

**San Mateo County Express Lanes Joint Powers Authority
(SMCEL-JPA)
Board of Directors Meeting Notice**

Meeting No. 48

Date: Friday, May 12, 2023 Time: 9:00 A.M. Primary Location: San Mateo County Transit District Office 1250 San Carlos Ave, 2 nd Fl. Auditorium, San Carlos, CA Teleconference Location (Alternate Public Access): Bay Area Metro Center 375 Beale Street Ohlone Conference Room, 1st Floor San Francisco, CA 94105	Join by Webinar: https://us02web.zoom.us/j/85756374288?pwd=bEZMcEltWHMwSlpnbWpUeUhuclNUQT09 Webinar ID: 857 5637 4288 Password: 051223 Join by Phone: (669) 900-6833
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*****HYBRID MEETING - IN-PERSON AND BY VIDEOCONFERENCE*****

This meeting of the SMCEL-JPA Board of Directors will be held in person and by teleconference pursuant to Government Code Section 54953(e). Members of the public will be able to participate in the meeting remotely via the Zoom platform or in person at the location above. For information regarding how to participate in the meeting, either in person or remotely, please refer to the instructions at the end of the agenda.

Board of Directors: Rico E. Medina (Chair), Alicia Aguirre (Vice Chair), Gina Papan, Emily Beach, Michael Salazar and Carlos Romero

1.0 CALL TO ORDER/ ROLL CALL

2.0 PUBLIC COMMENT ON ITEMS NOT ON THE AGENDA

Note: Public comment is limited to two minutes per speaker. Members of the public who wish to address the Board should complete a speaker's slip to make a public comment in person or raise their hand in Zoom to speak virtually.

3.0 APPROVAL OF CONSENT AGENDA

This item is to set the final consent and regular agenda, and to approve the items listed on the consent agenda. All items on the consent agenda are approved by one action. There will be no separate discussion on these items unless members of the Board, staff or public request specific items to be removed for separate action.

3.1 Approval of the minutes of Board of Directors regular business meeting No. 47 dated April 14, 2023. ACTION p. 1

3.2 Accept the Sources and Uses of Funds for the FY23 Period Ending March 31, 2023. ACTION p. 4

4.0 REGULAR AGENDA

4.1 Receive a presentation on the draft Fiscal Year 2024 SMCEL-JPA Operating Budget. INFORMATION p. 6

4.2 Receive overview of toll leakage and clean air vehicle study results and next steps. INFORMATION p. 7

4.3 Receive update on the US 101 Express Lanes operations from Interstate 380 to the San Mateo/Santa Clara County line. INFORMATION p. 30

5.0 REPORTS

- a) Chairperson Report.
- b) Member Communication.
- c) Executive Council Report - Executive Council Verbal Report.
- d) Policy/Program Manager Report.

6.0 WRITTEN COMMUNICATIONS

None.

7.0 NEXT REGULAR MEETING

June 9, 2023

8.0 ADJOURNMENT

PUBLIC NOTICING: All notices of SMCEL-JPA regular Board meetings, standing committee meetings, and special meetings will be posted at the San Mateo County Court Yard, 555 County Center, Redwood City, CA, and on SMCEL-JPA's website at: <http://www.ccag.ca.gov>.

PUBLIC RECORDS: Public records that relate to any item on the open session agenda for a regular Board meeting, standing committee meeting, or special meeting are available for public inspection. Those public records that are distributed less than 72 hours prior to a regular Board meeting are available for public inspection at the same time they are distributed to all members, or a majority of the members, of the Board. The Board has designated the San Mateo County Express Lanes JPA (SMCEL-JPA), located at 555 County Center, 5th Floor, Redwood City, CA 94063, for the purpose of making public records available for inspection. Such public records are also available on SMCEL-JPA's website at: <http://www.ccag.ca.gov>. Please note that SMCEL-JPA's office is temporarily closed to the public; please contact Mima Crume at (650) 599-1406 to arrange for inspection of public records.

ADA REQUESTS: Persons with disabilities who require auxiliary aids or services to participate in this meeting should contact Mima Crume at (650) 599-1406 or mcrume@smcgov.org by 10:00 a.m. prior to the meeting date.

PUBLIC PARTICIPATION DURING HYBRID MEETINGS: During hybrid meetings of the SMCEL-JPA Board, members of the public may address the Board as follows:

Written comments should be emailed in advance of the meeting. Please read the following instructions carefully:

1. Your written comment should be emailed to mcrume@smcgov.org.
2. Your email should include the specific agenda item on which you are commenting or note that your comment concerns an item that is not on the agenda.
3. Members of the public are limited to one comment per agenda item.
4. If your emailed comment is received at least 2 hours prior to the meeting, it will be provided to the SMCEL-JPA Board members, made publicly available on the SMCEL-JPA website along with the agenda. Emails received less than 2 hours before the meeting will be provided to the SMCEL-JPA Board members and included in the administrative record of the meeting as soon as practicable.

Spoken comments will be accepted during the meeting in person and through Zoom. Public comments will be taken first by speakers in person followed by via Zoom. Please read the following instructions carefully:

***In-person participation:**

1. If you wish to speak to the Board, please fill out a speaker's slip located on the 2nd floor auditorium side table against the wall. If you have anything that you wish distributed to the Board and included in the official record, please hand it to the SMCEL-JPA Clerk who will distribute the information to the Board members and staff.

***Remote participation:**

1. The SMCEL-JPA Board meeting may be accessed through Zoom at the online location indicated at the top of this agenda.
2. You may download the Zoom client or connect to the meeting using an internet browser. If using your browser, make sure you are using a current, up-to-date browser: Chrome 30+, Firefox 27+, Microsoft Edge 12+, Safari 7+. Certain functionality may be disabled in older browsers including Internet Explorer.
3. You will be asked to enter an email address and name. We request that you identify yourself by your name as this will be visible online and will be used to notify you that it is your turn to speak.
4. When the SMCEL-JPA Clerk or Chair call for the item on which you wish to speak, click on "raise hand." The Clerk will activate and unmute speakers in turn. Speakers will be notified shortly before they are called on to speak. If calling in via phone, press *9 to raise your hand and when called upon press *6 to unmute.
5. When called, please limit your remarks to the time allotted.

If you have any questions about this agenda, please contact SMCEL-JPA staff:

Executive Director: Sean Charpentier (650) 599-1409

Clerk of the Board: Mima Crume (650) 599-1406

San Mateo County Express Lanes Joint Powers Authority Board of Directors Meeting Minutes

Meeting No. 47
April 14, 2023

This meeting of the SMCEL-JPA Board of Directors was held in person and by teleconference pursuant to Government Code Section 54953(e). Members of the public was able to participate in the meeting remotely via the Zoom platform or in person.

Board of Directors: Rico E. Medina (Chair), Alicia Aguirre (Vice Chair), Carlos Romero, Emily Beach, Gina Papan and Michael Salazar

1.0 CALL TO ORDER/ ROLL CALL

Chair Rico E. Medina called the meeting to order at 9:00 a.m. Roll call was taken.

AGENCY:	IN-PERSON:	ABSENT:	REMOTE AB 2449:	REMOTE Publicly Accessible Teleconference Location:
C/CAG	Alicia Aguirre			
C/CAG	Gina Papan			
C/CAG	Michael Salazar			
SMCTA				Carlos Romero
SMCTA	Emily Beach			
SMCTA	Rico E. Medina			

Staff Present (In-Person):	Staff Present (Remote):
Sean Charpentier – C/CAG Executive Council	Christa Cassidy – HNTB
April Chan – SMCTA Executive Council	
Mima Crume – Clerk of the Board	
Tim Fox – Legal Counsel	
Kaki Cheung – C/CAG	
Van Ocampo – C/CAG	
Monique Fuhrman – HNTB	
Kevin Beltz – SMCTA	

Other members of staff and members of the public were in attendance via in-person or remote using zoom.

2.0 PUBLIC COMMENT ON ITEMS NOT ON THE AGENDA

Note: Public comment is limited to two minutes per speaker. Members of the public who wish to address the Board should complete a speaker's slip to make a public comment in person or raise their hand in Zoom to speak virtually.

Clerk Crume reported that there were no public comments.

3.0 APPROVAL OF CONSENT AGENDA

This item is to set the final consent and regular agenda, and to approve the items listed on the consent agenda. All items on the consent agenda are approved by one action. There will be no separate discussion on these items unless members of the Board, staff, or public request specific items to be removed for separate action.

3.1 Approval of the minutes of Board of Directors regular business meeting No. 46 dated March 10, 2023. APPROVED

3.2 Accept the Sources and Uses of Funds for the FY23 Period Ending February 28, 2023. APPROVED

3.3 Review and approval of Resolution SMCEL 23-07 authorizing the Chair to execute the License Agreement between the City of Burlingame and SMCEL-JPA for Express Lanes toll facilities within the City Rights of Way. APPROVED

Vice Chair Aguirre MOVED to approve the consent agenda items 3.1 to 3.3.
Director Salazar SECONDED. **MOTION CARRIED 6-0-0**

4.0 REGULAR AGENDA

4.1 Receive a presentation on the status of the outstanding 2020 Variable Rate Demand Bonds used to fund a portion of the SMCEL-JPA Express Lanes project. INFORMATION

The Board of Directors received a presentation on the status of the outstanding 2020 Variable Rate Demand Bonds used to fund a portion of the SMCEL-JPA Express Lanes project.

Vice Chair Aguirre asked about the equity component. April Chan added that in the agreement, an amount of \$600K is set aside every year after the O&M cost to support the equity program. Vice Chair Aguirre suggested that the JPA should continue to promote the equity program and its commitment to advancing equity.

Director Beach asked if the \$6M set aside for capitalized interest would last longer than 3 years. Kevin responded affirmatively.

Director Papan asked about the length of time it takes for the JPA to establish its own bond rating. Kevin answered that it takes at least 3 years of steady revenues in order to do so.

Director Romero was interested in understanding whether the JPA has sufficient revenues to cover both operating and interest expenses. If there is enough revenue to accomplish both, the JPA can consider setting aside some revenues for reserves.

- 4.2 Receive update on the US 101 Express Lanes operations from Whipple Ave. to the San Mateo /Santa Clara County line and a preliminary update on operations from Interstate 380 to Whipple Avenue. INFORMATION

The Board of Directors received an update presentation update on the US 101 Express Lanes operations from Whipple Ave. to the San Mateo /Santa Clara County line and a preliminary update on operations from Interstate 380 to Whipple Avenue.

Vice Chair Aguirre asked about the possibility of selling the FasTrak toll tag at the SamTrans building. April said she would investigate.

5.0 REPORTS

- a) Chairperson Report.

Chair Medina reported that Catrans has completed the replacement of at least 20 ft of storm drain pipes. A ribbon cutting celebration of the 22 miles of the Express Lanes will be held on April 15th at 11am on 19th Ave in the City of San Mateo. Lastly, the JPA's Equity program has been selected as a finalist for consideration at the California Transportation Foundation annual awards.

- b) Member Communication.

None.

- c) Executive Council Report - Executive Council Verbal Report.

April mentioned that she will be attending the Women in Transportation Seminar Annual Conference to present on the Equity Program.

- d) Policy/Program Manager Report.

The PPM reported on the outreach activities of the Equity program. Over 4000 flyers were printed and delivered to the three community colleges and San Mateo County Labor Council. An external partner tool kit was also distributed to Commute.org, 511.org, Community college district, MTC and North Fair Oaks office of community affairs.

6.0 WRITTEN COMMUNICATIONS

None.

