

# SR 237 EXPRESS LANES

## Operations Report

FY 2020 – Quarter 3  
(January – March 2020)



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# SR 237 Express Lanes

## Fiscal Year 2020 Quarter 3 (Q3) (January 2020 – March 2020)

### Background

SR 237 Express Lanes is part of VTA's Silicon Valley Express Lanes Program. It is VTA's first Express Lanes project and was implemented in two separate phases. The primary objectives of the Silicon Valley Express Lanes Program are:

- Provide congestion relief through more effective use of existing roadways;
- Provide commuters with a new mobility option; and
- Provide a new funding source for transportation improvements including public transit.

### SR 237 Express Lanes Phase 1

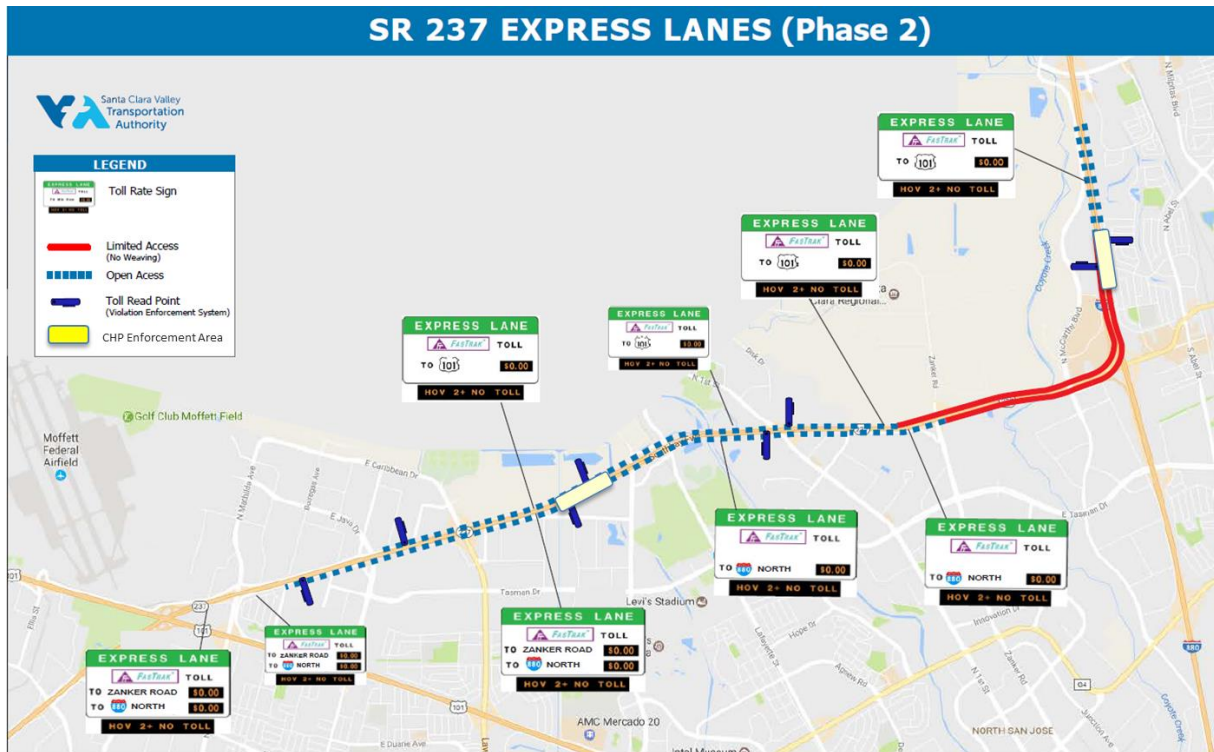
The SR 237 Express Lanes Phase 1 (Phase 1) opened for tolling in March 2012. The Phase 1 converted SR 237/I-880 direct carpool connector to Express Lanes, between Dixon Landing Road on I-880 and SR 237. The hours of operations were Monday to Friday, from 5 am to 10 am in the westbound direction, from 5 am to 9 am for the eastbound direction, and from 3 pm to 7 pm for both directions in the evening commute.

### SR 237 Express Lanes Phase 2 Extension

The SR 237 Express Lanes Phase 2 (Phase 2) opened for tolling on November 15, 2019. The Phase 2 extended the express lanes westward towards US 101 from North First Street in San Jose to Mathilda Avenue in Sunnyvale by converting the HOV lanes to express lanes. SR 237 Express Lanes (EL) uses a destination-based pricing strategy. Users are charged based on toll rates shown on the toll message sign at the time the driver enters the express lane. If the toll amount changes while the driver is in the lane, the driver still pays the price posted at the time of entering the lane. Tolls are dynamically priced based on the level of congestion in the lanes. In the westbound direction, there is only one destination – US101. In the Eastbound direction, there are two destinations, Zanker Road and I-880. Figure 1 shows the location of the toll message signs and the toll readers.

