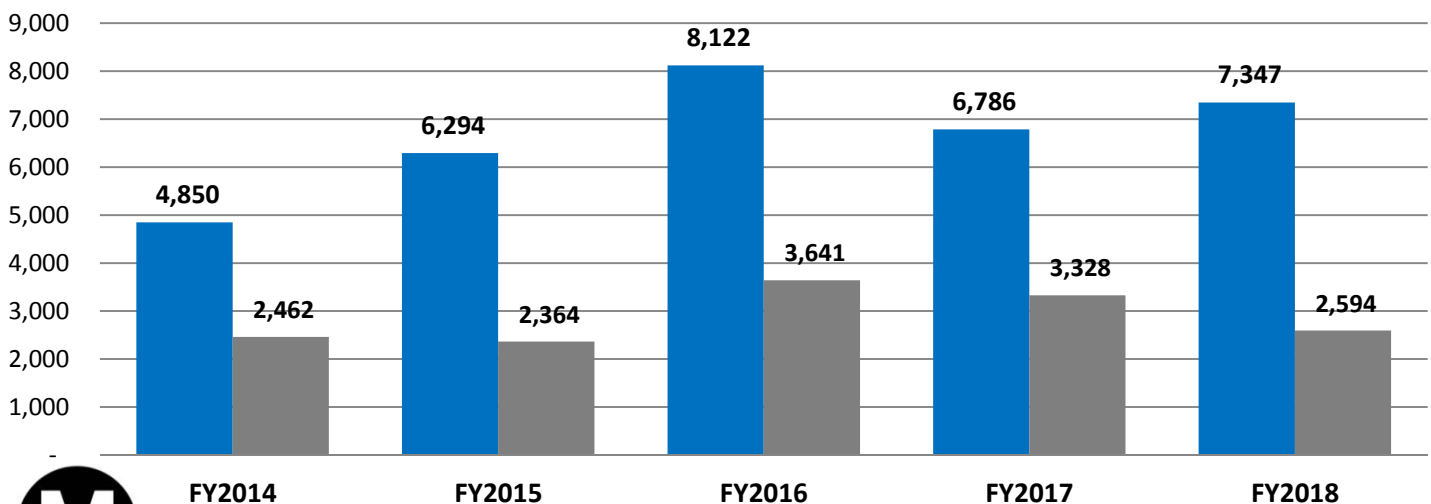
Violation Rate by Year



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 increased by 8% from FY17 to FY18.

CHP Issued Citations & Verbal Warnings



Metro

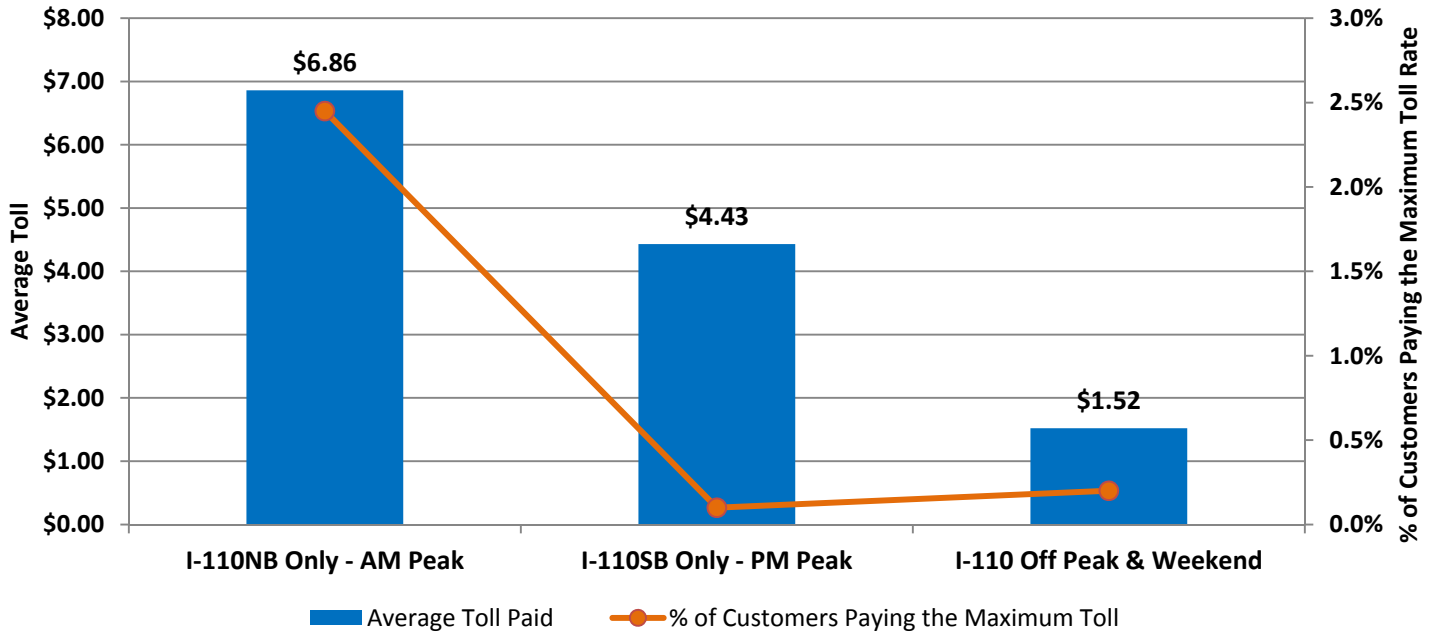
■ Citations Issued ■ Verbal Warnings



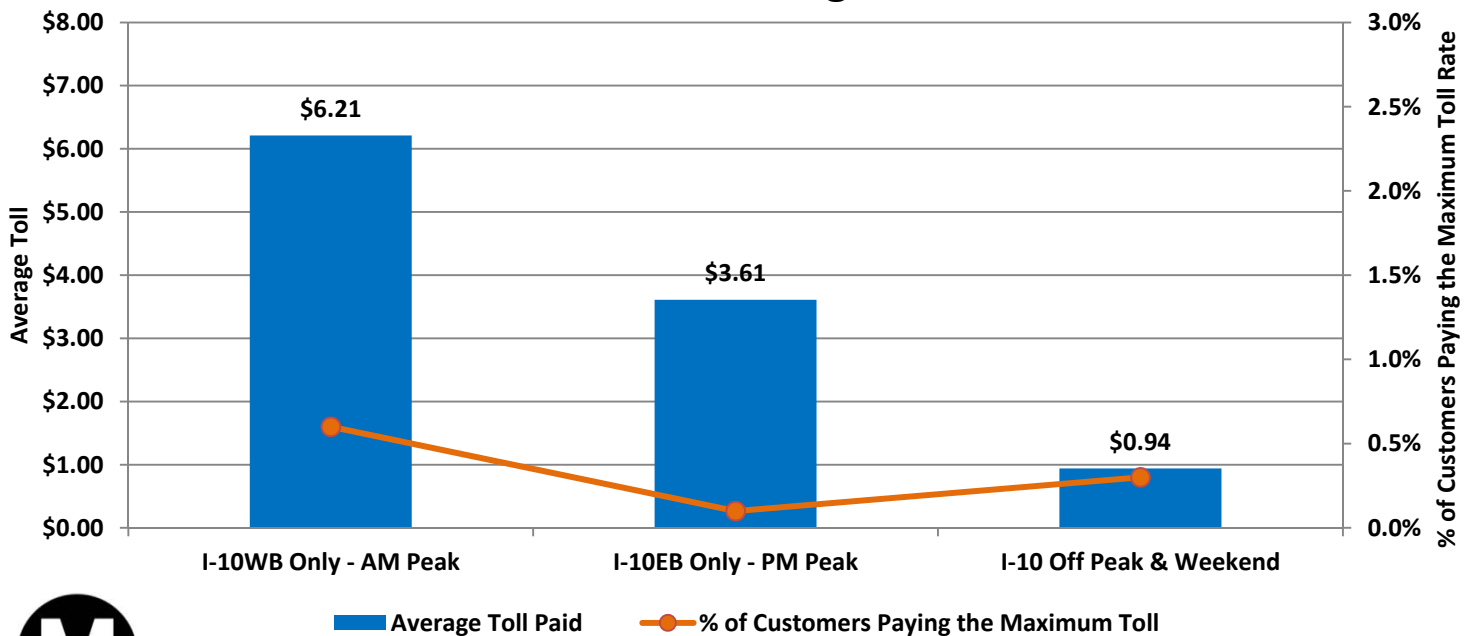
Average Tolls

Metro ExpressLanes uses a dynamic pricing algorithm to adjust the price of tolls according to the traffic volumes on the ExpressLanes. In FY18 the toll rates ranged from a minimum of \$0.10 to a maximum of \$2.00 per mile driven on the ExpressLanes. In FY18 the average toll during the AM Peak was \$6.86 and \$6.21 on the I-110NB and I-10WB respectively. Few customers pay the maximum toll rate; only 2.45% of I-110NB customers and 0.6% of I-10WB customers paid the maximum toll rates of \$26.20 and \$22.50, respectively during the AM Peak in FY18.