7.0 NEXT REGULAR MEETING

May 12, 2023

8.0 ADJOURNMENT – 9:48 a.m.

San Mateo County Express Lanes Joint Powers Authority Agenda Report

Date: May 12, 2023

To: San Mateo County Express Lanes Joint Powers Authority (SMCEL-JPA) Board of Directors

From: Executive Council

Subject: Accept the Sources and Uses of Funds for the FY 2023 Period Ending March 31, 2023
(For further information, contact Kate Steiner, CFO, at 650-508-6466)

RECOMMENDATION

That the SMCEL-JPA Board accepts and enters into the record the Sources and Uses of Funds for the Fiscal Year 2023, period ending March 31, 2023.

The statement columns have been designed to provide the year to date current actuals and the annual budget for the current fiscal year.

BACKGROUND

Year to Date Sources of Funds: As of March 2023, the Total Sources of Funds are \$7.6 million. It is mainly comprised of toll revenues (\$6.8 million) from both Southern and Northern Segments of Express Lanes on U.S. 101. The Northern Segment, which is from Whipple Avenue to the I-380 in South San Francisco, was officially opened on March 3, 2023. The Sources of Funds also include loan advances (\$0.5 million) under the two operating loan agreements between the SMCEL-JPA, the San Mateo County Transportation Authority, and the City/County Association of Governments of San Mateo County, and the Fiscal Year 2021 Carryforward Balance from SMCTA & CCAG (\$0.2 million).

Year to Date Uses of Funds: As of March 2023, the Total Uses of Funds are \$4.7 million. Major expenses are in the categories of FasTrak customer service costs (\$1.4 million), toll operations and maintenance costs (\$1.3 million), consultant costs (\$0.9 million), staff support costs (\$0.4 million), and insurance costs (\$0.2 million).

Budget Amendment: There are no budget amendments for the month of March 2023.

Other Information:

Loan payables represent loan advance payments received since the formation of the SMCEL-JPA from the San Mateo County Transportation Authority and the City/County Association of Governments of San Mateo County. Loan advances will be repaid on a monthly basis and no later than five years after the San Mateo County 101 Express Lanes Project begins operations and receives toll revenues.

ATTACHMENT

1. Sources and Uses of Funds Fiscal Year 2023 (March 2023)

SAN MATEO COUNTY EXPRESS LANE JPA
SOURCES AND USES OF FUNDS
Fiscal Year 2023
March 2023

		ACTUALS	REVISED BUDGET
		As of 3/31/2023	Annual
SOURCES OF FUNDS:			
1	Toll Revenue	\$ 6,770,794	\$ 8,000,000
2	Allocated Bond Funds	170,024	635,000
3	SMCTA Measure A (ACR TDM)	-	400,000
4	Carryforward Balance from SMCTA & CCAG	192,109 *	192,109
5	Advance from the City/County Association of Governments of San Mateo County	172,010	1,350,000
6	Advance from the San Mateo County Transportation Authority	343,438	1,915,185
7	Additional advance from SMCTA	-	622,667
TOTAL SOURCES OF FUNDS		\$ 7,648,375	\$ 13,114,961
USES OF FUNDS:			
8	Staff Support	\$ 352,038	\$ 839,628
9	Administrative Overhead	190,214	106,055
10	Seminar/Training & Business Travel	-	20,000
11	Audit & Bank Fees	822	15,160
12	Office Supplies	-	3,000
13	Printing and Information Svcs	-	5,000
14	Promotional Advertising	71,492	50,000
15	Utilities	23,778	50,000
16	Software Maintenance & License	26,205	32,000
17	Legal Services	8,857	60,000
18	Consultant	876,505	1,811,000
19	Express Lane Maintenance	-	444,000
20	Toll Operations and Maintenance	1,300,037	4,981,000
21	FasTrak Customer Service	1,378,095	2,840,000
22	Express Lane Enhanced Enforcement	42,529	240,000
23	Equity Program Administration and Costs	170,024	1,035,000
24	Insurance	203,777	500,000
25	Miscellaneous	82,723	83,118
TOTAL USES OF FUNDS		\$ 4,727,096	\$ 13,114,961
PROJECT SOURCES OVER USES		\$ 2,921,279	\$ -

Note:

* Represents Fiscal Year 2021 Operating Surplus.

Additional Information:

Loan payables to the City/County Association of Governments of San Mateo County	\$	2,912,181
Loan payables to the San Mateo County Transportation Authority	\$	3,572,327

San Mateo County Express Lanes Joint Powers Authority Agenda Report

Date: May 12, 2023

To: San Mateo County Express Lanes Joint Powers Authority (SMCEL-JPA) Board of Directors

From: Kate Jordan Steiner, Chief Financial Officer

Subject: Receive a presentation on the draft Fiscal Year 2024 SMCEL-JPA Operating Budget.

(For further information or questions, contact Kate Jordan Steiner at steinerkj@samtrans.com)

RECOMMENDATION

That the SMCEL-JPA Board receives a presentation on the draft Fiscal Year 2024 SMCEL-JPA Operating budget.

BACKGROUND

Staff will give a presentation on the draft Fiscal Year 2024 SMCEL JPA Operating budget at the meeting. An addendum to this item with a staff report and draft budget will be distributed and uploaded online prior to the SMCEL-JPA Board meeting.

ATTACHMENT

1. 4.1 Addendum: Staff Report and Attachment 1, FY2024 Preliminary Budget (To be made available prior to the Board meeting at: <https://smcexpresslanes.org/about/bod/meetings/>)

San Mateo County Express Lanes Joint Powers Authority Agenda Report

Date: May 12, 2023

To: San Mateo County Express Lanes Joint Powers Authority (SMCEL-JPA) Board of Directors

From: Policy/Program Manager (PPM)

Subject: Receive Overview of Toll Leakage and Clean Air Vehicle Study Results and Next Steps

(For further information please contact Lacy Vong, Policy/Program Manager at LVong@hntb.com)

RECOMMENDATION

Receive overview of the results of a the Toll Leakage and Clean Air Vehicle Study, which analyzed occupancy misdeclaration and potential revenue loss on the southern segment of the San Mateo 101 Express Lanes. The study includes suggested strategies and next steps to identify potential options for addressing leakage on the San Mateo 101 Express Lanes.

FISCAL IMPACT

There is no fiscal impact related to this informational item. The study was funded through the PPM Fiscal Year 2022-2023 budget allotted for technical studies. The study cost is for an amount not to exceed \$96,860, which includes \$12,000 for data collection by a third-party vendor and up to 336 hours of PPM team staff time.

SOURCE OF FUNDS

N/A

BACKGROUND

The San Mateo 101 Express Lanes Project is a multi-phase project which created 22 miles of Express Lanes in both directions on US 101 from the San Mateo/Santa Clara County border to I-380 in South San Francisco. The first phase, a 7.7-mile-long southern segment from the San Mateo/Santa Clara County border to Whipple Avenue, opened in February 2022, and requires users to have a FasTrak® toll tag. Depending on the type of toll tags, users may be able to self-declare occupancy or clean air vehicle (CAV) status to take advantage of free or discounted use.

Since the opening of the southern segment, data collected through the toll system from toll tags indicates that high occupancy vehicle (HOV) declaration of 3 or more occupants has been higher than expected – above 25% on average – indicating that some drivers may be declaring occupancy incorrectly. This could result in lost revenue or “leakage” and degradation of the Express Lane’s performance. Drivers who pay may also perceive a diminished value in using the lane. With the observed prevalence of CAVs in San Mateo County, CAV declarations have also been lower than expected – under 2% – indicating

that CAV toll tag adoption is low. To analyze these trends, a “leakage” study was undertaken to better understand the extent occupancy misdeclaration is occurring in the San Mateo 101 Express Lanes, with the ultimate goal of informing potential strategies and actions to be taken both near- to long-term to address leakage.

Some key takeaways from the study include:

- Manual counts of HOV3+ are approximately 21-24% lower than the toll system counts of HOV3+ in the southbound direction and between 19-26% lower in the northbound direction.
- In contrast, manual counts of HOV2 are higher than the tolls system: between 8% and 13% in the southbound direction; and about 32% in the northbound direction; which was previously an HOV2+ lane.
- Manual counts of SOV are about 11-14% higher than the toll system counts of SOV in the southbound direction and about 6-12% lower than the toll system counts of SOV in the northbound direction.
- Potential daily peak hour revenue loss as a result of occupancy misdeclaration is estimated to be about \$8,000 - \$12,000 solely within the Express Lane AM and PM peak periods observed within this study (approximately 6 hours of the tolling day).
- Manual observation found significantly higher proportions of vehicles with active CAV decals than trips utilizing CAV toll tags, demonstrating that CAV tag awareness may be low and/or that CAV customers may be utilizing a Flex tag for occupancy declaration.
- Potential identified strategies to address leakage include:
 - Peer Partnerships: Collaborate with other agencies working to address leakage at the regional and national level to enhance the effectiveness of the strategies below.
 - Enhanced Enforcement: Work with California Highway Patrol to adjust enforcement strategies, such as increased presence and HOV citations, and collaborate on potential technical solutions.
 - Technical Solutions: Apply technology to verify and/or enforce occupancy and collaborate with other local and national agencies that are testing or have deployed these solutions.
 - Policy Changes: Influence user behavior by revising occupancy discount policies, eligibility requirements, and verification methods, focusing on feasibility and utilizing peer partnerships.
 - Marketing and Communications: Increase public knowledge of proper use of FasTrak® CAV toll tags and general express lane rules relating to occupancy.

Please refer to Toll Leakage and Clean Air Vehicle Study Executive Summary for more detailed information.

ATTACHMENTS

1. Toll Leakage and Clean Air Vehicle Study Executive Summary
2. Toll Leakage and Clean Air Vehicle Study Presentation



San Mateo County 101 Express Lanes Southern Segment

Toll Leakage and Clean Air Vehicle Study

Executive Summary

Prepared by HNTB, Policy/Program Manager

April 2023



Executive Summary

Background and Purpose. The San Mateo 101 Express Lanes Project is a multi-phase project which created 22 miles of Express Lanes in both directions on US 101 from the San Mateo/Santa Clara County border to I-380 in South San Francisco. The first phase, a 7.7-mile-long southern segment from the San Mateo/Santa Clara County border to Whipple Avenue, opened in February 2022, and requires users to have a FasTrak® toll tag. Depending on the type of toll tag, users may be able to self-declare occupancy or clean air vehicle (CAV) status to take advantage of free or discounted use.

Since the opening of the southern segment, data collected through the toll system from toll tags indicates that high occupancy vehicle (HOV) declaration of 3 or more occupants has been higher than expected – above 25% on average – indicating that some drivers may be declaring occupancy incorrectly. This could result in lost revenue or “leakage” and degradation of the Express Lane’s performance. Drivers who pay may also perceive a diminished value in using the lane. With the observed prevalence of CAVs in San Mateo County, CAV declarations have also been lower than expected – under 2% – indicating that CAV toll tag adoption is low.

To better understand the extent occupancy violation is occurring on the San Mateo 101 Express Lanes, a “leakage” study was undertaken with the ultimate goal of informing potential strategies and actions to be taken from near- to long-term. This study also collects and analyzes counts of CAVs in the lanes. Since the percentage of CAVs using the facilities has been lower than expected, it is likely that a portion of CAVs using the lanes may be using another type of FasTrak® toll tag instead of the FasTrak® CAV toll tag, which may be procured by users participating in the Department of Motor Vehicle CAV decal program. This data will help the San Mateo County Express Lanes Joint Powers Authority (SMCEL-JPA) better direct resources toward public messaging on proper Express Lane usage for CAV drivers and inform future decisions about the CAV discount offered to eligible drivers.