With the Phase 2 extension, the SR 237 Express Lanes now has similar hours of operations (5am – 8pm) as other express lane operations in the Bay Area. All users are required to have a FasTrak transponder, and video enforcement is used to capture license plate of vehicles not carrying a transponder. In addition, solo drivers in eligible Clean Air Vehicles (CAV) using a CAV toll transponder will receive a 50% discount on the toll rate. High Occupancy Vehicle (HOV), as eligible carpoolers (vehicles with two or more occupants), continue to travel toll free but are required to have a transponder with the correct occupancy declaration based on the number of occupants in the vehicle.

**Figure 1:** SR 237 Express Lanes Map



### Traffic Operations Summary

During the Fiscal Year (FY) 2020, Quarter 3 (Q3) between January through March 2020, SR 237 EL served a total of about 1,271,700 vehicles, including 643,100 tolled vehicles (about 51% of total vehicles) and 628,600 High Occupancy Vehicles /non-tolled. About 49,000 of the tolled vehicles are Clean Air Vehicles (CAV). The estimated toll revenue collected for the FY 2020 Q3 was approximately \$1,698,900. The average toll rate is about \$3.00.

FY 2020 Q3 represented the second quarter since the opening of Phase 2 Express Lanes. Express Lanes customers were getting used to the new operating policies. All transponders issued by Bay Area Toll Authority (BATA) Regional Customers Service Center are now switchable transponders which allows an individual to declare occupancy based on the number of occupancy in the vehicle. Approximately 70 percent of all users carried FasTrak® transponders, 23 percent were registered FasTrak® account holders who did not carry the transponders but were tolled based on license plate capture, and the remaining 7% of the vehicles were issued notice of toll evasion. License plates of vehicles are captured as part of the video enforcement on SR 237 Express Lanes. Between November 15, 2019 through February 29, 2020, a courtesy notice was sent to explain the operating rules to users not carrying a transponder in the EL and no penalty was imposed. Customers were provided information to obtain transponder from the FasTrak Regional Customers Service Center.

During the FY 2020 Q3, the average speeds on SR 237 EL in the westbound direction ranged between 40 to 70 mph during the morning commute hours (5 a.m. to 11 a.m.) with the lower speeds occurring between Calaveras Boulevard and McCarthy Boulevard. Similarly, the average speeds on the EL in the eastbound direction ranged between 25 to 60 mph during the afternoon commute hours (3 p.m. to 8 p.m.) with the lower speeds occurring between Lawrence Expressway and First Street. Overall, the SR 237 EL does experience high congestion levels during the peak commute periods. These are primarily attributed to the limited number of lanes within SR 237, high concentration of merging traffic from on-ramps and downstream congestion beyond the EL limits especially on US 101 and I-880. Regardless, the SR 237 EL continues to maintain speed differentials up to 20 miles per hour during the peak commute period. The general-purpose lanes continue to be congested and at certain segments particularly in the eastbound direction between Lawrence Expressway and North First Street has seen increased travel time by about 5 minutes.

Initial travel time observations during November /December 2019 after the opening showed that SR 237 Express Lanes provides travel time savings over the general-purpose lanes. In the westbound direction, travel time savings up to 30 minutes were observed while in the eastbound direction, travel time savings of up to 20 minutes were observed. The Phase 2 opening also resulted in several good reviews from the media.

### **Clean Air Vehicles**

CAV usage continues to remain high with about 25 percent of the total EL traffic volume being CAVs. CAVs with solo drivers receive 50% discount on the toll rate if they carry a special CAV transponder. Approximately 20% of the CAVs paid toll, this equates to about 4 percent of all tolled vehicles.

### **Coronavirus Disease (COVID-19)**

Due to COVID-19 pandemic and the shelter-in-place order, VTA along with other regional Bay Area Express Lanes operators ceased EL tolling beginning March 20, 2020. The variable toll message signs displayed “OPEN TO ALL” due to the lack of traffic congestion in the corridor. Traffic volume in the corridor started to show reduction as early as March 6th as the Silicon Valley tech companies started implementing Work From Home policies. As a result of lower traffic volumes, toll revenues for the month of March was lower by about \$450,000.

### **Enforcement (California Highway Patrol)**

During FY 2020 Q3, California Highway Patrol (CHP) issued a total of 301 citations. CHP enforcement hours for FY 2020 Q3 totaled approximately 413 hours. During the grace period,

between November 15,2020 and February 29, 2020, CHP issued verbal warnings without any citations.

### **Incidents /Traffic collision**

- During the FY 2020 Q3, there were approximately 33 reported traffic incidents along the SR 237 express lanes corridor between Dixon Landing Road on I-880 and Lawrence Expressway on SR 237.
- The EL was blocked or closed 4 times due to traffic incidents while general purpose lanes were blocked 5 times due to traffic incidents. Total revenue loss due to EL blocked in Q3 was \$597.40.