FY18 I-110 Average Tolls



FY18 I-10 Average Tolls





2018 Metro ExpressLanes Customer Survey

During August 2018 Metro ExpressLanes conducted a survey of our customers. The purpose of the Metro ExpressLanes 2018 Customer Survey was to gather feedback as part of Metro ExpressLanes' ongoing efforts to improve customer experience.

The survey included questions regarding Metro ExpressLanes use, proposed customer incentives/programs and potential modifications to toll-exempt carpool requirements. The survey was conducted August 1-15, 2018 and was sent to all Metro ExpressLanes customers with a valid email on file. In FY18 a total 81,748 customer responded. This was an 80% increase over 2017's 45,278 respondents.

Respondents were evenly split between I-10 and I-110 users providing insight to customer travel patterns and awareness of business rules on both corridors. In general, customer satisfaction remains high and at or above the satisfaction levels of the 2017 customer survey.

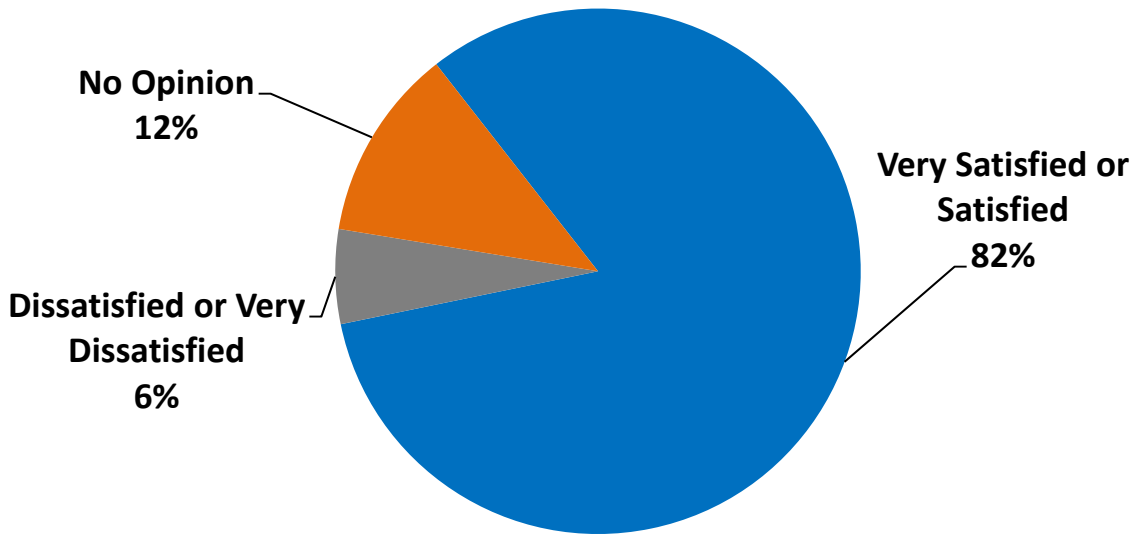
Key 2018 customer surveys findings are listed on the following pages.



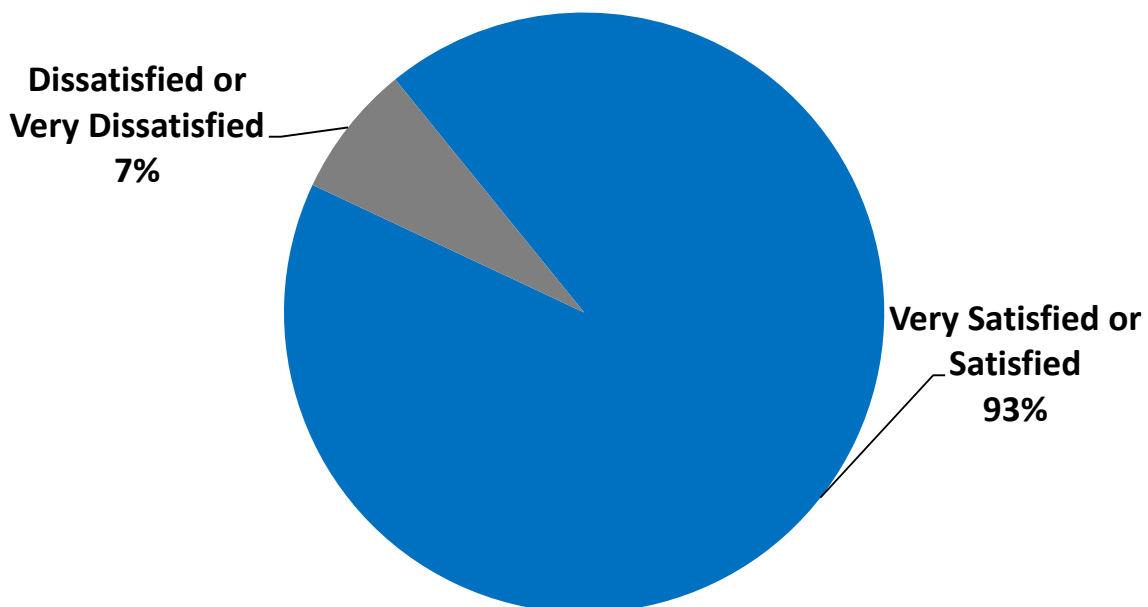
2018 Customer Survey – Customer Satisfaction

Customer satisfaction remains high for Metro ExpressLanes with 82% very or somewhat satisfied with Metro ExpressLanes customer service. Customers were very satisfied with the safety on Metro ExpressLanes which received a satisfaction rate at 93%.

How Satisfied are you with Metro ExpressLanes Customer Service?



How Satisfied are you with the Safety of the Metro ExpressLanes?