Methodology. Occupancy violations and leakage were estimated by performing a manual occupancy count and comparing it to occupancy declarations collected automatically during the same time periods by the toll system. This comparison approximates how many occupancy violators there are during the observed periods, thereby estimating the resulting potential loss in toll revenue.

Manual counts were performed by an experienced data collection consultant and were captured in fifteen-minute intervals with physical observation into passing cars in the Express Lane. The consultant ensures the quality of the counts by consistently alternating between counters to minimize counter fatigue and captures video recordings of the observed traffic to be able to perform quality checks of the manual counts. Count locations were chosen such that counters were within the existing zone limits (1 per zone) and would have an unobstructed view into passing cars travelling in both directions. Thus, count locations on the southern segment of the US101 corridor were limited to two overcrossing locations at Maple Street and Willow Road, as shown in Figure i.

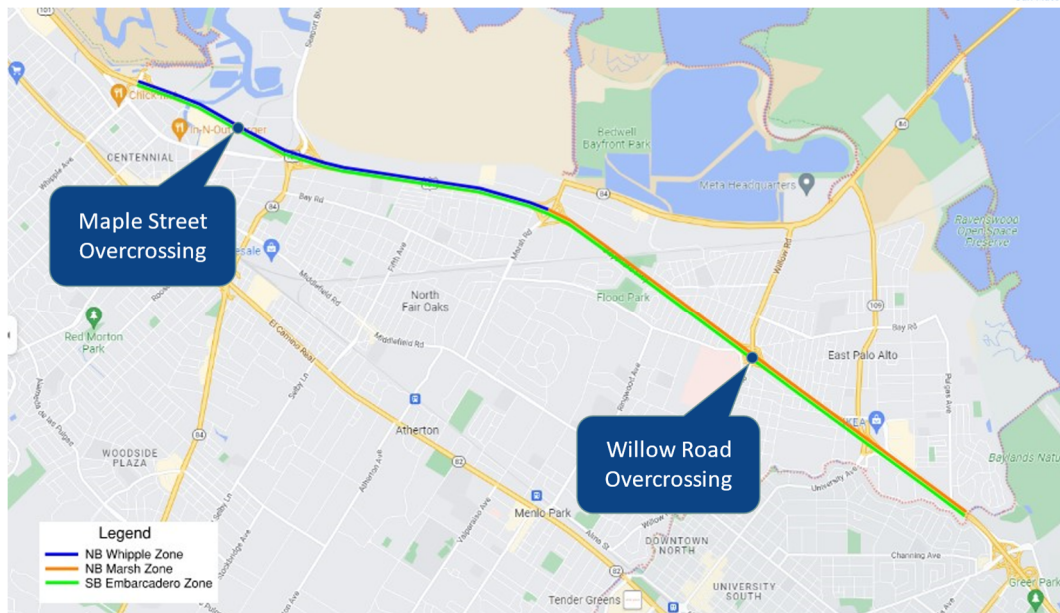


Figure i: Count Location Map and Views

Results. This study finds that toll leakage is occurring on the US101 corridor as a result of occupancy misdeclaration based on comparisons in observed and declared occupancy (see Figure ii, below):

- **HOV3+:** Across all directions of travel, times of day, and data collection locations, manual counts of HOV3+ are 19-26% lower than the toll system, with the greatest difference within the study area shown at Willow Road in the southbound PM peak. This indicates that a portion of drivers are incorrectly declaring as HOV3+.
- **HOV2:** Differences between manual and toll system counts vary depending on direction, time of day, and data collection point for HOV2. In most cases, manual counts are 8-33% higher than toll system, again with the greatest difference shown at Willow Road in the southbound PM peak, which again indicates some drivers are incorrectly declaring as HOV2.
 - A notable exception is at the Willow Road data collection point in the northbound direction where, irrespective of AM or PM peak, manual counts of HOV2 are very high at 55-63% and exceeding toll system counts, whereas HOV3+ and SOV counts for this same point show higher toll system counts indicating that some HOV2 vehicles are declaring as HOV3+ or may not have FasTrak® Flex toll tags.
- **Single Occupancy Vehicle (SOV):** Manual counts of SOV are 11-14% higher than the toll system counts in the southbound direction, potentially indicating that some SOVs are incorrectly declaring occupancy. However, manual counts are 6-12% lower than the toll system counts in the northbound direction, with the greatest difference shown at Maple Street in the northbound AM peak, indicating that many drivers travelling in this direction are not using a toll tag, thus being captured as an image-based transaction.

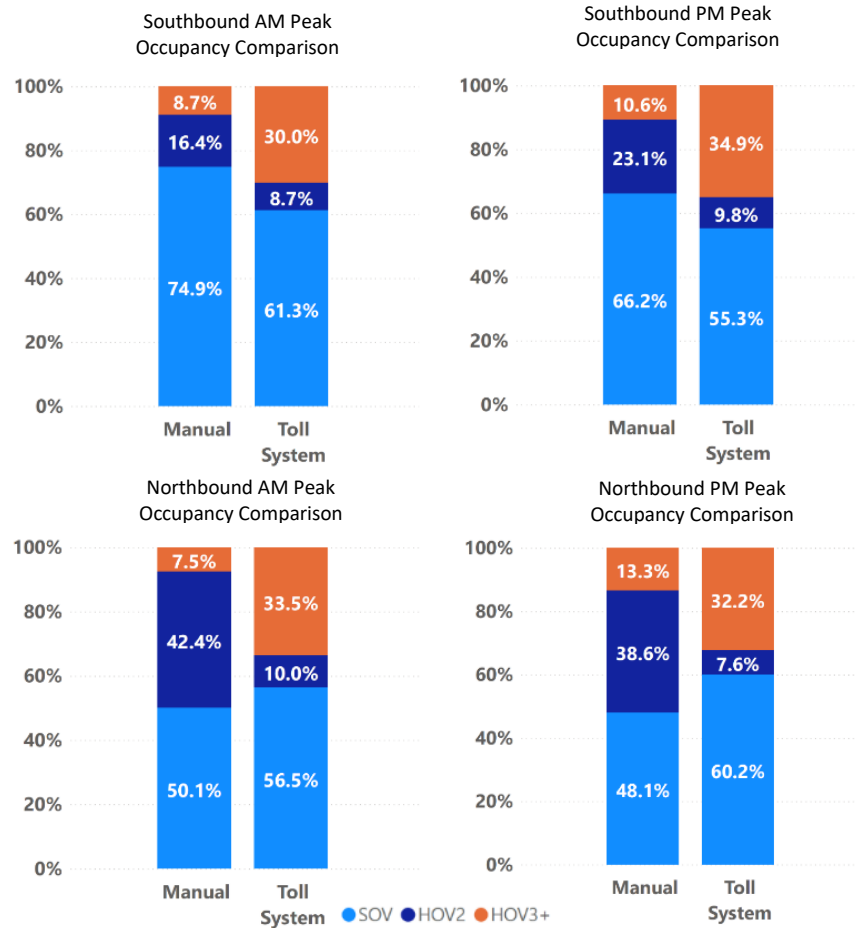


Figure ii: Manual vs. Toll System Comparison Summary for Occupancy

While an exact accounting of potential lost revenue during this observation period is not possible, it is estimated that during the two specific peak periods of study (six hours total), between \$8,000 and \$12,000 in revenue was potentially lost due to incorrect occupancy declarations alone. This does not consider that an unknown proportion of this revenue would potentially be uncollectable due to leakage from other factors such as unreadable or missing license plates, unpaid violations, etc.

This study finds significantly higher proportions of CAV decals than FasTrak® CAV toll tag usage (see figure iii). This data indicates that many CAV users may be unaware of the opportunity to use FasTrak® CAV toll tags and/or that CAV users may be incorrectly declaring as HOV3+ to avoid tolls.

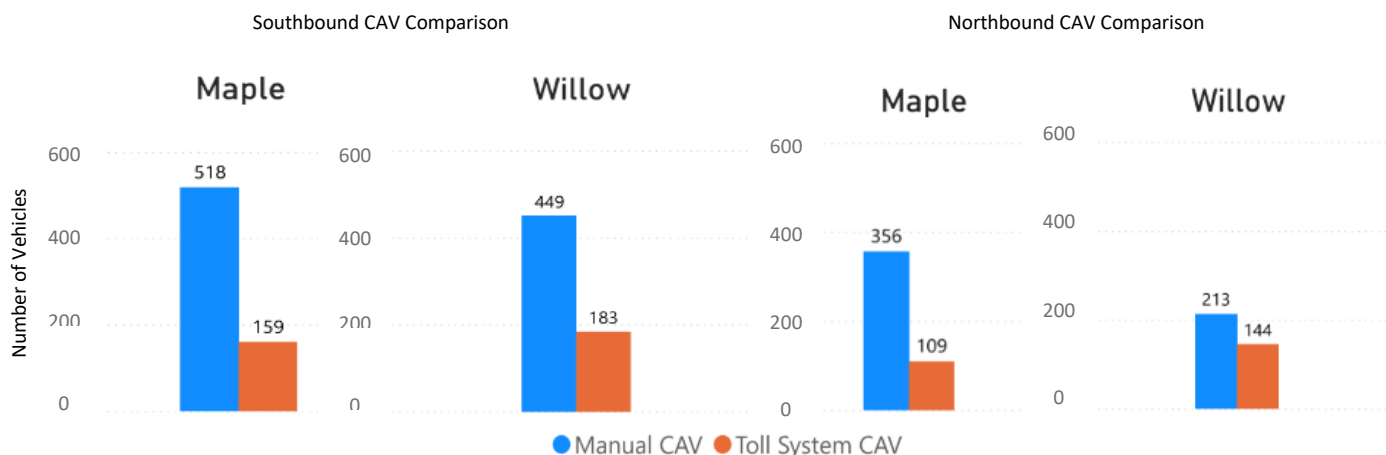


Figure iii: Manual vs. Toll System Comparison Summary for CAV Status

Potential Strategies. To begin to address leakage, as it pertains both to occupancy declaration and CAV status, the following potential strategies were identified:

- **Peer Partnerships:** Collaborate with other agencies working to address leakage at the regional and national level to enhance the effectiveness of the strategies below.
- **Enhanced Enforcement:** Work with California Highway Patrol to adjust enforcement strategies, such as increased presence and HOV citations, and collaborate on potential technical solutions.
- **Technical Solutions:** Apply technology to verify and/or enforce occupancy and collaborate with other local and national agencies that are testing or have deployed these solutions.
- **Policy Changes:** Influence user behavior by revising occupancy discount policies, eligibility requirements, and verification methods, focusing on feasibility and utilizing peer partnerships.
- **Marketing and Communications:** Increase public knowledge of proper use of FasTrak® CAV toll tags and general express lane rules relating to occupancy.

Actions. HNTB recommends several actions to help prioritize potential strategies including:

- **Near-term (< 6 months):**
 - Report findings, potential strategies, and Action Plan to SMCEL-JPA Board of Directors.
 - Provide a preliminary scan of national enforcement strategies and technologies in peer programs.
- **Medium-term (6 months – 1 year):**
 - Develop recommendations for occupancy detection strategies.
 - Perform additional leakage studies to reinforce findings, understand trends over time, and analyze initial impacts of potential strategies.
 - Develop a targeted enforcement strategy in coordination with California Highway Patrol, the California Toll Operators Committee, and Express Lane Operators.
 - Assess potential policy changes.
 - Develop recommendations for communications strategies.
- **Long-term (> 1 year):** Conduct outreach for technological solutions and continue leakage analysis as the corridor evolves.