### **SR 237 Express Lane Maintenance/Activities Summary**

EL was blocked during the maintenance period on February 27<sup>th</sup> and 28<sup>th</sup> for several hours due to road repair work by California Department of Transportation (Caltrans).

- February 27, 2020 – Caltrans closed three general purpose lanes for about 2 hours and 10 minutes to fix pothole in the westbound direction near the Lawrence Expressway off ramp.
- February 28, 2020 - Caltrans maintenance crew closed all lanes on SR 237 in the westbound direction near Mathilda Ave for 3 minutes to perform a pothole fix around 10:30 a.m.



# Operational Data

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**Table 1: FY 2020 Q3, SR 237 Express Lanes Traffic Volumes & Revenue Projection**

Reporting Period	Express Lanes Traffic Volumes				Estimated Revenue
	Total Vehicles	Non-Tolled Vehicles	Tolled Vehicles	% Tolled Vehicles	
*FY2020 Q3	1,271,700	628,600	643,100	51%	\$1,698,900
FY2019 Q3	732,000	626,700	105,300	14%	\$319,400
<b>Net Difference</b>	<b>↑ 539,700</b>	<b>↑ 1,300</b>	<b>↑ 537,800</b>	<b>↑ 40%</b>	<b>↑ \$1,379,500</b>

\* Due to Covid-19 shelter in place requirement, SR 237 Express Lanes stopped tolling on 3/20/2020

**Table 2: FY 2020 Q3, SR 237 Express Lanes Tolled Vehicles by Month**

Month	Tolled Vehicle Count			Total
	SOV	CAV	Video Image	
January	137,900	19,700	113,900	271,500
February	133,800	21,300	97,400	252,500
*March	64,000	8,200	47,200	119,400

\* Due to Covid-19 shelter in place requirement, SR 237 Express Lanes stopped tolling on 3/20/2020

**Table 3: FY 2020 Q3, SR 237 Express Lanes Tolled Revenue by Month**

Month	Tolled Vehicle Revenue			Total
	SOV	CAV	Video Image	
January	\$ 388,400	\$ 44,600	\$ 306,300	\$ 739,300
February	\$ 379,500	\$ 48,800	\$ 258,600	\$ 686,900
*March	\$151,400	\$15,500	\$101,100	\$268,000

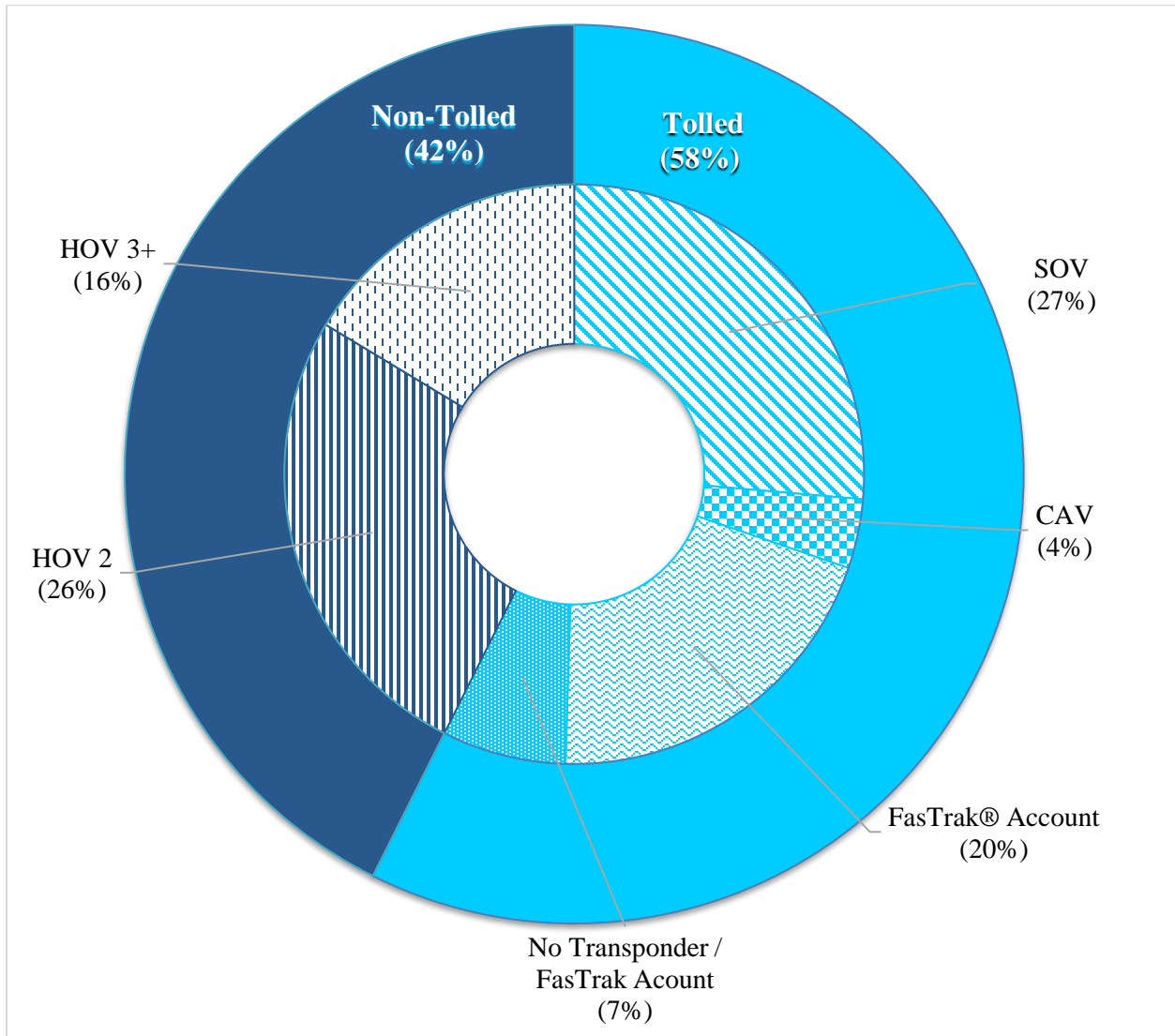
\* Due to Covid-19 shelter in place requirement, SR 237 Express Lanes stopped tolling on 3/20/2020