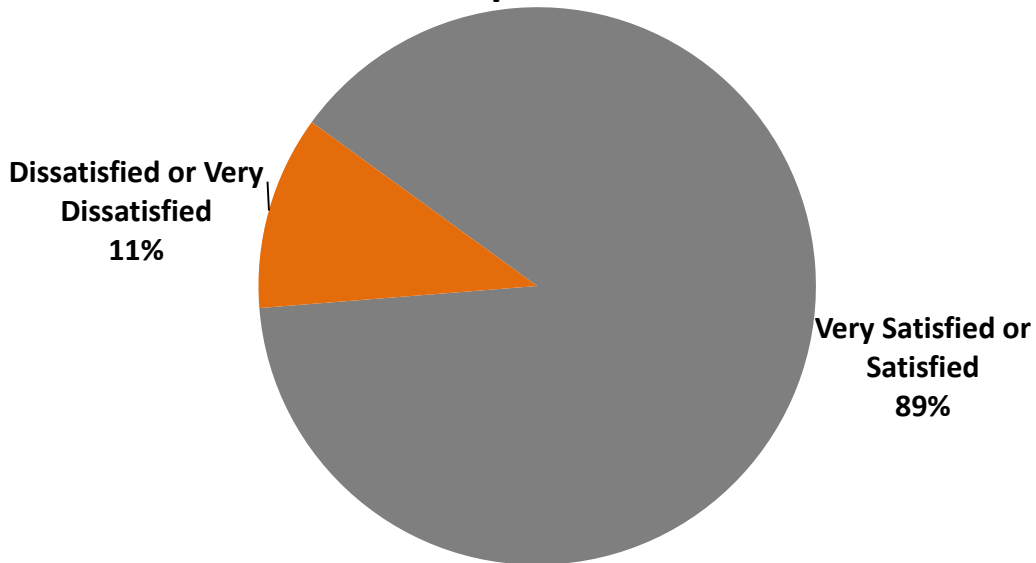




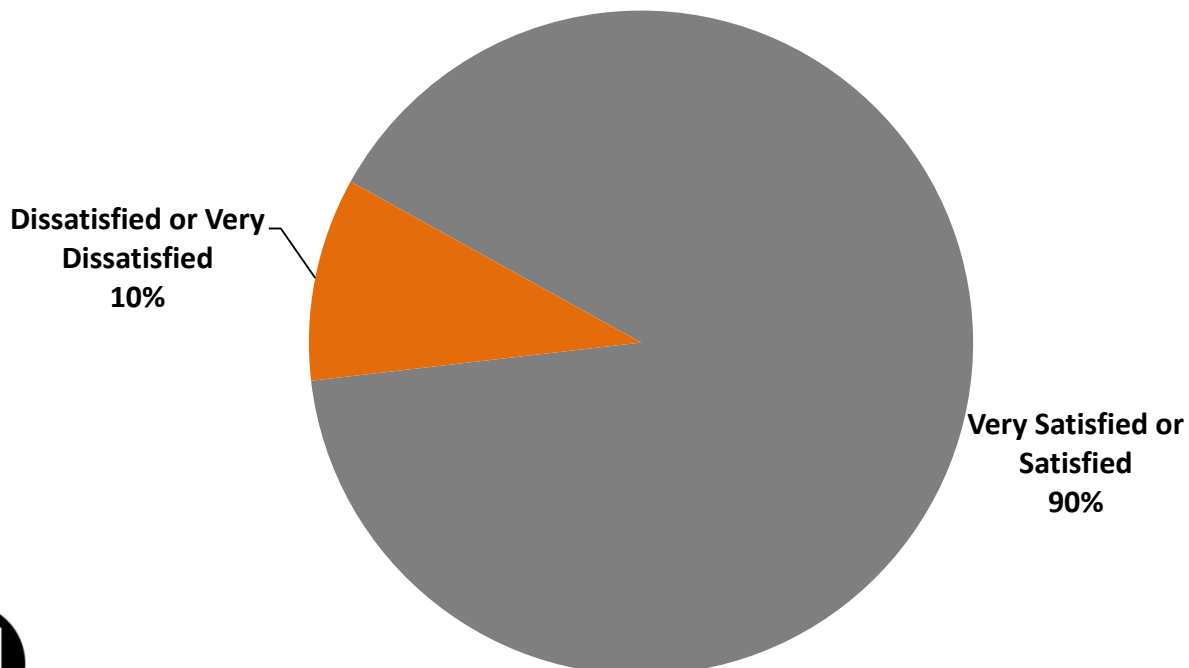
2018 Customer Survey – Customer Satisfaction

In FY18, customer satisfaction is high for Metro ExpressLanes with speeds and the time saved relative to the toll spent at 89% and 90%.

How Satisfied are you with the Speed you can Maintain in the Metro ExpressLanes?



How Satisfied are you with the time saved relative to the toll paid for the Metro ExpressLanes?

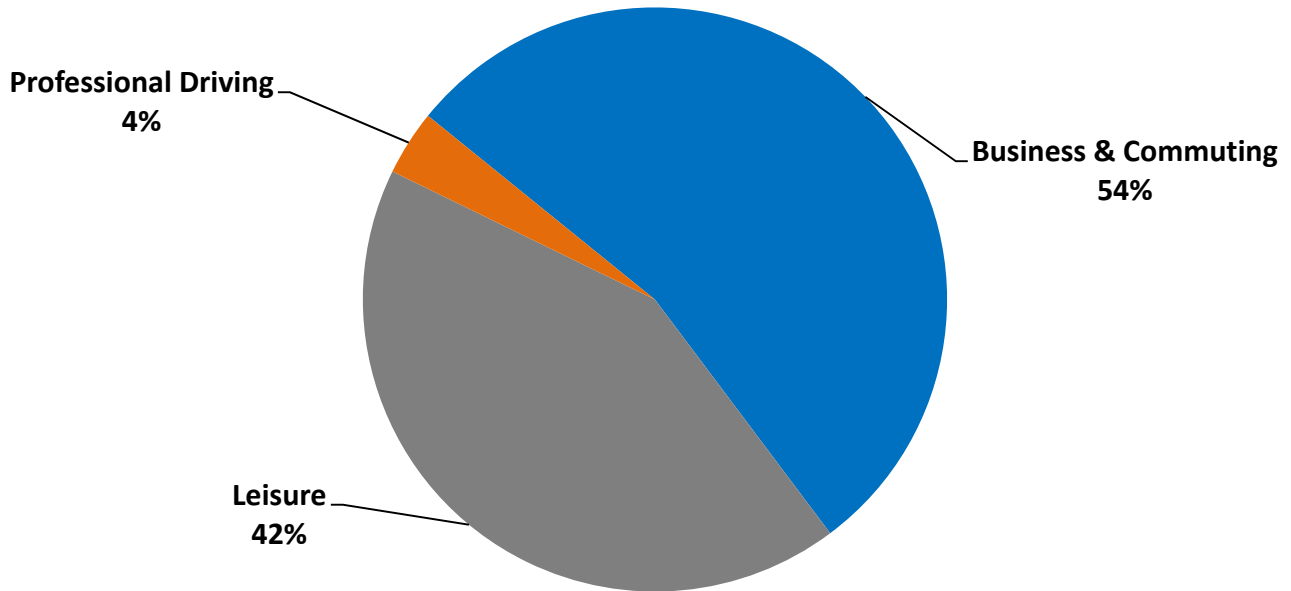




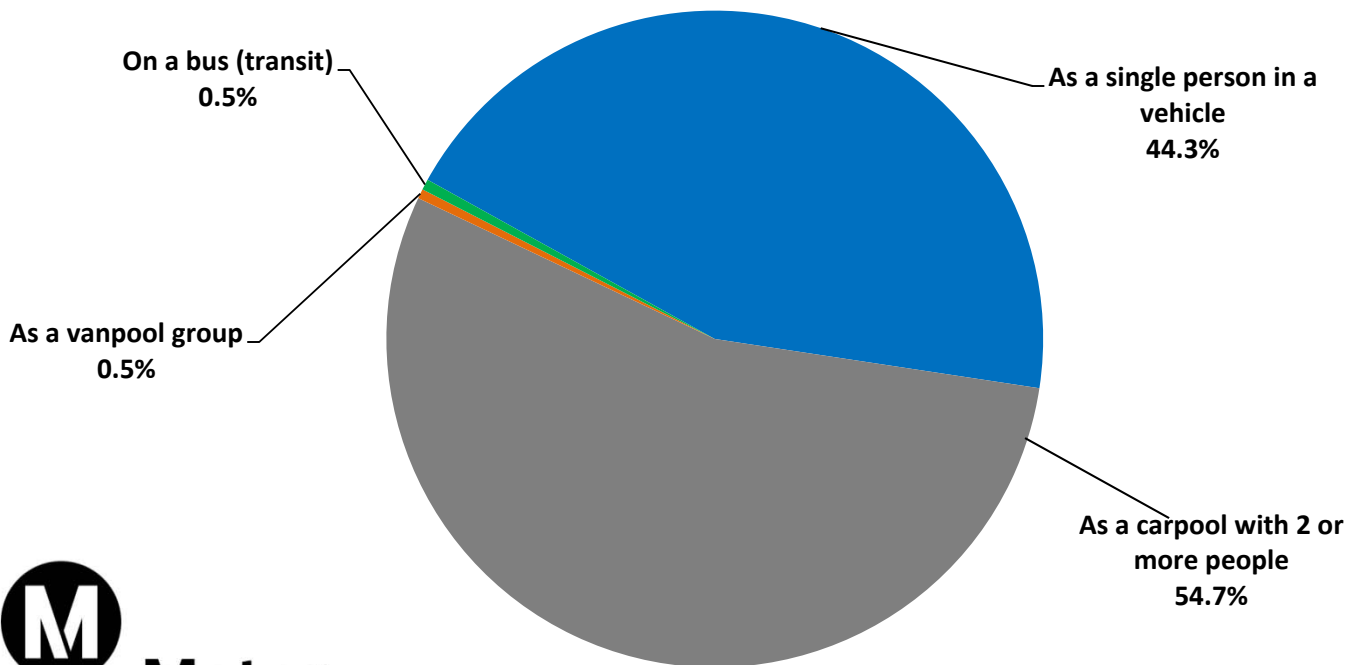
2018 Customer Survey - Usage

54% of respondents used the ExpressLanes for work and business related (commuting, meetings, deliveries, etc.) trips while 42% of survey respondents used the ExpressLanes for leisure activities (errands, day trips, etc.). On weekdays, survey respondents drove alone 44% of the times, travelling on a bus or in a vanpool about 1% of the time.

What is your Main Purpose for Travelling on the Metro ExpressLanes?



How do you Typically Travel on the Metro ExpressLanes on Weekdays?