Toll Leakage and Clean Air Vehicle Study Results

May 12, 2023

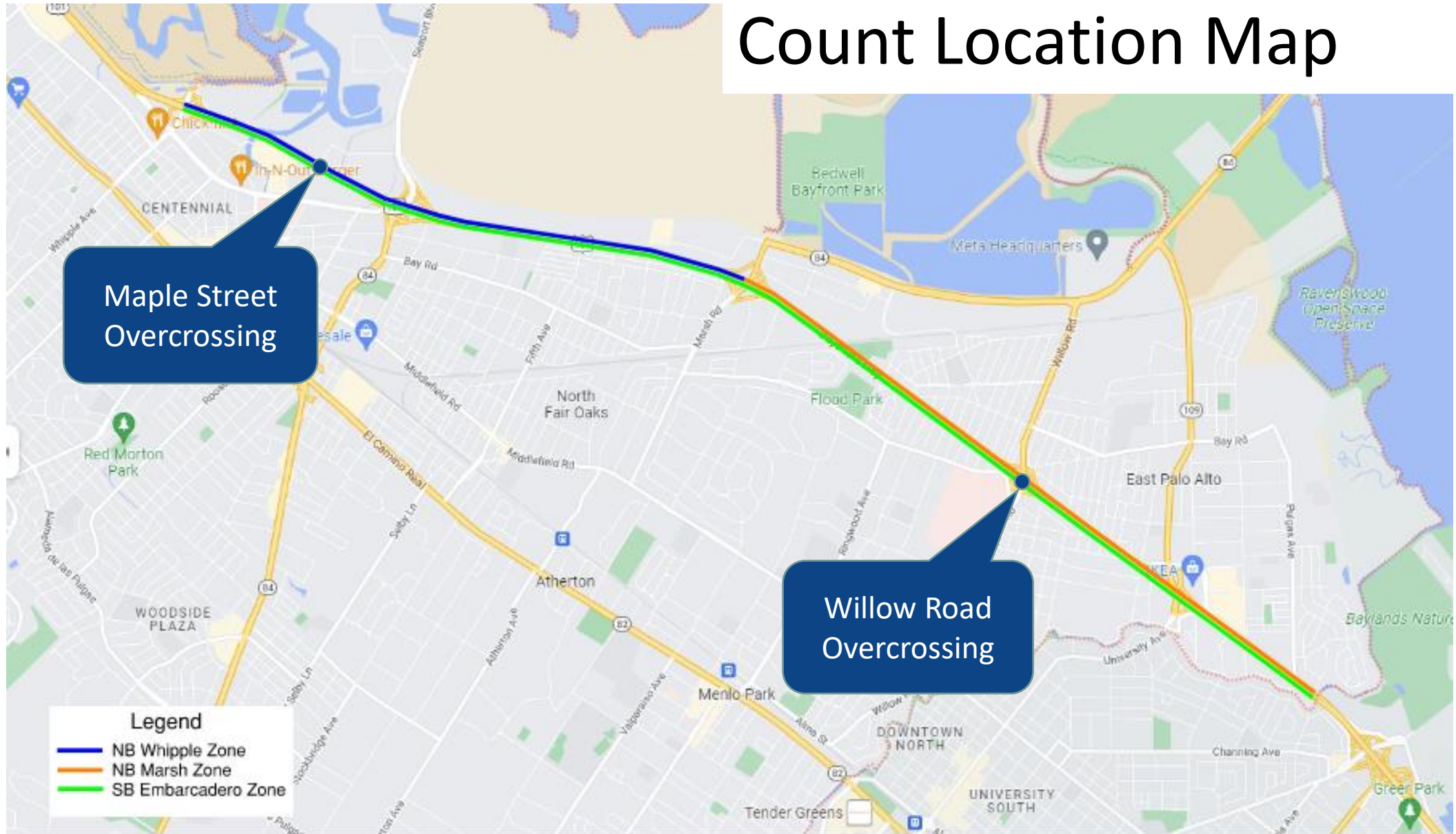
Study Purpose & Goals

- Understand Occupancy Misdeclaration in SM 101 Southern Segment
 - Estimate Potential Revenue Loss
- Determine Observed Clean Air Vehicle (CAV) usage of EL
 - CAV tag penetration

Analysis Methodology

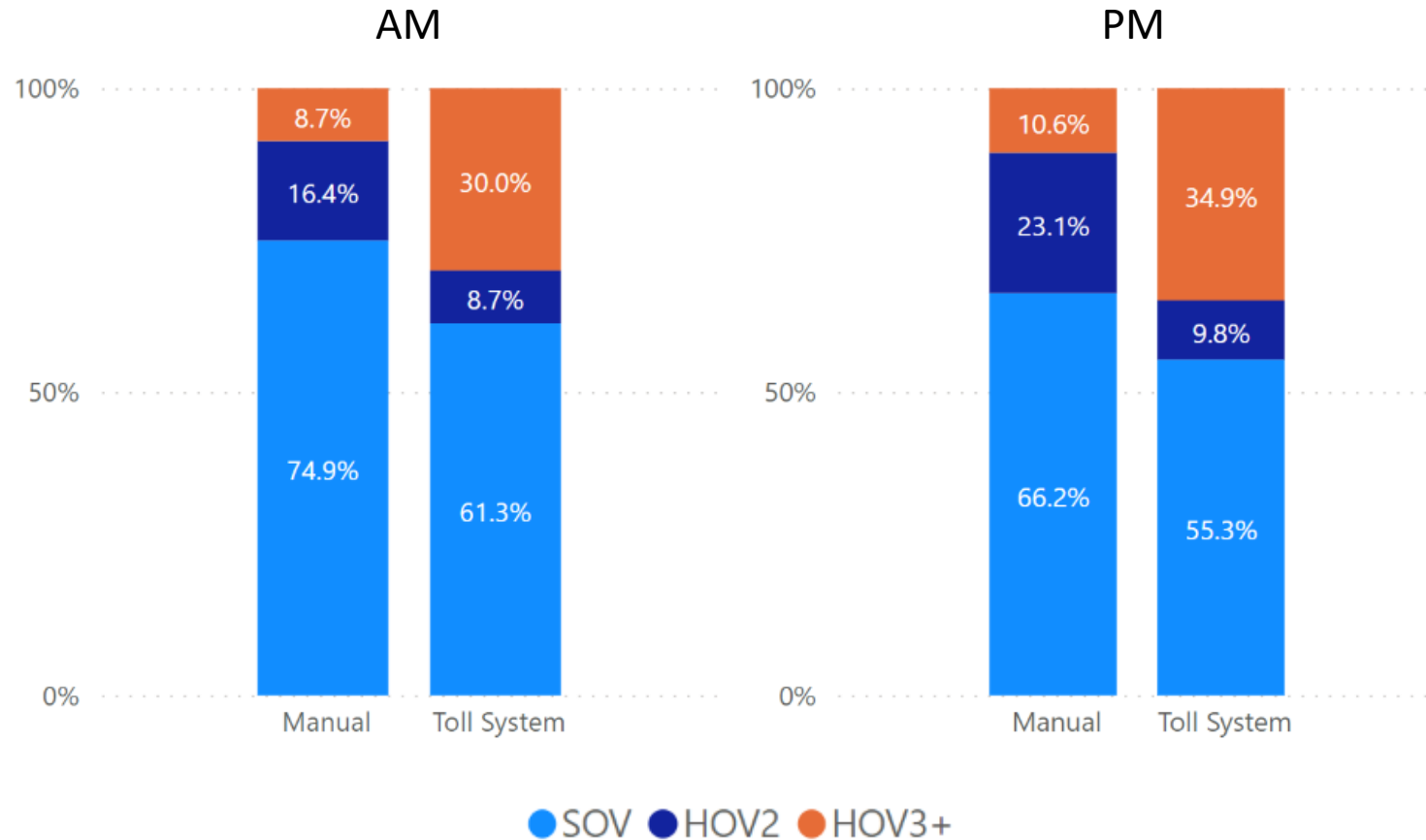
- Manual Counts
 - Observed occupancy & classification
 - Separately observed valid CAV stickers
 - Collected Manual Counts on November 2, 2022
- BAIFA Toll Host Reports
 - Pulled reports for closest read points to data collection points
- Perform Comparison Manual vs. Toll System
 - Estimate potential revenue loss based on differences