**Table 4:** FY 2020 Q3, SR 237 Express Lanes Non-Tolled Vehicles by Month

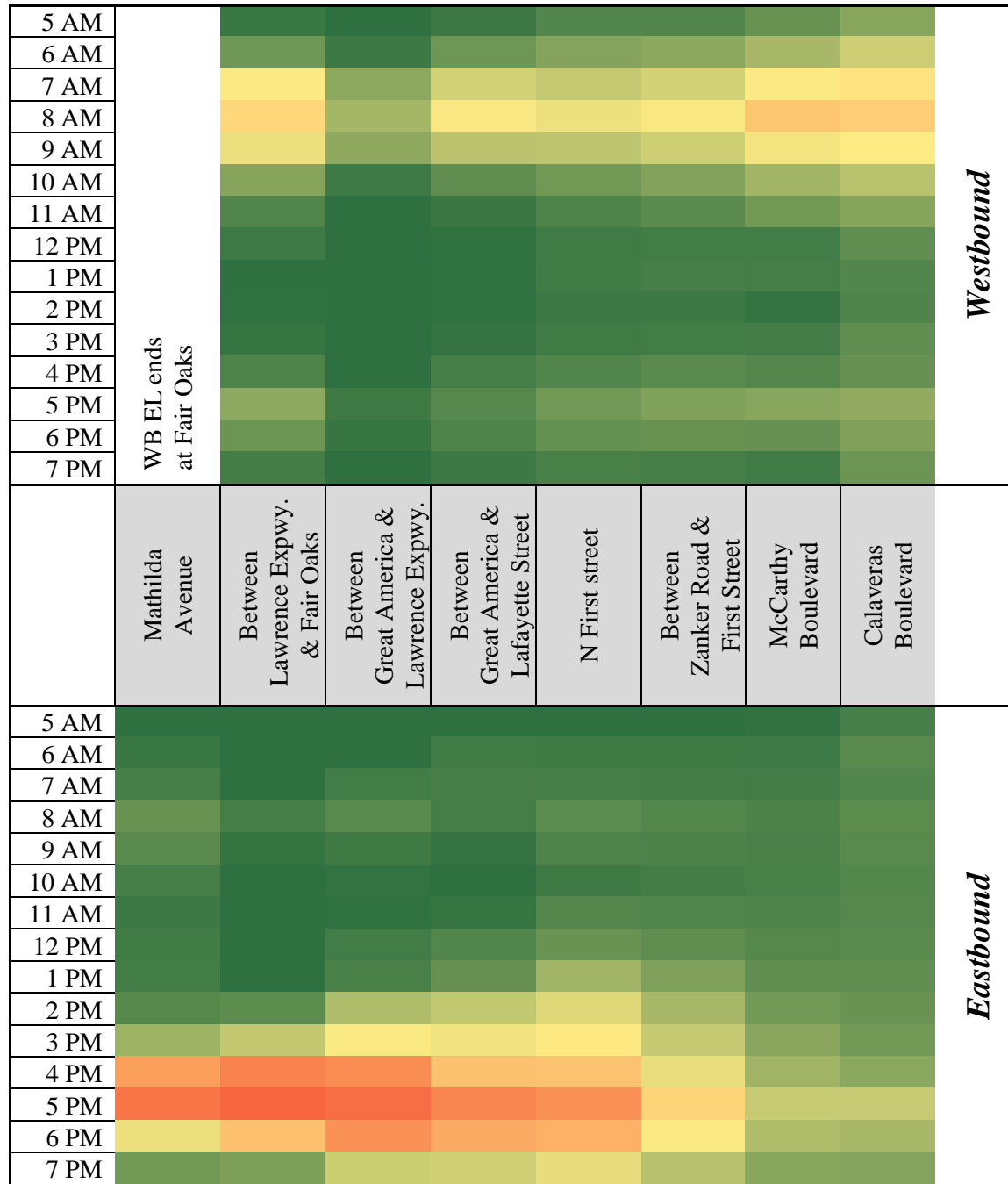
Month	Non - Tolled Vehicle Counts			Total
	HOV 2	HOV 3+	Violations	
January	132,700	86,600	38,700	258,000
February	138,000	84,300	31,600	253,900
*March	62,800	37,500	16,400	116,700