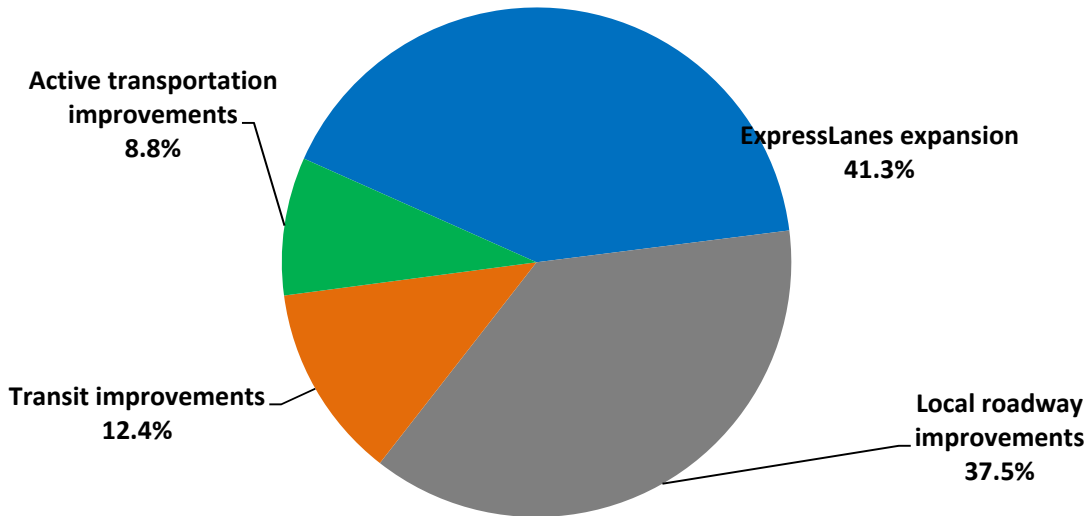




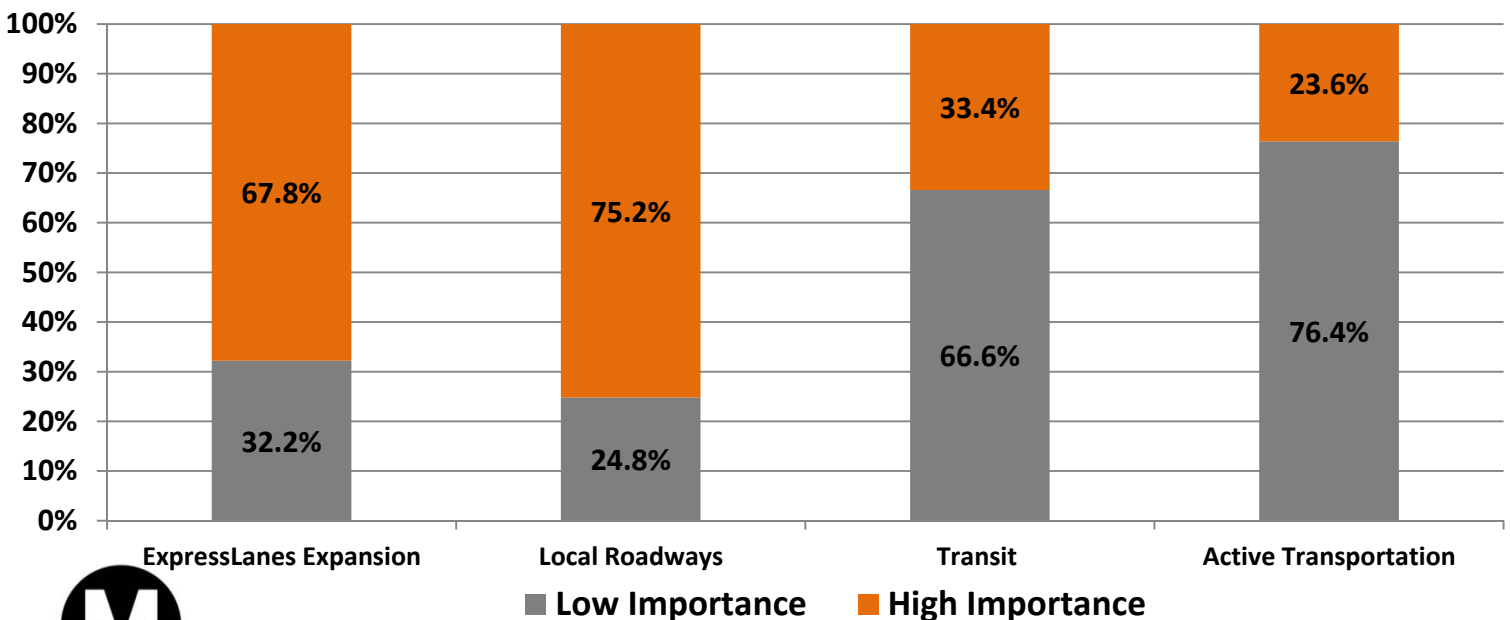
2018 Customer Survey – New Initiatives

Customers were asked to rank the importance of different ways to mitigate traffic congestion. If they could only choose one thing, 41% of customers believe that expanding ExpressLanes onto other corridors would be the best way to mitigate congestion. However, when ranking strategies as high or low importance, 75% of customers ranked local roadway improvements and 68% ranked ExpressLanes expansion as high importance. Only 24% of customers ranked active transportation improvements (walking and biking) as high importance.

Which of the Following do you Think is the Most Important in Mitigating Traffic Congestion in LA County



How Important do you Think Each will be in Mitigating Traffic in LA County?



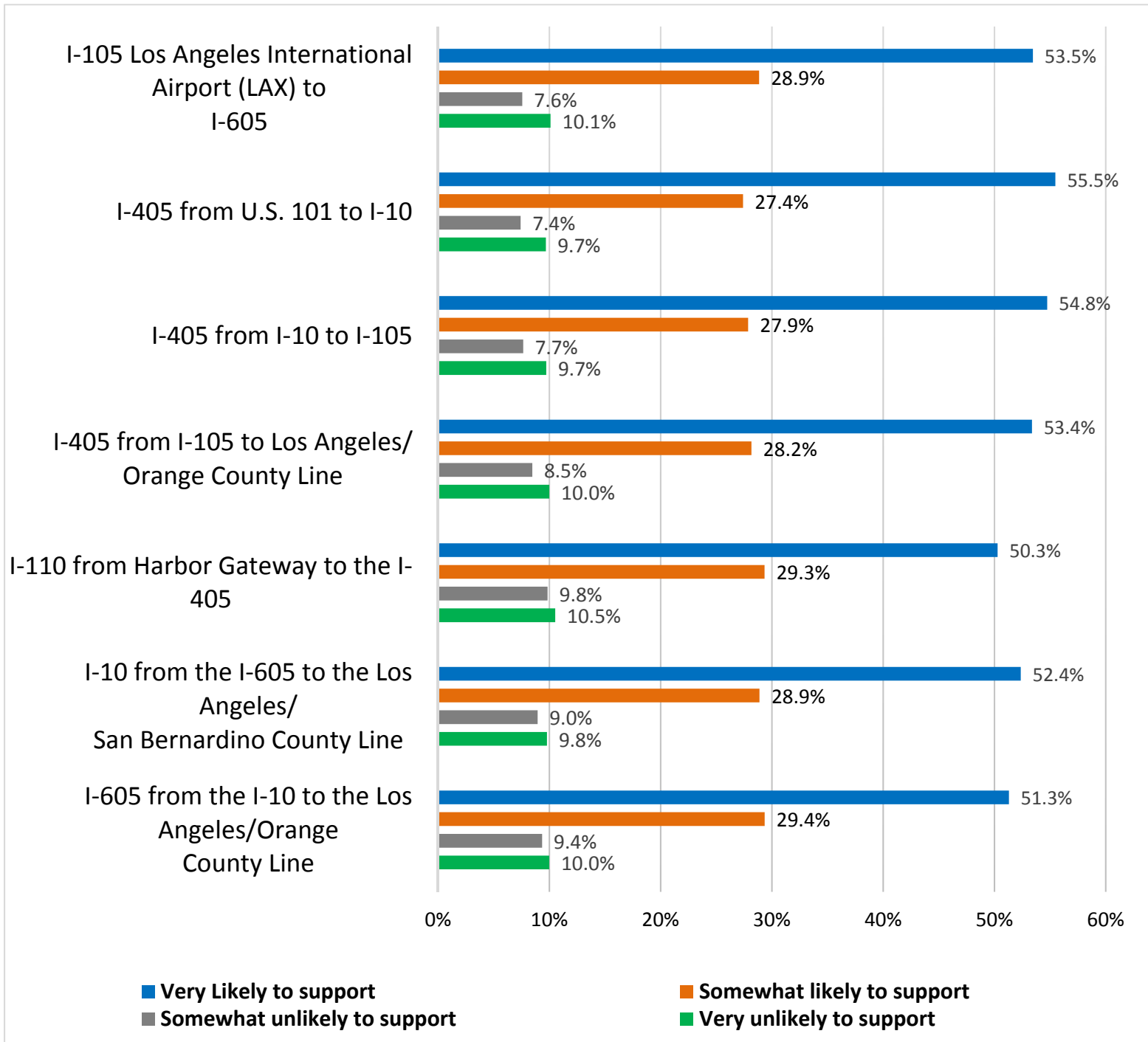
Metro



2018 Customer Survey – ExpressLanes Expansion

More than 75% of all respondents were very or somewhat likely to support Metro ExpressLanes on all projects listed. The I-105 LAX to I-605 and I-405 from U.S. 101 to I-10 received the highest support ratings of 82.3% and 82.9% respectively.