Count Location Map

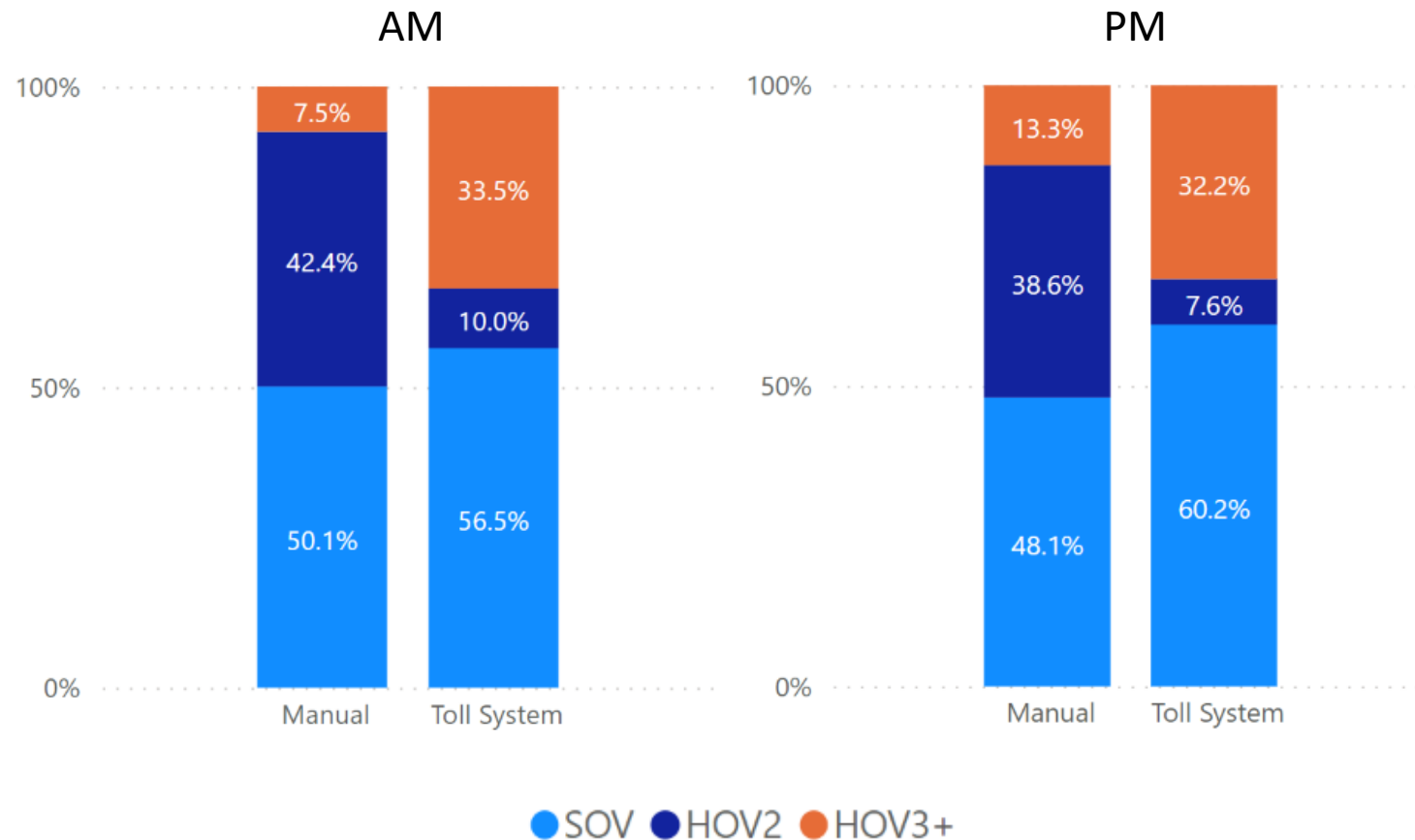


Results

Southbound Occupancy Results



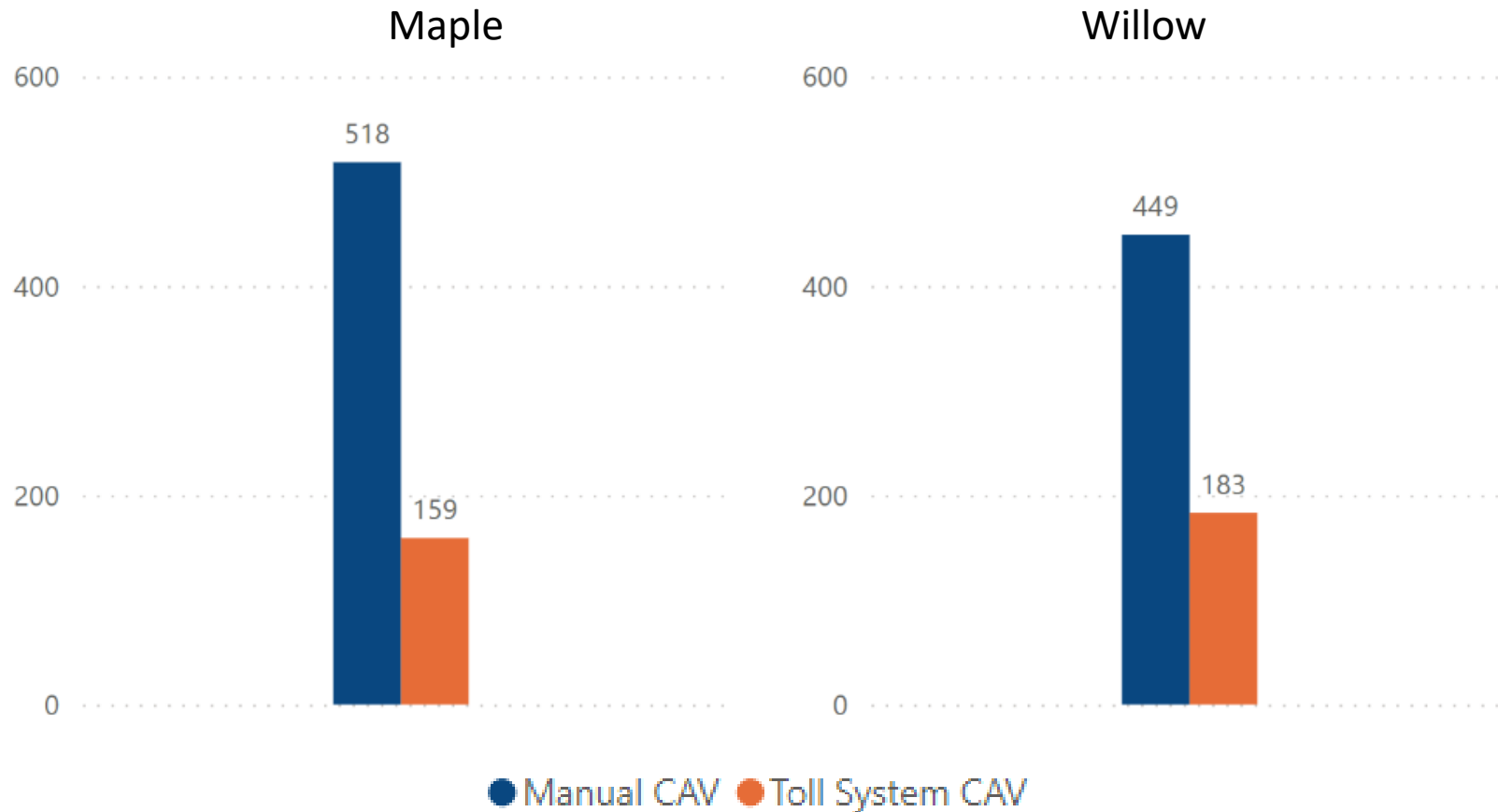
Northbound Occupancy Results



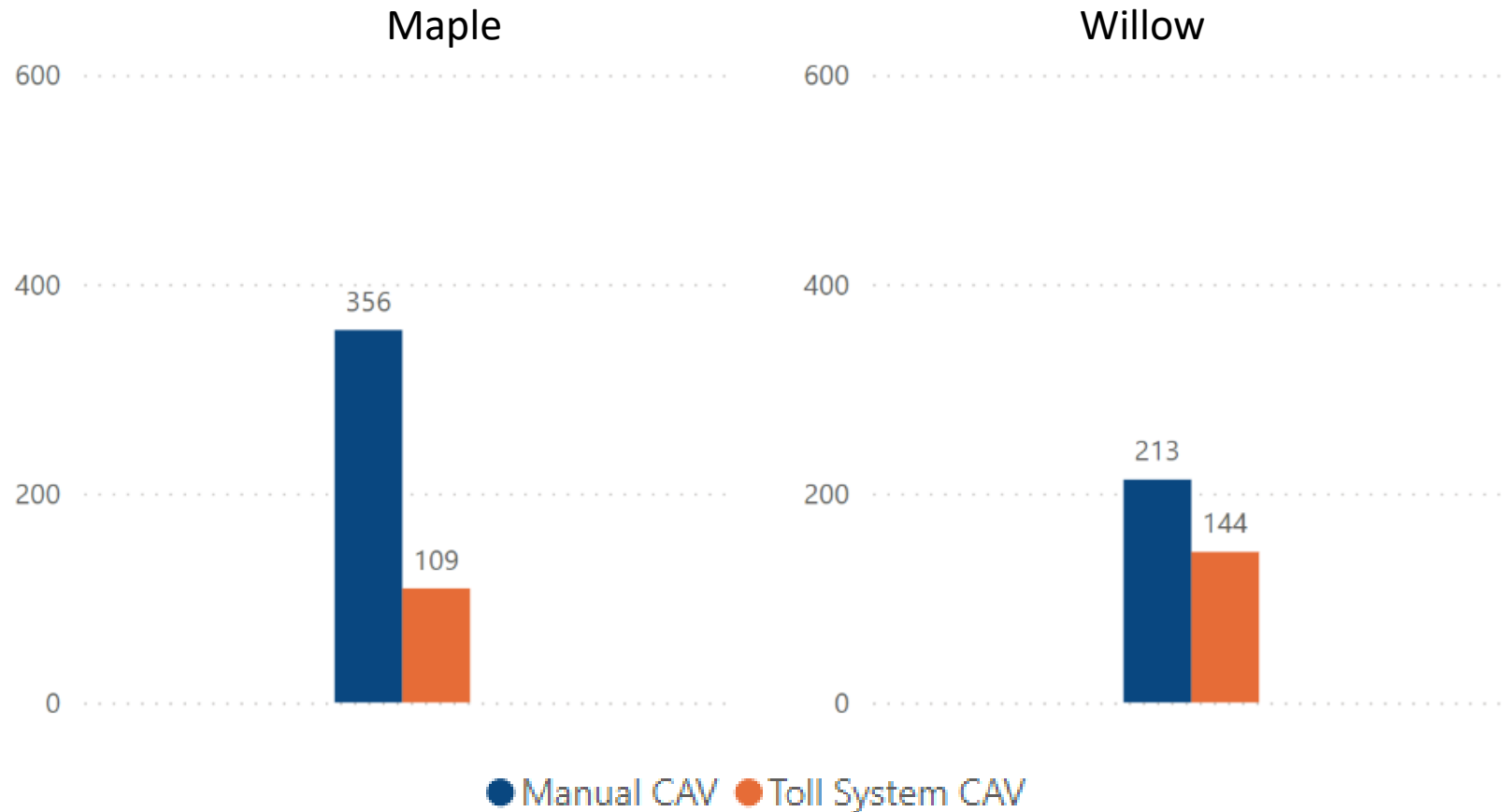
Occupancy Results Summary

- HOV3+: Manual counts 19-26% higher than toll system
 - Consistent with national leakage trends
- HOV2: Make up for some difference in HOV3+ counts
 - Potentially indicating misdeclaration is occurring
- SOV: More similar values between count methods
 - Also influenced by IBTs (non-toll tag trips) which could be carpools
- **Estimated \$8,000 - \$12,000 in lost potential toll revenue during peak analysis periods**

Southbound CAV Results



Northbound CAV Results



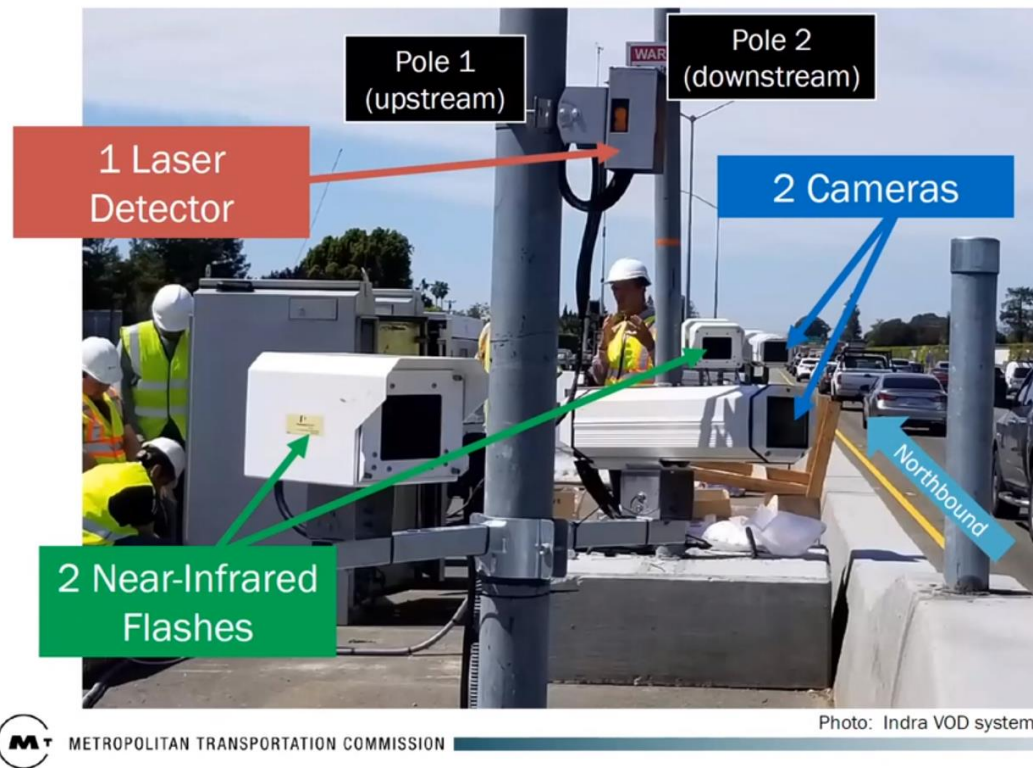
Strategies & Next Steps

Potential Strategies

- **Peer Partnerships** – Collaborate on past/current strategies and pilots
- **Enhanced Enforcement** – Partnership with CHP (in progress)
- **Technical Solutions** - Explore technology-based solutions via existing deployments or pilots
- **Policy Changes** - Consider revision of occupancy discount policies, eligibility requirements, and verification methods
- **Marketing and Communications** - Increase public knowledge of proper use of FasTrak® CAV toll tags and general express lane rules relating to occupancy

