Mid-Valencia Pilot 12-Month Evaluation

December 2024

Executive Summary

To ensure a successful pilot process, staff evaluated the center-running separated bikeway and its associated design elements at the 3-, 6-, and 12-month post-implementation time periods. Data was collected between September and October 2022 to establish pre-pilot conditions. For post-implementation conditions, data was collected between October and November 2023 (3-month evaluation period), March 2024 (6-month evaluation period), and between September and October 2024 (12-month evaluation period).

The evaluation included metrics that measured the design's effectiveness at improving traffic safety and ensuring the adequate movement and access of goods and people. Additionally, other aspects, such as transportation modal volumes, or the number of people using the street, and traffic operations (i.e., congestion), were also measured to evaluate potential impacts from the design.

The findings from the 12-month Mid-Valencia Pilot evaluation period remain consistent with those from the 6-month and 3-month evaluation periods. There was little to no change observed across the metrics used to evaluate the mid-Valencia pilot. Furthermore, the findings continue to indicate that the pilot design is an improvement over the pre-pilot conditions.

Aspects like vehicle blockage of the bikeway, which was a significant traffic safety concern in pre-pilot conditions, were drastically less frequent during the pilot. Other concerns, such as vehicle dooring or vehicle encroachment of the bikeway, were also less frequent after pilot implementation. Essentially, the pilot has reduced or almost eliminated all mid-block conflicts for people on bikes. Overall, the pilot has made the biking experience safer and more predictable.

Other aspects of the pilot design, such as the curb management plan, also showed success at reducing unsafe vehicle loading behavior, such as double-parking.

However, even with these positives from the pilot design, a new conflict arose from the pilot: vehicles making illegal left or U-turns at the intersection. These illegal movements are the main cause for bike-related collisions in the current pilot conditions.

The table below shows the key findings from the evaluation of the pilot design:

Metric	Key Finding – *compared to pre-implementation conditions*		
	3-month finding	6-month finding	12-month finding
Review of traffic collision factors	Traffic collision factors related to the pre-pilot design have been significantly reduced.	Monthly collision rates for all modes, bike/scooter related and ped-related have all trended down when compared to post 3-months and post 5-months. Factors related to the pre-pilot design have continued to be significantly reduced.	A year's worth of collision data is now available. With the latest data, monthly collision rates continue to trend downward, albeit they are not drastically lower than pre-implementation conditions.
Vehicle left turn frequency (turn restriction compliance)	1% of through volumes (pre-pilot: 8%)	1% of through volumes	1% of through volumes
Frequency of double parking / loading in the bikeway (vehicle loading)	13% of all loading activity / 0.1% of all loading activity (pre-pilot: 67% / 40%)	14% of all loading activity / 0.1% of all loading activity	18% of all loading activity / 0.1% of all loading activity
Average rate of vehicle incursions in the bikeway	1% per hour; 3-4 vehicles per hour (pre pilot: 40% of vehicle loading activity occurred in the bikeway)	1% per hour; 3-4 vehicles per hour	1% per hour; about 4 vehicles per hour
Average daily vehicle speed	-1 mph (pre-pilot: 19 mph)	-2 mph	+1 mph

Average daily vehicle volume	-26% (pre-pilot: 8,700)	-23%	-14%
Average daily bicycle volume	+3% (pre-pilot: 3,450)	-2%	+2%
Average daily pedestrian volume (2-Hr AM and 2-Hr PM peak periods)	-5% (pre-pilot: 2,160)	+4%	-8%
Bicycle signal compliance / vehicle compliance with bike signal restrictions	77% / 97% (pre-pilot: N/A)	76% / 97%	75% / 98%
Bicycle and pedestrian interactions at the intersection	5% of crossing pedestrians interact with a person bicycling. When compared to the northern design (side-running), there is little difference between post-implementation bicycle-pedestrian interaction rates. (pre-pilot: N/A)	On average, 3.6% of pedestrians crossing at the crosswalk interact with a person bicycling through the intersection or making a turn from or to a cross street per hour.	On average, 0.4% of pedestrians crossing at the crosswalk are expected to interact with a person bicycling through the intersection or making a turn from or to a cross street per hour.
Bike positioning	95% of bicyclists are biking in the bikeway (pre-pilot: 88%)	94% of bicyclists are biking in the bikeway	95% of bicyclists are biking in the bikeway
Traffic Impacts on adjacent streets	Insignificant to no change on all metrics evaluated	Insignificant to no change on all metrics evaluated	Insignificant to no change