Would you support Metro ExpressLanes on the following roadways?

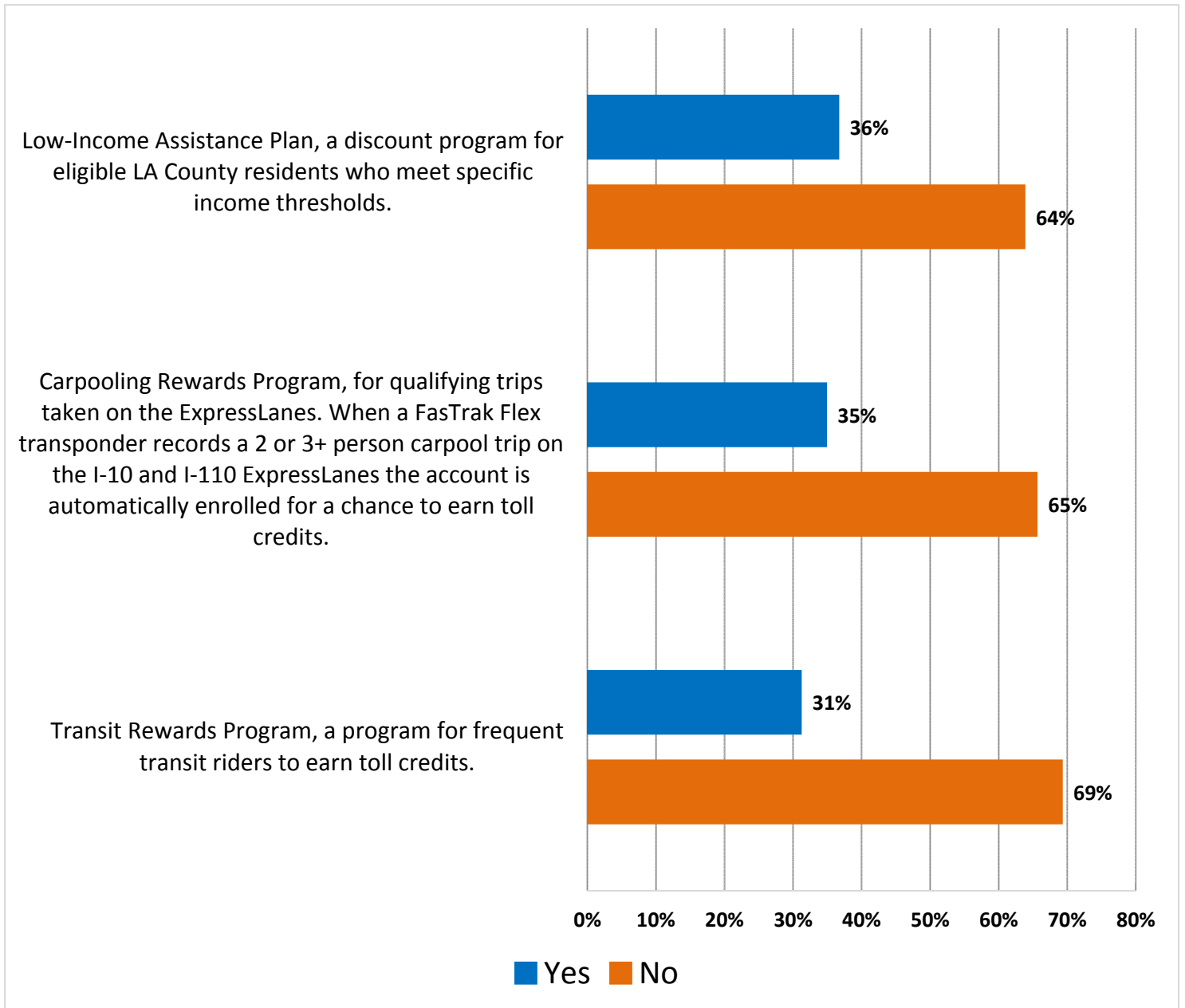




2018 Customer Survey – Customer Programs

Customer awareness of the different discount programs available were low, with the Transit Rewards Program having the lowest customer awareness at 31%. Metro ExpressLanes will increase marketing of the plans in FY19.

Before today, were you aware of each of the following programs offered by Metro ExpressLanes?





OPERATIONAL IMPROVEMENTS ON THE EXPRESSLANES IN FY2019 and FY2020

Transponder Readers: Upgraded multi-protocol transponder antennas and readers at every toll collection site, with additional antennas between lanes to ensure accurate capture of vehicles in the process of changing lanes or driving in the shoulder areas.

License Plate Readers: Upgraded license plate cameras with two cameras dedicated to each lane at each toll collection site for full redundancy. Also, an upgraded, distributed license plate processing system installed at each toll site to process license plate photos.

Advanced Toll Site Monitoring: A new digital video audit system providing complete camera coverage of each toll zone, for transaction verification and review.

Vehicle Detection: New laser scanners above each lane to ensure accurate detection of vehicles in the event of any failures of the primary detection system loops in the pavement.

Enforcement Technology: Upgraded enforcement beacons that display large numbers corresponding to the transponder switch setting of each vehicle to facilitate CHP enforcement.

ExpressLanes Roadway Monitoring: Expansion of the CCTV camera system to fill a number of coverage gaps and achieve complete monitoring .

Traffic Conditions Monitoring: Expansion of our traffic detection system that monitors throughput and speed, to provide more accurate travel time estimates and more precise input data to the dynamic pricing system. This expansion will more than double the current number of sensors out on the ExpressLanes, and will also expand coverage to provide data for the general purpose lanes as well.

Pricing System: Significant enhancements to the dynamic pricing system including additional traffic sensor inputs, comparative pricing model analysis tools, and access to additional tuning parameters to refine and optimize performance.



EXPRESSLANES NETWORK EXPANSION EFFORTS

- **Preparation of a Network Project Study Report (PSR) for the Tier 1 projects identified in the Metro ExpressLanes Strategic plan:**
 - The Network PSR for the I-10, I-405, and I-605 is scheduled to be completed in Summer 2019.
- **I-105 ExpressLanes from the I-405 to I-605:**
 - Project Approval/Environmental Document (draft), Concept of Operations, and Investment Grade Traffic and Revenue Study are expected to be released in Summer 2019.
- **I-605 ExpressLanes from I-10 to I-105:**
 - Project Approval/Environmental Document (draft), Concept of Operations, and Level 2 Traffic and Revenue Study is scheduled to be released in Summer 2019.

Attachment C — Demographics Analysis of Express Lane Regions

The demographic data for customers that use express lanes across the country are very difficult to obtain, as doing so requires detailed analyses of toll agencies' account holder data and user data, weighted to reflect the relative frequency of use for each person. While Metro has performed such an analysis of its users in the past, most peer agencies have not, and in those cases the data necessary to conduct a rigorous and precise user-focused comparative demographic analysis is not possible. Therefore, as a proxy for these data, this analysis considers census data for the areas (typically the encompassing county or counties) that are expected to function as the primary catchment areas for the corresponding express lanes demand.

The express lane regions considered in this analysis are listed in Table 1 below. Demographics are not provided for those areas of the country where express lanes are planned but not yet in operation.

Table 1: Express Lane Regions and Counties

Express Lane Region	Counties or Cities Included
Los Angeles	Los Angeles, Orange, Riverside
Atlanta	Fulton, Henry, Clayton, DeKalb, Gwinnett
Austin	Travis, Williamson
Baltimore	Baltimore City, Baltimore, Harford, Cecil
Dallas/Ft. Worth	Dallas, Denton, Tarrant
Denver	Denver, Adams, Weld, Broomfield, Boulder, Jefferson
Houston	Harris
Minneapolis/St. Paul	Hennepin, Ramsey, Scott, Dakota, Isanti, Anoka, Washington, Chisago
Salt Lake City	Salt Lake, Utah, Davis
San Francisco Bay Area	San Francisco, Alameda, San Joaquin, Santa Clara
Seattle	King, Snohomish, Pierce
South Florida	Miami-Dade, Broward, Palm Beach
Washington, DC	District of Columbia, Montgomery, Arlington, Fairfax, Fauquier, Warren, Stafford, Prince William, Fairfax City, Falls Church City, Manassas City, Fredericksburg City

To evaluate the similarity of a given express lane region to Los Angeles, a data analysis technique involving calculation of the Error Sum of Squares (ESS) was performed to quantitatively characterize the goodness of fit between the two regions. As the ESS is a quantitative measure of the differences between two datasets, the lower the ESS value, the better the match between that region and Los Angeles.