Current Technological Strategies

Roadside Solutions

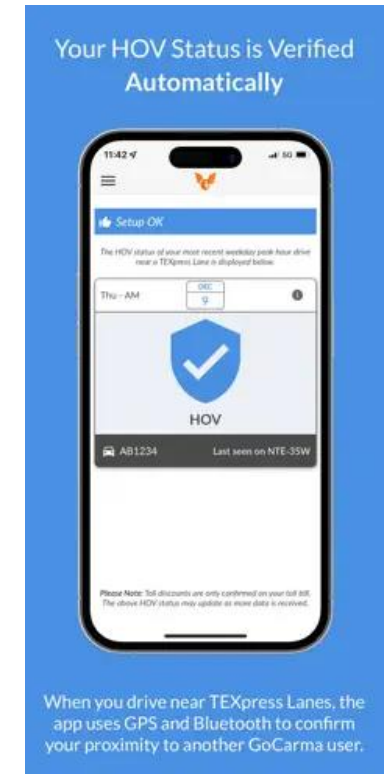


App-Based Solutions

Facial Capture



GPS + Bluetooth



Action Plan – Nearer Term

- Research and present national scan of current practices and pilots
- Develop CHP strategy, ideally in coordination with CTOC or EL Operators
- Assess impacts and challenges of potential policy changes
- Provide recommendation on public/stakeholder communications strategy

Action Plan – Longer Term

- Assess possible solutions through innovative technology and regional partnerships
- Continue to study and monitor leakage over time



Questions?

San Mateo County Express Lanes Joint Powers Authority Agenda Report

Date: May 12, 2023

To: San Mateo County Express Lanes Joint Powers Authority (SMCEL-JPA) Board of Directors

From: Policy/Program Manager (PPM)

Subject: Receive Update on the US 101 Express Lanes Operations from Interstate 380 to the San Mateo/Santa Clara County line.

(For further information please contact Lacy Vong, Policy/Program Manager, LVong@hntb.com)

RECOMMENDATION

Receive update on the US 101 Express Lanes operations from Interstate 380 to the San Mateo /Santa Clara County line. No Board action is required.

FISCAL IMPACT

There is no fiscal impact related to this informational item.

SOURCE OF FUNDS

N/A

BACKGROUND

US 101 Express Lanes Operations

On March 3rd, 2023, the northern segment of the US 101 Express Lanes (between Interstate-380 and Whipple Avenue) opened, establishing the full 22-mile San Mateo 101 Express Lanes corridor. There is now a seamless express lanes network along the US 101 from Interstate 380 to the Santa Clara County line. The full corridor has been operational for about two months and is performing well.

The following are operational highlights for the first month of full corridor operations, period from March 3, 2023 through March 31, 2023:

- The average potential daily revenue during this period was \$73,460, compared to the average of \$39,932 for February 2023 in which only the southern segment of the corridor was operational.

- The average daily toll rates were:
 - Southbound: \$2.10
 - Northbound: \$2.29
- Daily average express lanes volumes were:
 - Southbound: 22,253
 - Northbound: 26,364
- Express Lanes continue to provide a speed differential benefit by operating at about 8 to 12 mph faster than the general purpose lanes in both directions.
- Similar occupancy declaration trends were observed during the northern segment opening. When the southern segment began operation, there was an uptick in image-based trips, which are vehicles that may not yet have a FasTrak® account or transponder.
- Potential toll revenue increased in March as expected with the corridor extension to approximately \$1.65 million, which is the highest month of Fiscal Year 2023.
- Actual cumulative toll revenue in fiscal year 2023 through March is approximately \$6.8 million.
- Toll operations and maintenance (O&M) costs, which consists of the toll system operating and maintenance, FasTrak Regional Customer Service Center support, Caltrans civil roadway maintenance, and California Highway Patrol enhanced lane enforcement activities, is about \$2.7 million cumulative to date in fiscal year 2023. The Toll O&M costs do not include agency overhead and other administrative costs used to support the Express Lanes Program.
- In the period from April 2022 – March 2023, 1,704 participants have enrolled in the Community Transportation Benefits Program. 1,412 (83%) selected the Clipper Card benefit and 292 (17%) selected the FasTrak benefit.

ATTACHMENT

1. US 101 Express Lanes Operations Update Presentation



US 101 Express Lanes Operations Update

SMCEL-JPA Board Meeting
May 12, 2023



- Total of 22 miles of Express Lanes in operation in each direction
 - Added ~14 miles of Express Lanes on March 3 (Whipple Ave to I-380)
- Change in zone configuration
 - 5 zones in each direction (Northbound & Southbound)
 - Southern Segment was 1 zone SB and 2 zones NB



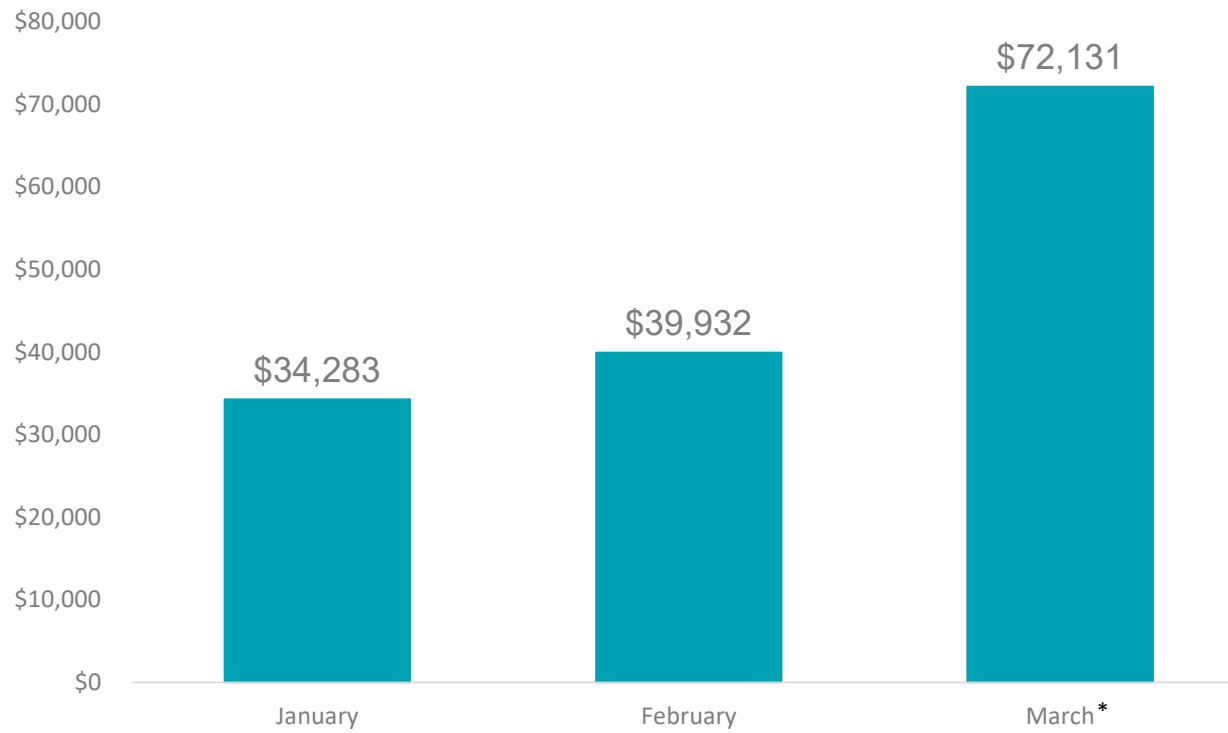
Full Corridor: Tolling and Revenue Summary

- Data for First Month of full corridor operations:
 - March 3rd – March 31st
 - 21 Toll Days
- Average Daily Posted Toll Rates:
 - Southbound: \$2.10
 - Northbound: \$2.29
- Average Potential Daily Revenue: \$73,460
- Average speed differential between Express Lanes and GP:
 - AM Peak: 10 mph
 - PM Peak: 12 mph



Note: Potential revenue assumes full collection of image-based tolls and no leakage from all account types.

Average Daily Potential Revenue

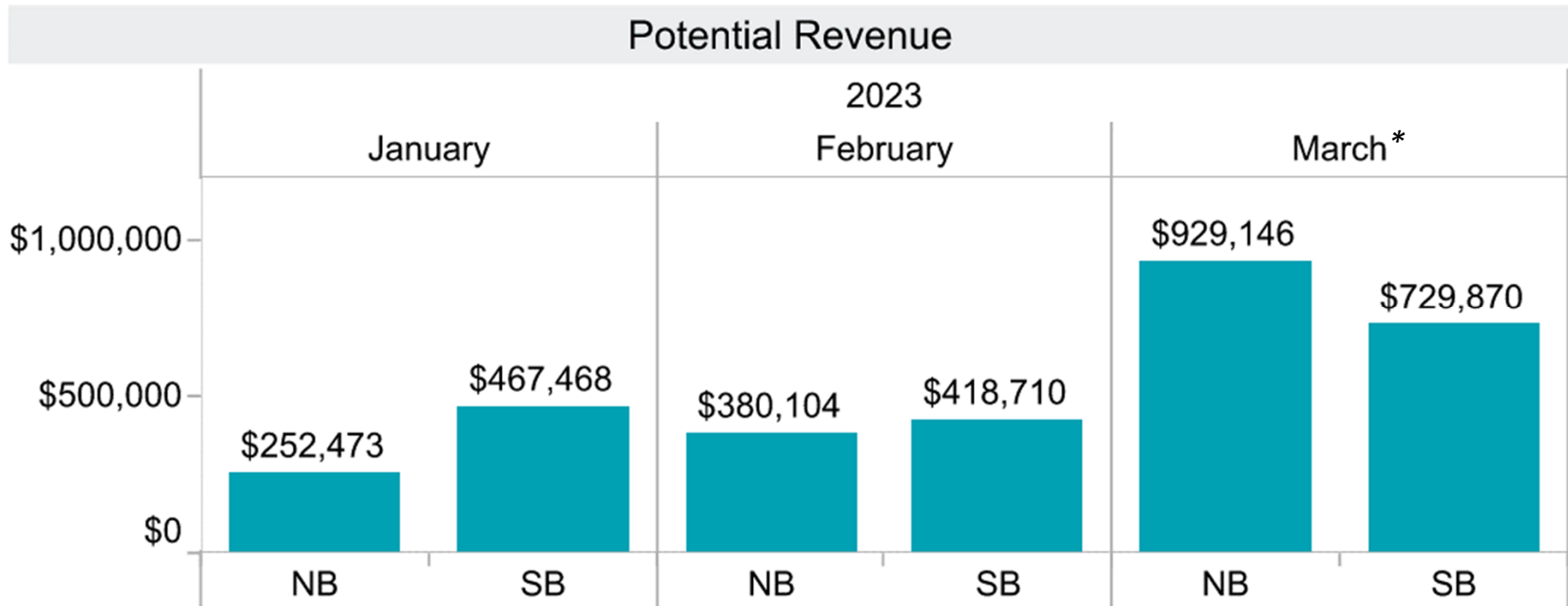


Note: Potential revenue assumes full collection of image-based tolls and no leakage from all account types.