\* Due to Covid-19 shelter in place requirement, SR 237 Express Lanes stopped tolling on 3/20/2020

**Figure 2:** FY 2020 Q3, SR 237 Express Lanes Tolled and Non-Tolled Vehicles



**Figure 3:** FY 2020 Q3, SR 237 Express Lanes Average Speed by Location

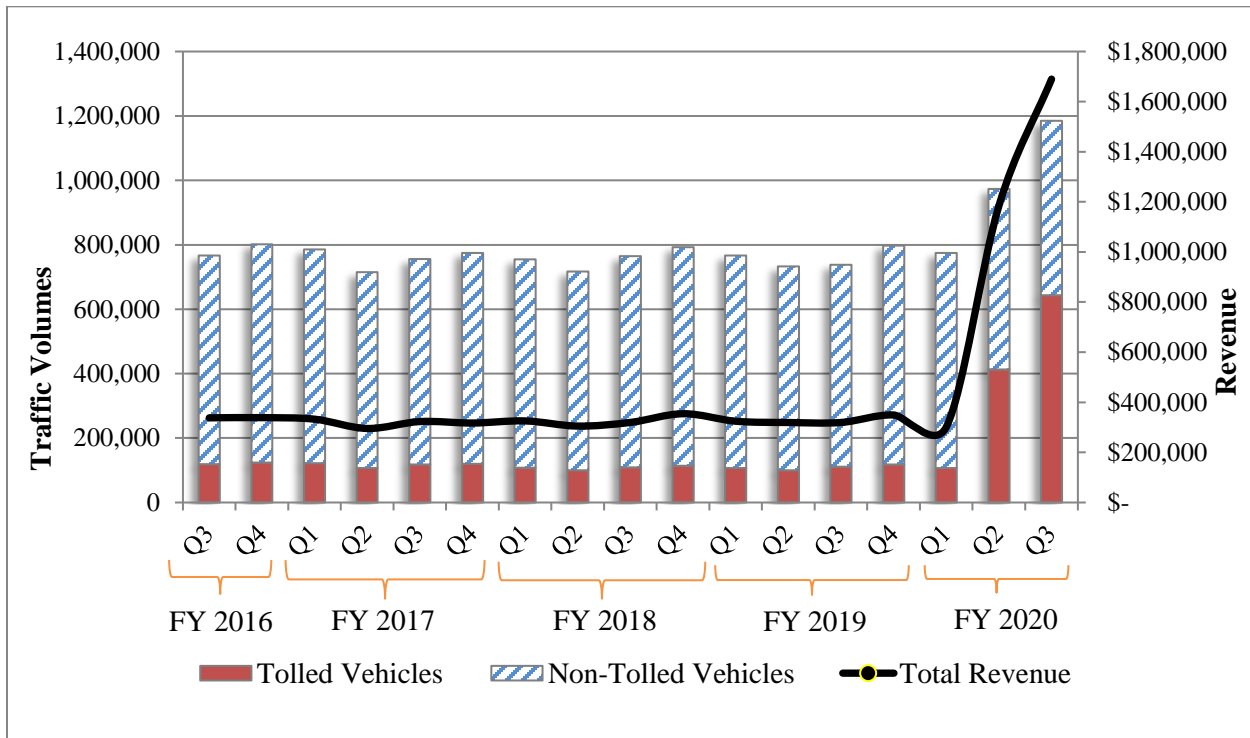