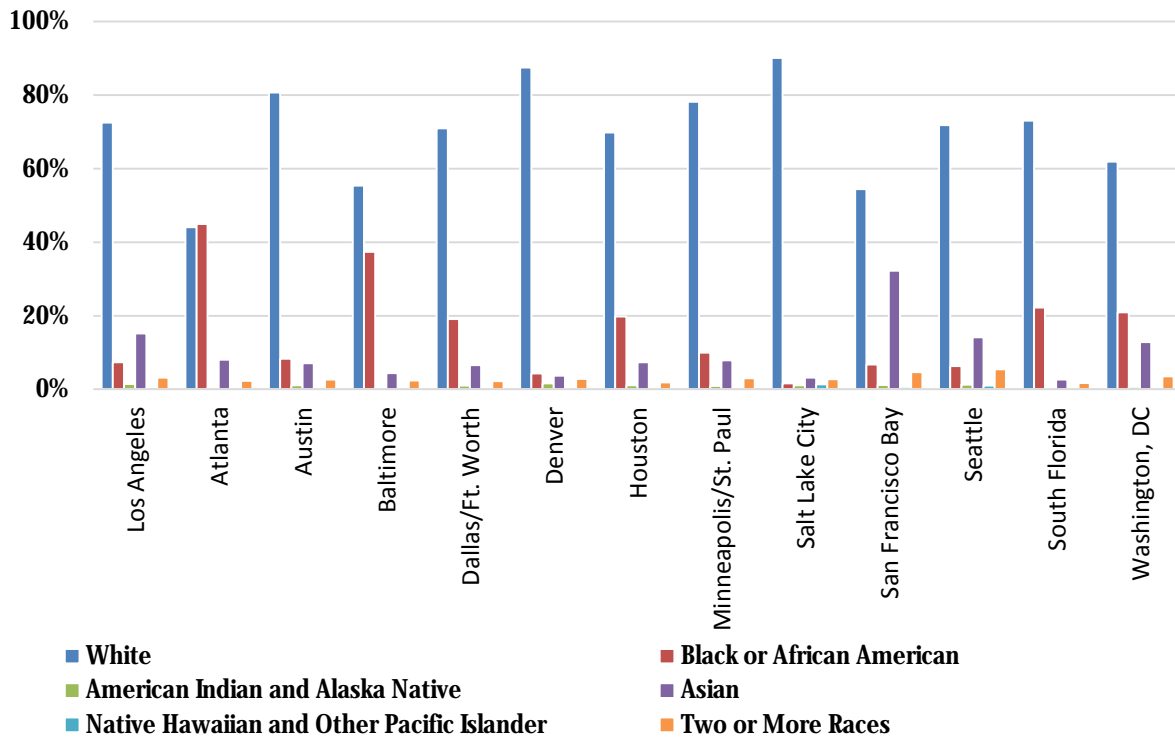
Race

An analysis of census data by region indicates that the Seattle, WA metropolitan area most closely resembles the Los Angeles metropolitan area with respect to racial distribution. The race distributions are presented graphically in Figure 1. Each of the individual regions and their accompanying ESS ratings are provided in Table 2 below.

Table 2: Region Similarity Rankings by Race (combined Hispanic/Non-Hispanic Ethnicities)

City	Difference Score (lower means more similar)
Seattle	0.0008
Minneapolis/St. Paul	0.0093
Austin	0.0135
Dallas/Ft. Worth	0.0216
Houston	0.0225
Washington, DC	0.0305
Denver	0.0366
South Florida	0.0383
Salt Lake City	0.0486
San Francisco Bay Area	0.0619
Baltimore	0.1312
Atlanta	0.2273

Figure 1: Distribution of Population by Race and Region (combined Hispanic/Non-Hispanic Ethnicities)



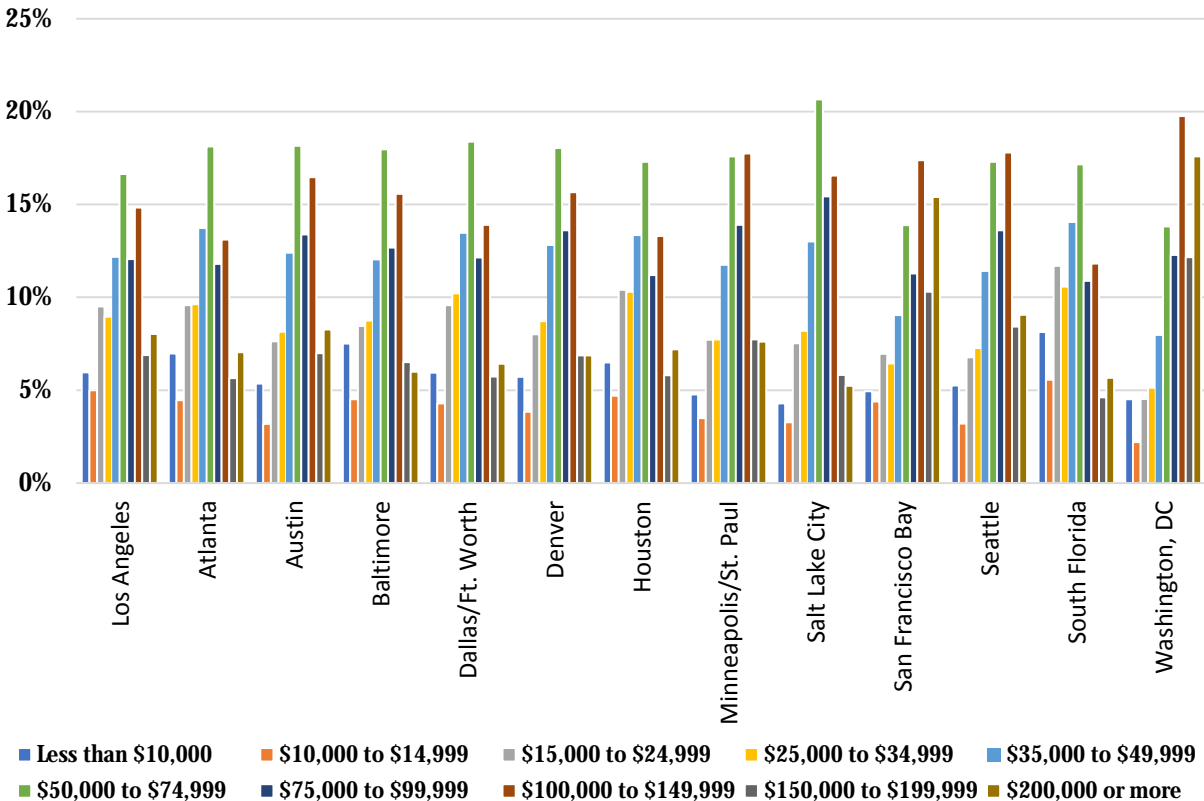
Income

An analysis of census data by region indicates that the Houston metropolitan area most closely resembles the Los Angeles metropolitan area with respect to income distribution. The income distributions are presented graphically in Figure 2. Each of the individual regions and their accompanying ESS ratings are provided in Table 3 below.

Table 3: Region Similarity Rankings by Income Distribution

City	Difference Score (lower means more similar)
Houston	0.000979
Denver	0.001043
Baltimore	0.001074
Dallas/Ft. Worth	0.001158
Atlanta	0.001201
Austin	0.001465
Minneapolis/St. Paul	0.002212
Seattle	0.002960
South Florida	0.003758
Salt Lake City	0.005044
San Francisco Bay Area	0.010458
Washington, DC	0.021843

Figure 2: Distribution of Population by Income and Region



Attachment D – Comparison Chart, Summary of Express Lanes in the US, and Toll Road Facilities in California