**March 2023 data includes 2 days of Southern Segment only tolling and 21 days of full corridor tolling*



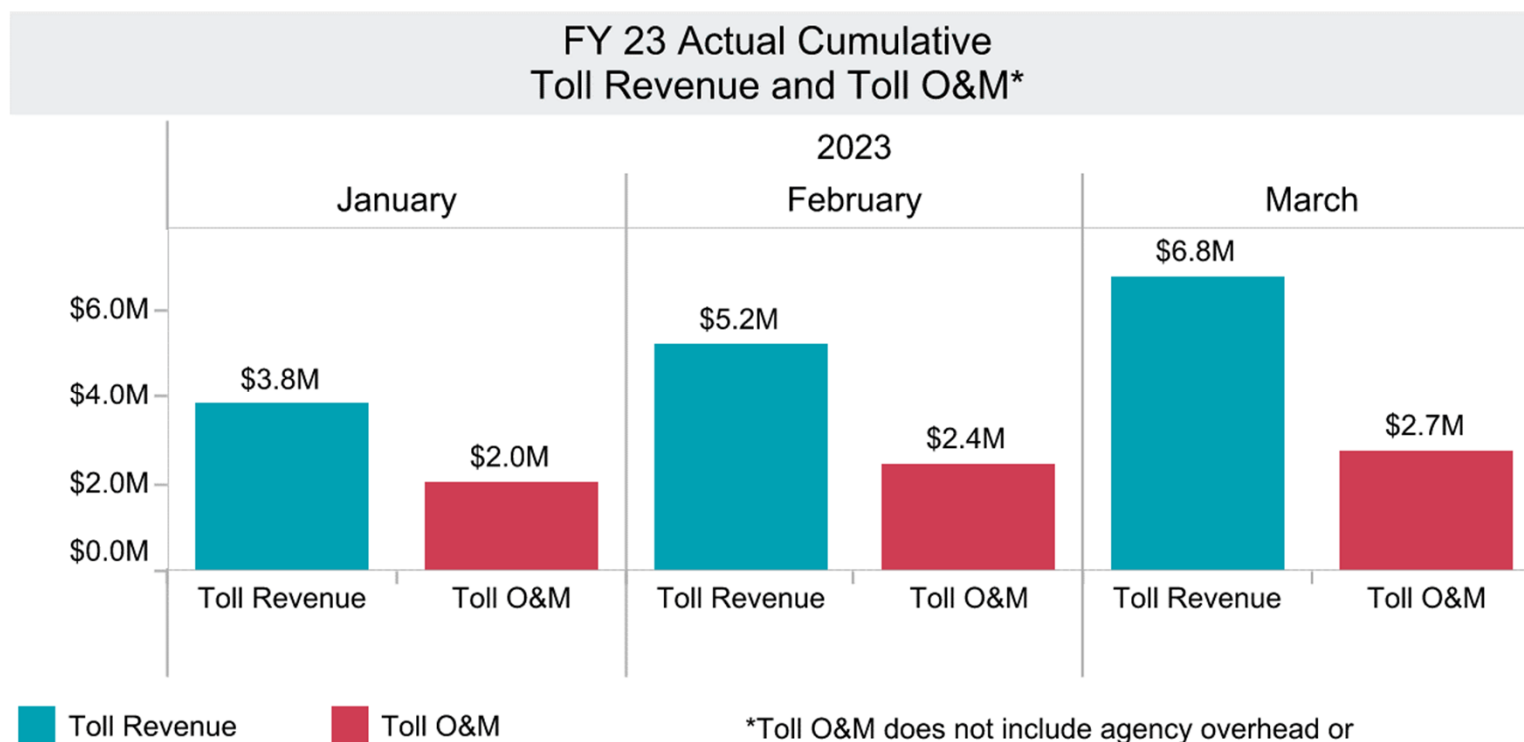
Monthly Potential Revenue



Note: Potential revenue assumes full collection of image-based tolls and no leakage from all account types.

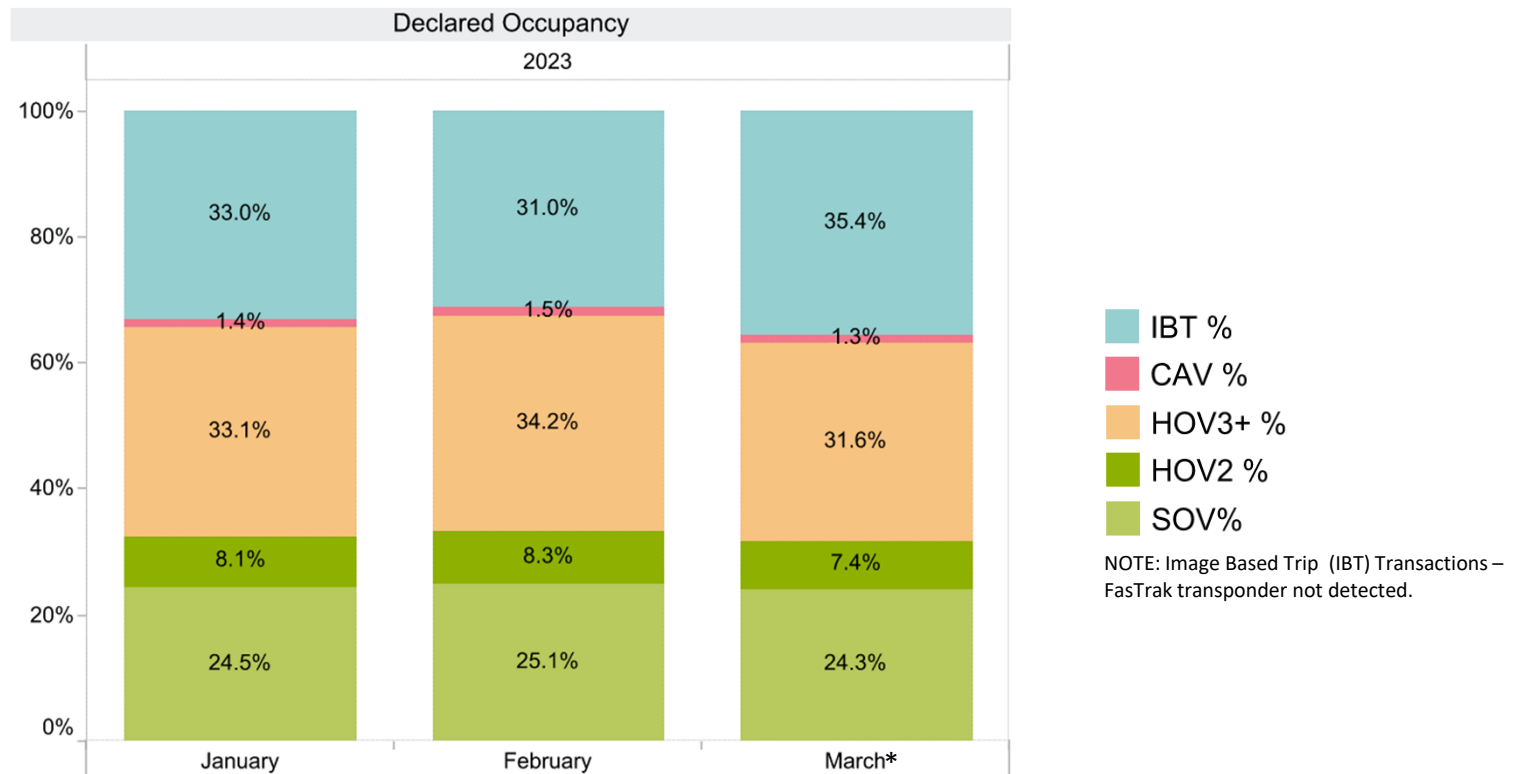
**March 2023 data includes 2 days of Southern Segment only tolling and 21 days of full corridor tolling*

Actual Cumulative Toll Revenue & Toll O&M



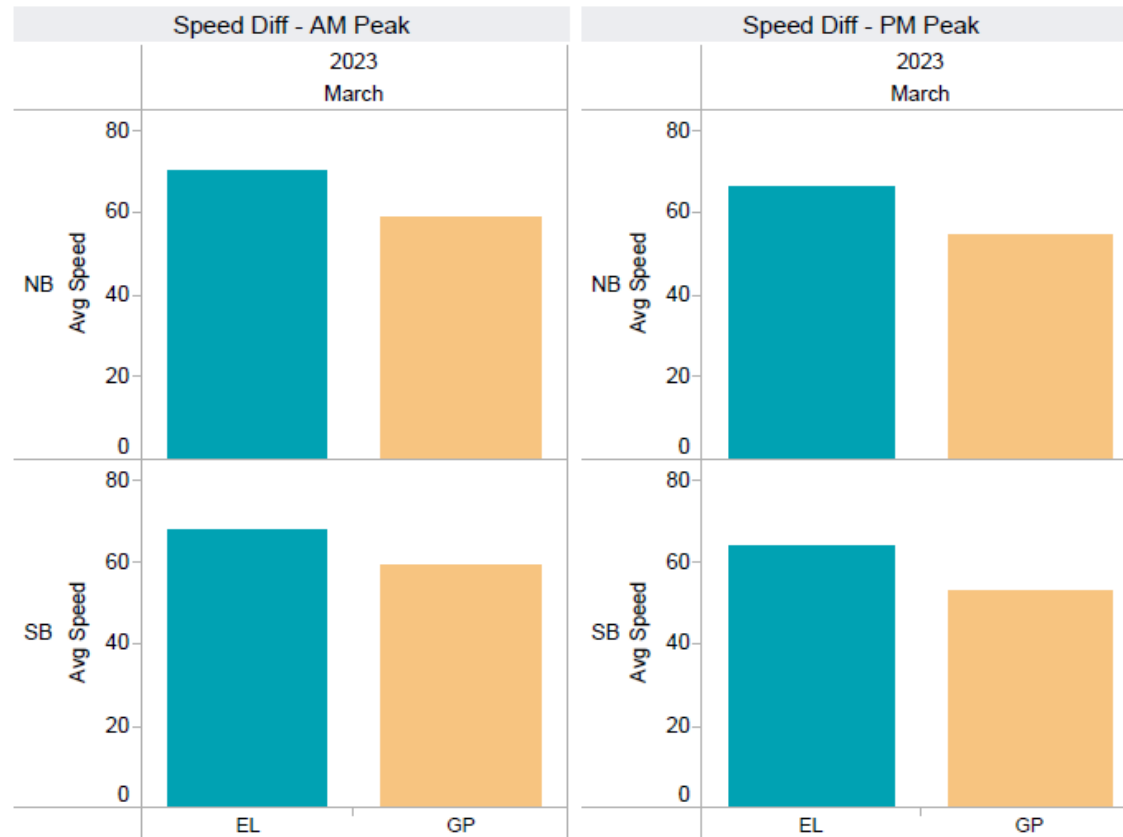
*Toll O&M does not include agency overhead or administrative costs.