Speed Scale in miles per hour

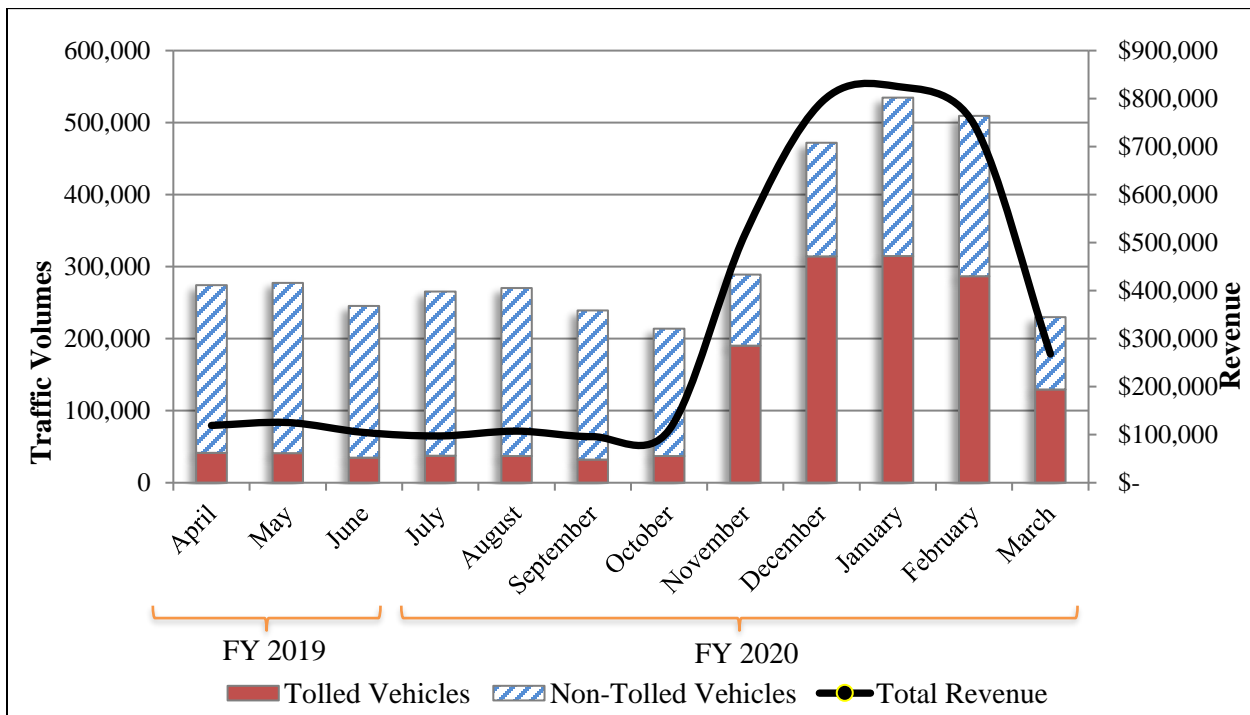


- FY 2020 Q3 average speeds are calculated using EL vehicle data for random weekdays (3 days /month).

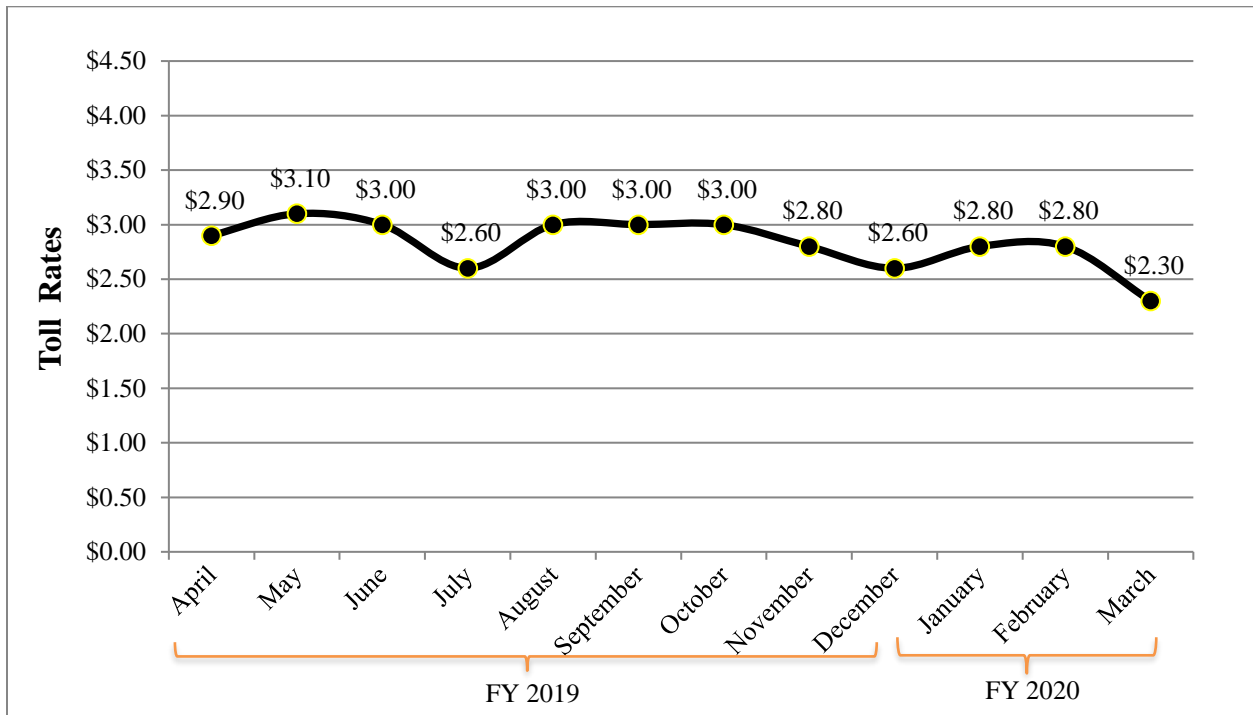
**Figure 4: SR 237 Express Lanes Traffic Volumes & Revenue by Quarter**