IDENTIFIER			OPERATIONS						PAY-AS-YOU-USE				OTHER						
Facility	Operator Agency	Location	Lane Separation Barrier Types			Reversible or Moveable Barrier?	Prices Active at All Times?	Transponder Required for All Traffic?	Primary Toll Method			HOV Discount		Pay-As-You-Use Offered?	Surcharge or Fee for Pay-As-You-Use?	Surcharge/Fee Amount for Pay-As-You-Use*	HOV Discount Offered for Pay-As-You-Use?	Low Income Assistance Plan	Additional Notes (see below table)
			Painted	Flexible Post / Channelizer	Concrete Barrier				Fixed	Scheduled Variable	Dynamic Variable	At all times	Part time						
I-10	Metro	Los Angeles, CA	✔		✔	✘	✔	✔			✔	✔	✘	—	—	—	✔		
I-110	Metro	Los Angeles, CA	✔		✔	✘	✔	✔			✔	✔	✘	—	—	—	✔		
I-15	SANDAG	San Diego, CA	✔		✔	✔	✔	✘			✔	✔	✘	—	—	—	✘	Note 1	
I-580	Alameda CTC	Alameda, CA	✔			✘	✘	✔			✔	✔	✘	—	—	—	✘		
I-680 South	Alameda CTC	Alameda, CA	✔			✘	✘	✘			✔	✔	✘	—	—	—	✘	Note 1	
I-680 North	Contra Costa	Contra Costa, CA	✔			✘	✔	✔			✔	✔	✘	—	—	—	✘		
SR 91	OCTA/RCTC	Orange County, CA			✔	✘	✔	✔		✔		✔	✔	—	—	—	✘		
SR 237/ I-880	SCVTA	Santa Clara, CA	✔			✘	✘	✔			✔	✔	✘	—	—	—	✘		
I-25 Central	Co. DOT	Denver, CO			✔	✔	✔	✘		✔		✔	✔	✔	\$5	✘	✘	Note 2	
I-25 North	Co. DOT	Denver, CO	✔			✘	✔	✘		✔		✔	✔	✔	\$5	✘	✘		
I-70	Co. DOT	Denver, CO	✔			✘	✔	✘			✔		✔	✔	≤\$10	✘	✘	Note 3	
US 36 Phase 1	Co. DOT	Denver, CO	✔			✘	✔	✘		✔		✔	✔	✔	\$5	✘	✘		
US 36 Phase 2	Co. DOT	Denver, CO	✔			✘	✔	✘		✔		✔	✔	✔	\$5	✘	✘		
I-595	FDOT	Ft. Lauderdale, FL			✔	✔	✔	✔			✔		✘	—	—	—	✘		
I-75	FDOT	Miami, FL		✔	✔	✘	✔	✔			✔		✘	—	—	—	✘		
I-95	FDOT	Miami, FL		✔		✘	✔	✔			✔	✔	✘	—	—	—	✘		
SR 589	FDOT	Tampa, FL		✔		✘	✔	✔			✔		✔	✔	≤100%	✘	✘		
I-75 North	GDOT	Atlanta, GA			✔	✔	✔	✔			✔		✘	—	—	—	✘		
I-75 South	SRTA	Atlanta, GA			✔	✔	✔	✔			✔		✘	—	—	—	✘		
I-85	SRTA	Atlanta, GA	✔			✘	✔	✔			✔	✔	✘	—	—	—	✘		
I-95	MDTA	Baltimore, MD			✔	✘	✔	✘		✔			✘	—	—	—	✘		
I-35E	Mn. DOT	St. Paul, MN	✔			✘	✘	✘			✔	✔	✘	—	—	—	✘		

EXPRESS LANES IN THE UNITED STATES

Attachment D – Comparison Chart, Summary of Express Lanes in the US, and Toll Road Facilities in California

IDENTIFIER			Lane Separation Barrier Types					OPERATIONS					PAY-AS-YOU-USE				OTHER		
Facility	Operator Agency	Location	Painted	Flexible Post / Channelizer	Concrete Barrier	Reversible or Moveable Barrier?	Prices Active at All Times?	Transponder Required for All Traffic?	Primary Toll Method			HOV Discount		Pay-As-You-Use Offered?	Surcharge or Fee for Pay-As-You-Use?	Surcharge/Fee Amount for Pay-As-You-Use*	HOV Discount Offered for Pay-As-You-Use?	Low Income Assistance Plan	Additional Notes (see below table)
									Fixed	Scheduled Variable	Dynamic Variable	At all times	Part time						
I-35W	Mn. DOT	Minneapolis, MN	✔			✘	✔	✘			✔	✔		✘	—	—	—	✘	
I-394	Mn. DOT	Minneapolis, MN	✔		✔	✘	✔	✘			✔	✔		✘	—	—	—	✘	
Loop 1	CTRMA	Austin, TX		✔		✘	✔	✘			✔		✔	✔	\$1		✘	✘	
SH 114	TxDOT	Dallas/Ft. Worth, TX			✔	✘	✔	✘			✔		✔	✔	≥50%		✘	✘	
I-30	TxDOT	Dallas/Ft. Worth, TX			✔	✔	✔	✘			✔		✔	✔	≥50%		✘	✘	
I-635	LBJIG	Dallas, TX			✔	✘	✔	✘			✔		✔	✔	≤50%		✘	✘	
I-820	NTEMP	Dallas/Ft. Worth, TX			✔	✘	✔	✘			✔		✔	✔	≥50%		✘	✘	Note 4
I-35W	NTEMP	Dallas/Ft. Worth, TX			✔	✘	✔	✘			✔		✔	✔	≥50%		✘	✘	
I-35E	TxDOT	Dallas/Ft. Worth, TX			✔	✔	✔	✘			✔		✔	✔	≥50%		✘	✘	
I-10	HCTRA	Houston, TX		✔		✘	✔	✔		✔		✔	✘	—	—	—	✘	✘	
I-45N	Harris MTA	Houston, TX			✔	✔	✔	✔		✔		✔	✘	—	—	—	✘	✘	
I-45S	Harris MTA	Houston, TX			✔	✔	✔	✔		✔		✔	✘	—	—	—	✘	✘	
US 290	Harris MTA	Houston, TX			✔	✔	✔	✔		✔		✔	✘	—	—	—	✘	✘	
US 59N	Harris MTA	Houston, TX			✔	✔	✔	✔		✔		✔	✘	—	—	—	✘	✘	
US 59S	Harris MTA	Houston, TX		✔		✔	✔	✔		✔		✔	✘	—	—	—	✘	✘	
I-15	UDOT	Salt Lake City, UT	✔			✘	✔	✔			✔	✔	✘	—	—	—	✘	✘	
I-64	VDOT	Norfolk, VA			✔	✔	✘	✔			✔	✔	✘	—	—	—	✘	✘	
I-495	Transurban	Washington, D.C.		✔	✔	✘	✔	✔			✔	✔	✘	—	—	—	✘	✘	
I-95	Transurban	Washington, D.C.			✔	✘	✔	✔			✔	✔	✘	—	—	—	✘	✘	
I-405	WSDOT	Seattle, WA	✔			✘	✘	✘			✔	✔	✔	✔	\$2		✘	✘	
SR 167	WSDOT	Seattle, WA	✔			✘	✘	✘			✔	✔	✘	—	—	—	✘	✘	Note 1

EXPRESS LANES IN THE UNITED STATES

Attachment D – Comparison Chart, Summary of Express Lanes in the US, and Toll Road Facilities in California

IDENTIFIER			Lane Separation Barrier Types					OPERATIONS					PAY-AS-YOU-USE				OTHER		
Facility	Operator Agency	Location	Painted	Flexible Post / Channelizer	Concrete Barrier	Reversible or Moveable Barrier?	Prices Active at All Times?	Transponder Required for All Traffic?	Primary Toll Method			HOV Discount		Pay-As-You-Use Offered?	Surcharge or Fee for Pay-As-You-Use?	Surcharge/Fee Amount for Pay-As-You-Use*	HOV Discount Offered for Pay-As-You-Use?	Low Income Assistance Plan	Additional Notes (see below table)
									Fixed	Scheduled Variable	Dynamic Variable	At all times	Part time						
TOLL ROAD FACILITIES IN CALIFORNIA	SR 73	TCA	Orange County, CA	—	—	—	✗	✔	✗		✔			✔	✔	≤\$2.26	✗	✗	
	SR 133	TCA	Orange County, CA	—	—	—	✗	✔	✗		✔			✔	✔	≤\$0.43	✗	✗	
	SR 241	TCA	Orange County, CA	—	—	—	✗	✔	✗		✔			✔	✔	≤\$0.48	✗	✗	
	SR 261	TCA	Orange County, CA	—	—	—	✗	✔	✗		✔			✔	✔	≤\$0.59	✗	✗	
	SR 125	SANDAG	San Diego, CA	—	—	—	✗	✔	✗	✔				✔	✔	\$2	✗	✗	
	US 101	Golden Gate	San Francisco, CA	—	—	—	✔	✔	✗		✔			✔	✔	\$1–\$7	✗	✗	
	I-80 Bridge	BATA	San Francisco, CA	—	—	—	✗	✔	✗		✔			✗	—	—	—	✗	
	SR 160 Bridge	BATA	Antioch, CA	—	—	—	✗	✔	✗	✔			✔	✗	—	—	—	✗	
	I-680 Bridge	BATA	Benicia, CA	—	—	—	✗	✔	✗	✔			✔	✗	—	—	—	✗	
	I-80 Bridge	BATA	Carquinez, CA	—	—	—	✗	✔	✗	✔			✔	✗	—	—	—	✗	
	SR 84 Bridge	BATA	Palo Alto, CA	—	—	—	✗	✔	✗	✔			✔	✗	—	—	—	✗	
	I-580 Bridge	BATA	Richmond, CA	—	—	—	✗	✔	✗	✔			✔	✗	—	—	—	✗	
	SR 92 Bridge	BATA	Hayward, CA	—	—	—	✗	✔	✗	✔			✔	✗	—	—	—	✗	

Attachment D – Comparison Chart, Summary of Express Lanes in the US, and Toll Road Facilities in California

TABLE NOTES

- A dash (—) indicates that a category is not applicable.
- *When surcharge/fee is reported as a percentage, it is a percentage of the base toll amount.
- **Note 1:** For SR 167 and I-15, vehicles without transponders are assumed to be HOVs.
- **Note 2:** For I-25, there is a surcharge for trucks using the managed lanes: Vehicles with four or more axles have to pay the \$25 fee in addition to the base toll rate.
- **Note 3:** For I-70, the Express Lanes are only open on weekends and holidays; otherwise the lane serves as a shoulder to the general purpose lanes.
- **Note 4:** For I-820, the HOV amount is always displayed along with the non-HOV amount, but when the traffic level is low, the two amounts are the same.