Average Declared Occupancy



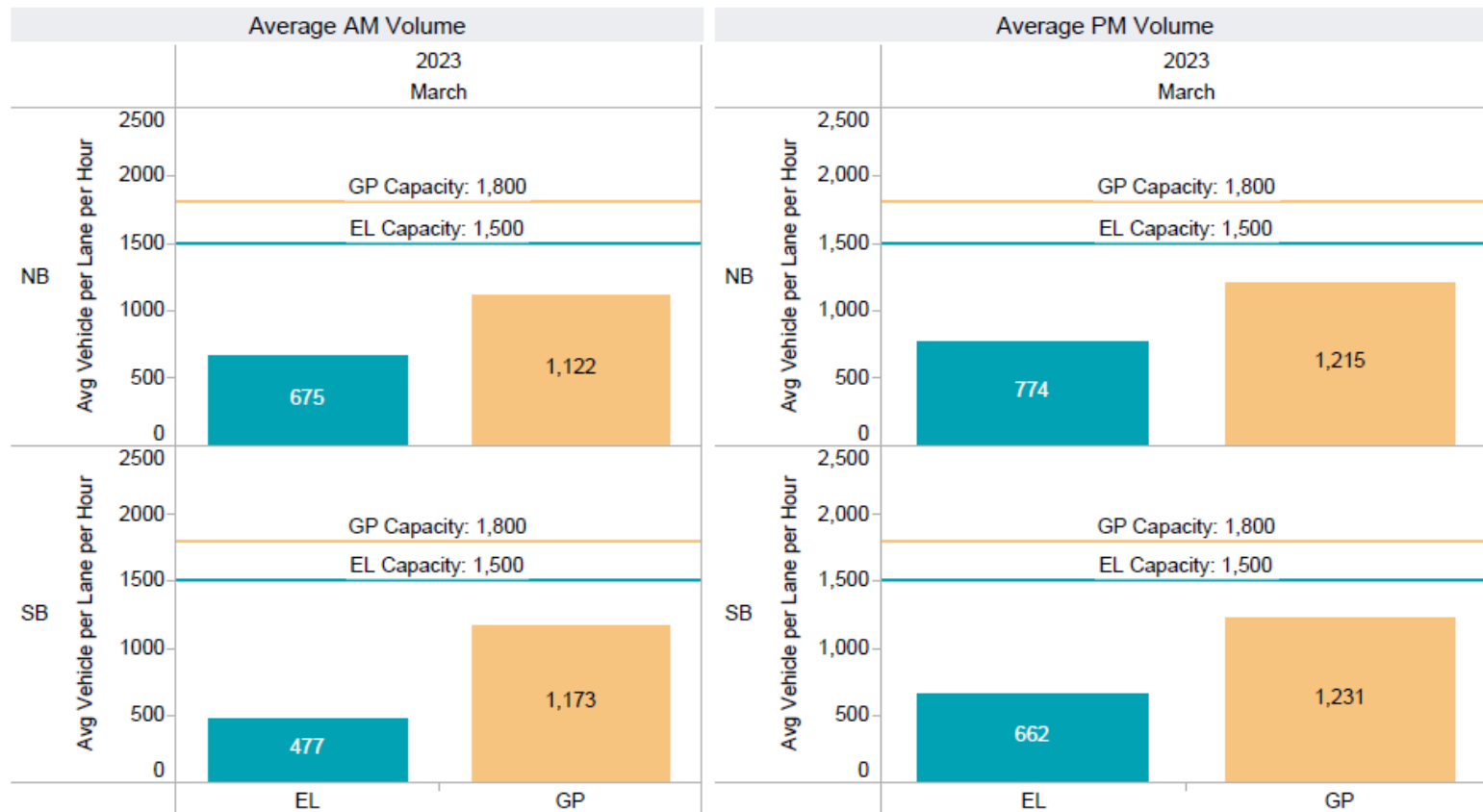
*March 2023 data includes 2 days of Southern Segment only tolling and 21 days of full corridor tolling

Full Corridor Express Lanes Speeds



Note: Analysis of the first 21 days of full corridor tolling from March 3-31, 2023

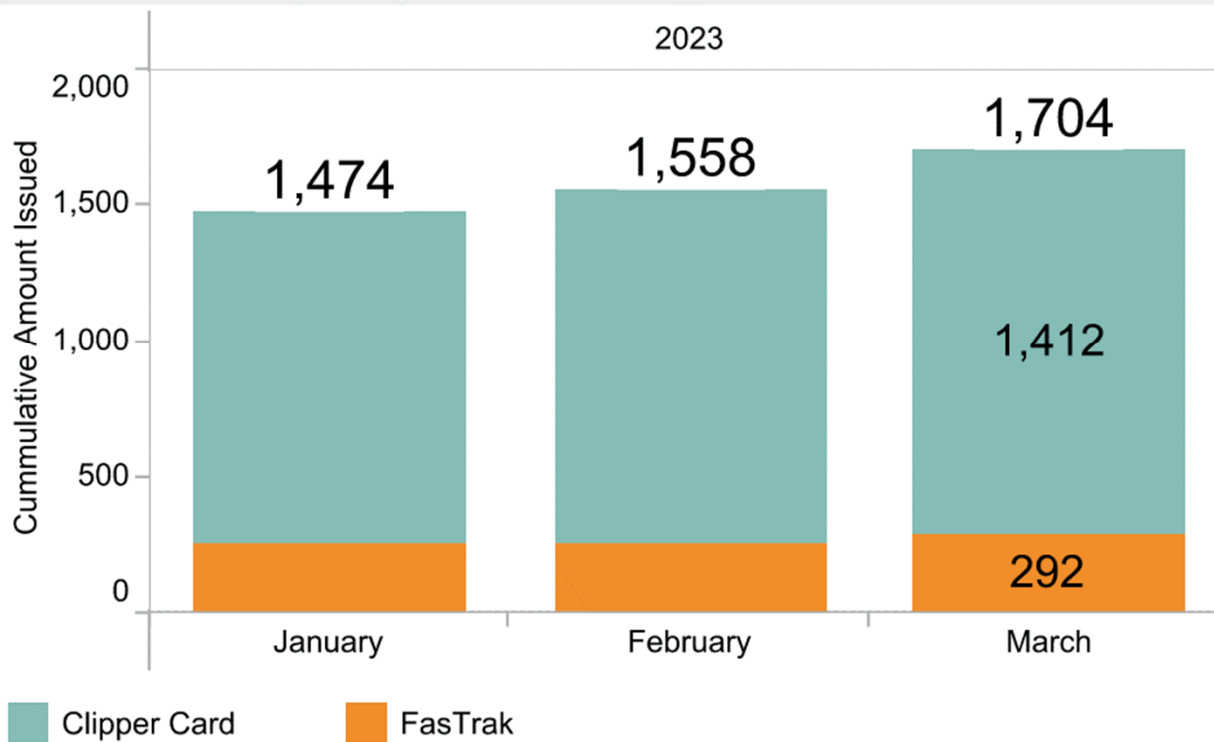
Full Corridor Average Hourly Lane Volumes



Note: Analysis of the first 21 days of full corridor tolling from March 3-31, 2023

Community Transportation Benefits Program

Equity Program - Cumulative Benefits Issued



Monitoring Congestion

Example of SR 92 Approach

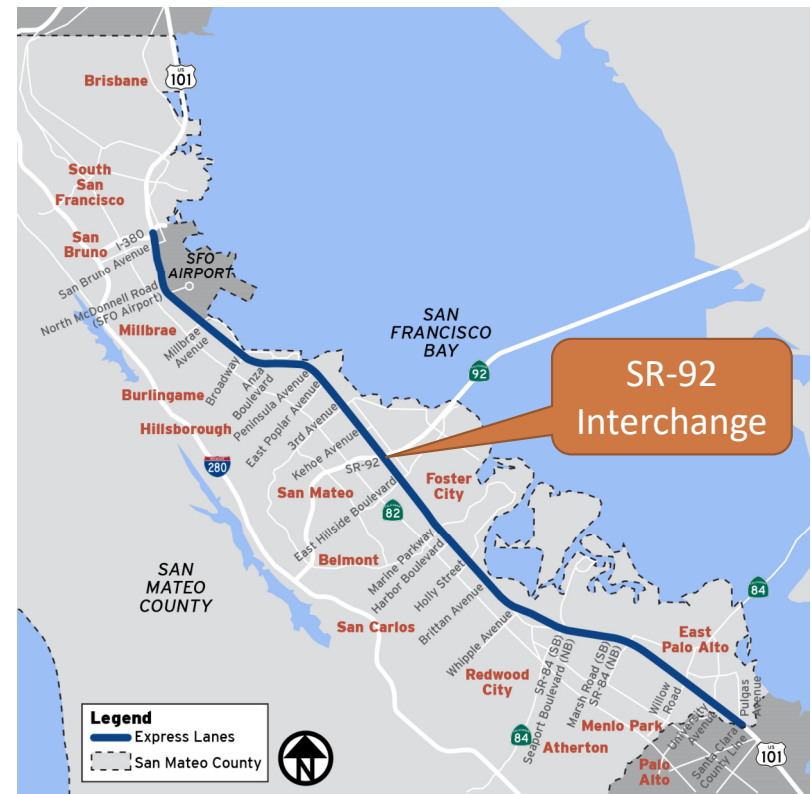


Northbound (PM Peak)

- Hotspot approaching SR-92 around 5:00 p.m.

	Speed (mph)	Volume (vphpl)
General Purpose Lanes	32	1,228
Express Lane	50	953
Benefit	+18	Improved flow past congestion

- Example of EL providing an option to ease congestion during peak commute time

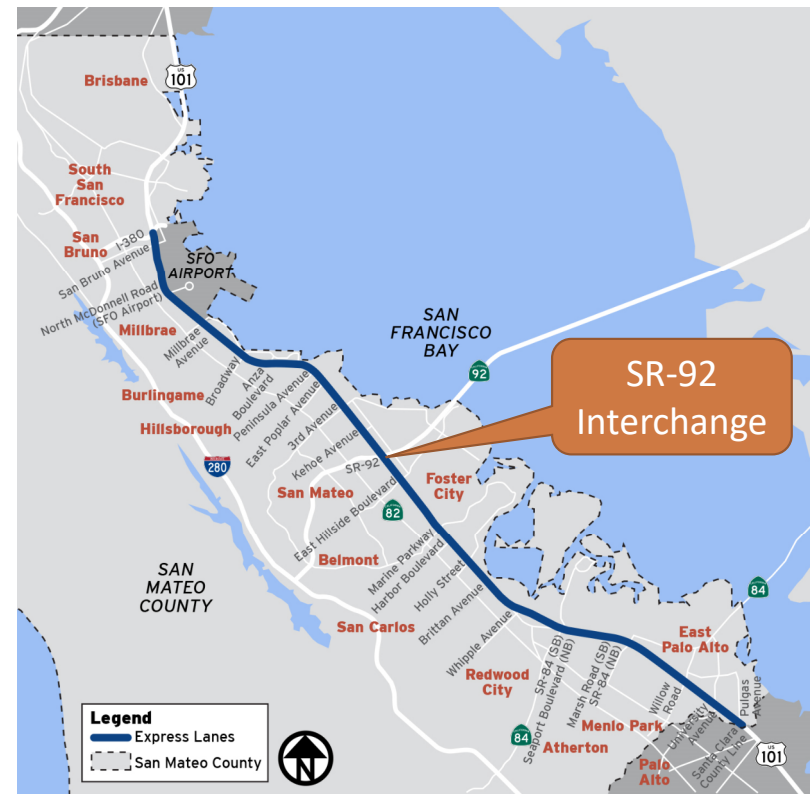


Southbound (PM Peak)

- Hotspot approaching SR-92 around 3:45 p.m.

	Speed (mph)	Volume (vphpl)
General Purpose Lanes	36	1,188
Express Lane	49	1,039
Benefit	+13	Improved flow past congestion

- Similar congestion improvements as Northbound direction



Questions?