**Figure 5: SR 237 Express Lanes Traffic Volumes & Revenue by Month**



**Figure 6: SR 237 Express Lanes Average Toll rate (1-Year Trend)**



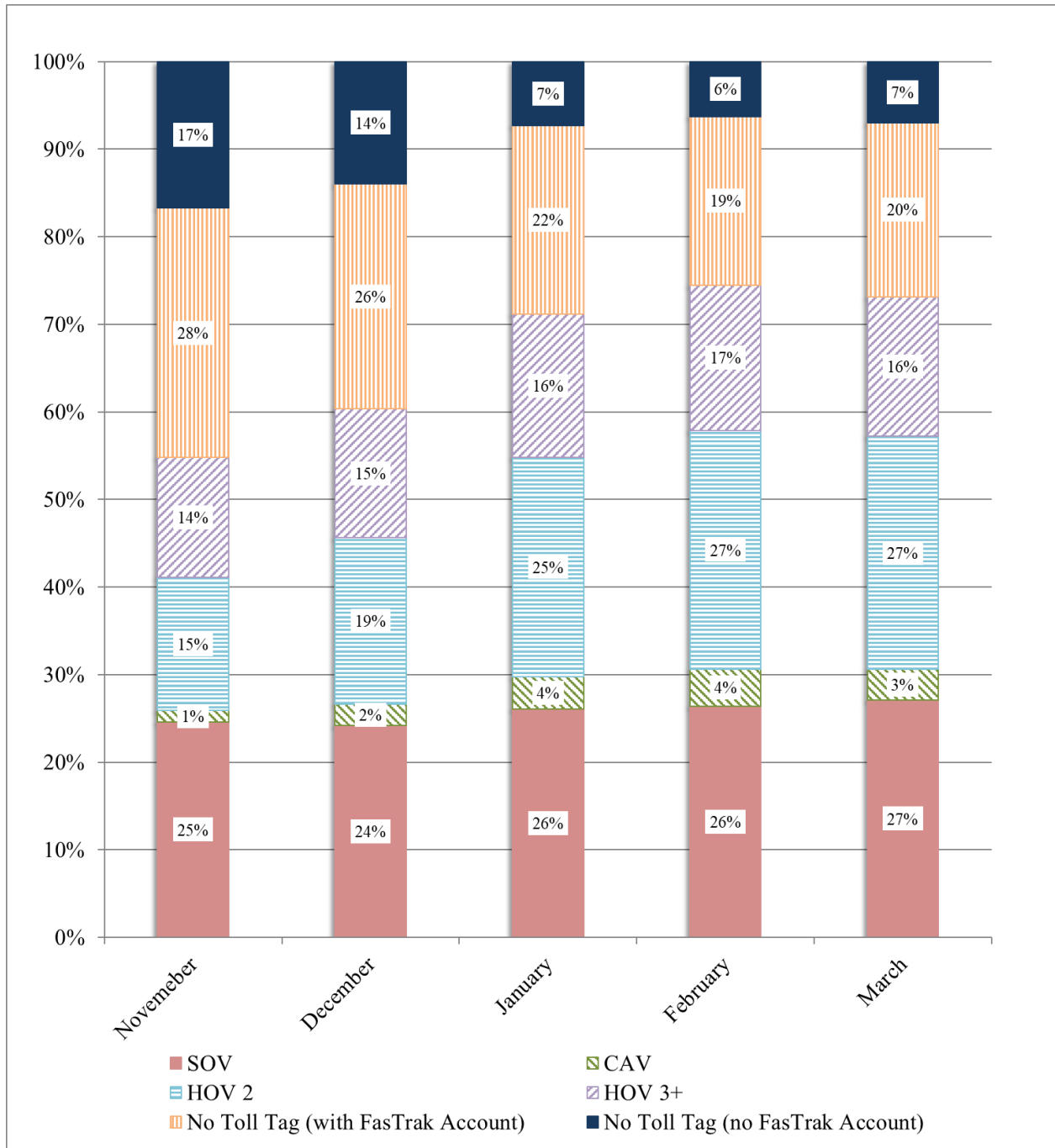
**Table 5: FY 2020 Q3, SR237 Express Lane Average Hourly Toll Rate by Segment**