DEFINITIONS:

Facility Type:

- **Express Lane:** a facility with one or more priced lanes that are parallel to non-priced lanes
- **Toll Road:** a facility where every lane on the roadway is priced

Primary Toll Method:

- **Fixed:** tolls are the same at all times
- **Scheduled Variable:** tolls change according to a predetermined schedule, time of day and/or day of week
- **Dynamic Variable:** tolls change in response to roadway conditions in real time.

Pay-As-You-Use refers to plate-based tolling for non-account holders only.

Attachment E - Surcharge Assumptions and Costs

Estimated Volumes	
42,000,000	Transactions per year
1,720,000	"Pay-As-You-Use" Transactions (based on current violation rate)
400,000	Estimated Calls

Costs Per "Pay-as-You-Use" Transaction	Cost Categories
\$ 0.64	System, Signage & Maintenance (applies to one-year pilot term only)
\$ 1.28	Printing, Postage, Credit Card, and Other Processing Costs
\$ 0.30	Manual Review of License Plate Images
\$ 1.80	Customer Service Costs
\$ 4.02	Total

Note: Fee calculation is subject to reassessment if the Pay-As-You-Use program is extended beyond its current one-year pilot duration.

**METRO EXPRESSLANES
MOTION RESPONSE #42
PAY-AS-YOU-USE**

**Board of Directors – Ad Hoc Congestion, Highway and Roads Committee
January 16, 2019**



Metro

Motion Response

- **Response to Director Hahn’s motion regarding “Pay-as-You-Use”**
 - **Current ExpressLanes Performance**
 - **Demographic comparison to other express lane systems**
 - **Viability of implementing a “Pay-as-You-Use” model**



Current Performance

- **In 2018, 2% increase in trips on the ExpressLanes**
 - 195 million trips from inception through 2018
- **Over 870,000 transponders issued through 2018 reflecting a 21% increase from FY17**
- **4.1% of all ExpressLanes trips are violations**
- **Based on annual customer surveys:**
 - 89% of respondents are satisfied with their speed of travel
 - 90% are satisfied with time saved relative to tolls paid
 - 93% are aware of FasTrak requirements

Comparison

In comparing the Metro ExpressLanes to other major congestion pricing systems in the country, need to differentiate between:

Toll Roads – Facility built to provide highway capacity where every lane within the roadway is tolled.

Examples:

SR 73, 133, 241, 261 (The Toll Roads)

SR 125 (SANDAG)



Express Lanes – Optimize lane utilization by selling the extra capacity to lower occupancy vehicles. Not all lanes within the roadway are tolled nor all vehicles in the Express Lanes tolled.

Examples:

I-10, I-110 (Metro)

I-15 (SANDAG)

SR-91 (OCTA & RCTC)



Demographic Comparison

Of the 13 major metropolitan regions in the country that have express lanes, the most similar to Los Angeles with respect to race and income are:

Race:

Rank	City, State	“Pay-as-You-Use” Offered	HOV Discount Offered for “Pay as-You-Use”	Surcharge or Fee for “Pay-As-You Use”
1	Seattle, WA	Yes	No	\$2
2	Minneapolis and St, Paul, MN	No	N/A	N/A
3	Austin, TX	Yes	No	\$1

Income:

Rank	City, State	“Pay-as-You-Use” Offered	HOV Discount Offered for “Pay as-You-Use”	Surcharge or Fee for “Pay-As-You Use”
1	Houston, TX	No	N/A	N/A
2	Denver, CO	Yes	No	\$3.75 – \$10
3	Baltimore, MD	No	N/A	N/A

- 50% of the similar demographic regions by race and income have a “Pay-as-You-Use” model. Each do not offer a HOV discount for this model and charge a surcharge or fee for this type of transaction.
- Nationwide, 33% of express lanes offer “Pay-as-You-Use” .

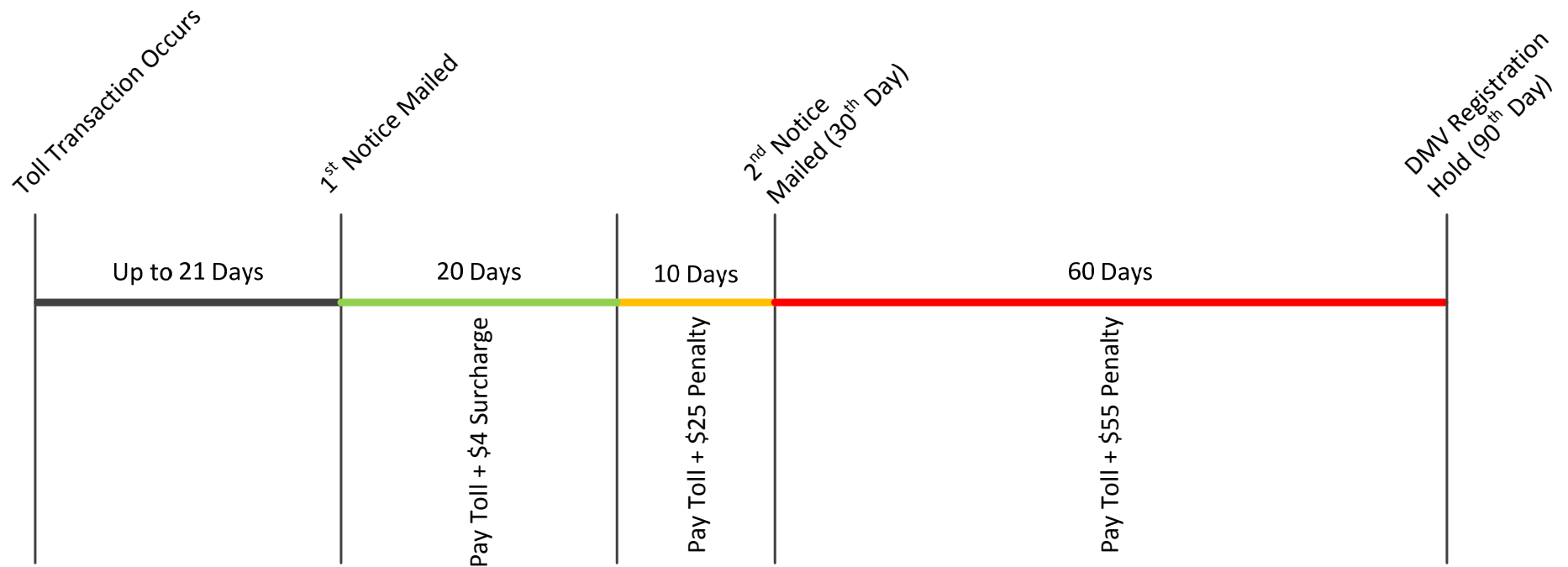


Summary of Findings

1. **Allows customers to use the ExpressLanes without any advance interaction with Metro;**
2. **Model can be integrated into the current and new back office system;**
3. **All users of “Pay-as-You-Use” will have to pay a toll at all times regardless of vehicle occupancy;**
4. **An additional surcharge will be added to each transaction to supplement the additional processing, staffing, and mailing expense;**
5. **Potential increase in ExpressLanes traffic volumes;**
6. **Low Income Assistance Plan can only be applied to account holders;**
7. **Billing process will not be as fast and efficient for “Pay-as-You Use” as it is for account holders;**
8. **This model will require changes to the existing signage and require a regional outreach campaign;**
9. **May lead to revenue leakage and reduction in revenue or an increase in usage and revenue which will be studied as part of the pilot.**

Pilot

- “Pay-as-You-Use” model pilot transaction timeline



Recommendation

Given the opportunities and challenges, staff recommends a one-year pilot of the “Pay-as-You-Use” model with a before/after evaluation to assess actual impacts.

Next Steps, if approved:

- 9 months to develop and implement
- Work in conjunction with Caltrans
- Campaign to educate potential users
- Software modification
- Necessary website modifications
- Update existing signage
- Anticipated cost to implement the pilot is \$750,000