Operations hours	Westbound		Eastbound	
	US 101	I 880	Zanker Road	
5 a.m. - 6 a.m.	\$1.40	\$1.30	\$1.00	
6 a.m. - 7 a.m.	\$2.90	\$1.90	\$1.40	
7 a.m. - 8 a.m.	\$5.40	\$2.10	\$1.50	
8 a.m. - 9 a.m.	\$7.20	\$2.00	\$1.50	
9 a.m. - 10 a.m.	\$7.10	\$2.10	\$1.50	
10 a.m. - 11 a.m.	\$4.70	\$2.10	\$1.50	
11 a.m. - 12 p.m.	\$2.10	\$2.00	\$1.50	
12 p.m. - 1 p.m.	\$1.60	\$2.10	\$1.50	
1 p.m. - 2 p.m.	\$1.60	\$2.10	\$1.50	
2 p.m. - 3 p.m.	\$1.60	\$2.60	\$1.90	
3 p.m. - 4 p.m.	\$1.60	\$3.60	\$2.50	
4 p.m. - 5 p.m.	\$1.90	\$4.70	\$2.90	
5 p.m. - 6 p.m.	\$2.20	\$5.80	\$3.60	
6 p.m. - 7 p.m.	\$1.90	\$5.20	\$3.00	
7 p.m. - 8 p.m.	\$1.70	\$3.60	\$2.20	

Average Toll Rate Scale



**Figure 7: FY2020 Q3, SR 237 Express Lane Trip Types**





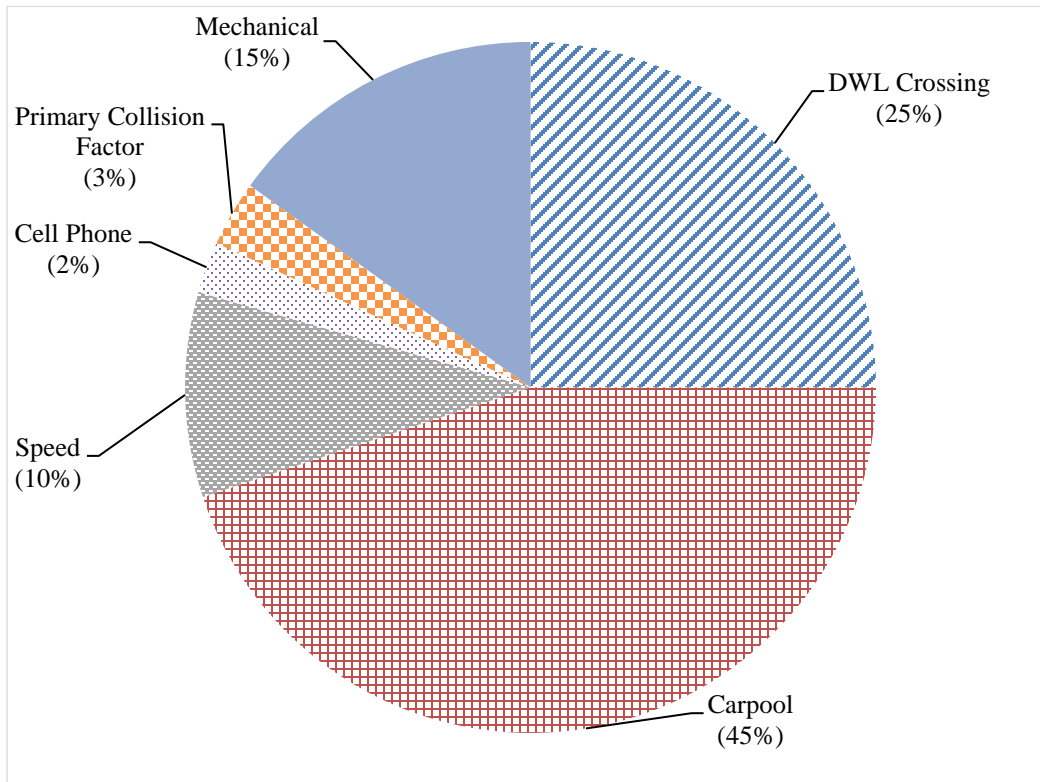
**Figure 8:** FY 2020 Q3, SR 237 Express Lanes Westbound Origin and Destination



**Figure 9:** FY 2020 Q3, SR 237 Express Lanes Eastbound Origin and Destination



**Figure 10: FY 2020 Q3, SR 237 Express Lanes Citations Issued by CHP**



**Table 6: FY 2020 Q3, SR 237 Express Lanes CHP Issued Citations**

Month	Total Citations	Verbal Warnings <sup>1</sup>	DWL Crossing	Carpool	Speed	Seatbelt	Cell Phone	Primary Collision Factor	Mechanical	Hours
January	36	123	9	8	4	0	0	3	11	95
February	141	178	45	43	20	0	3	5	27	189
March	124	51	19	80	4	0	4	1	6	129
<b>TOTAL</b>	<b>301</b>	<b>352</b>	<b>73</b>	<b>131</b>	<b>28</b>	<b>0</b>	<b>7</b>	<b>9</b>	<b>44</b>	<b>413</b>

<sup>1</sup> Verbal warnings are not included in the total citations.

**Figure 11: SR 237 Express Lanes Traffic Volumes and Revenue (Before & After Covid-19 Shelter-in-Place)**