Measured by using vehicle speeds and vehicle travel time on parallel neighboring streets			*Only vehicle travel time was measured at the 12-month evaluation period*
Congestion on Valencia Street ***PM-peak median travel time in minutes*** ***PM-peak median travel time in minutes at 23rd Street intersection***	N/A	Vehicle travel time on Valencia Street has decreased or not changed significantly in either direction: **Northbound (NB):** 90 seconds faster **Southbound (SB):** 20 seconds faster **NB:** Slight decrease **SB:** Slight increase	Vehicle travel time on Valencia Street has not changed much in either travel direction: **Northbound (NB):** 10 seconds slower **Southbound (SB):** 8 seconds slower **NB:** Slight increase **SB:** Slight increase

Introduction

The mid-Valencia pilot was a near-term effort to improve traffic safety and transportation on Valencia Street between 15th to 23rd streets. The pilot aimed to address longstanding traffic safety conflicts and vehicle loading challenges exacerbated by the street's status as a major commercial corridor, major north-south bike route in the City's bike network, and an existing street design that did not meet the diverse needs of the varying users.

The pilot implemented a near-term design that consisted of the following features:

- Center-running protected bikeway
- Bike signal separation at the intersections of Valencia at 15th Street and Valencia at 23rd Street
- A new curb management plan
- Several pedestrian safety tools, such as intersection daylighting and corridor-wide vehicle left turn and U-turn restrictions in the northbound and southbound directions

As part of the pilot process, the project team evaluated the pilot design at three different periods. This summary report provides findings from the 12-month evaluation period, which is a follow-up to the 6-month evaluation period that was completed spring 2024 and the 3-month evaluation period that was completed in late fall 2023. This report provides an update to all of the metrics analyzed in the previous evaluation periods.

It is recommended that readers review the **3-month evaluation summary report** and **6-month evaluation summary report** for full context of the evaluation framework prior to reviewing the 12-month summary report. Both the 3-month and 6-month evaluation summary reports can be found on the project webpage at **SFMTA.com/Valencia**.

Metric 1 – Review of Traffic Collisions

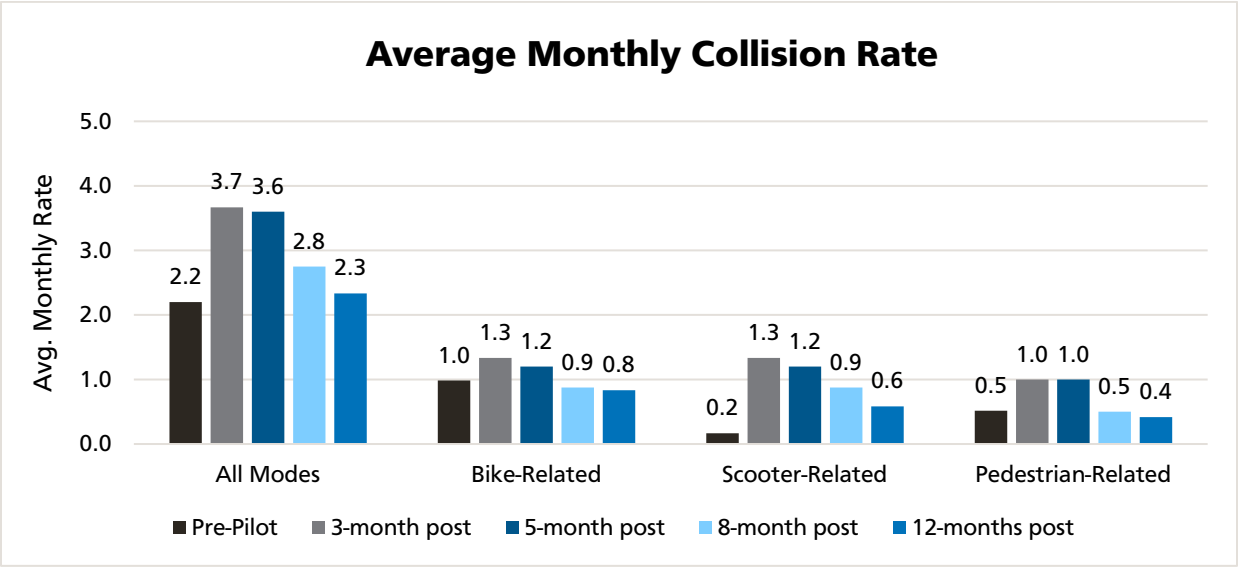
This metric comprehensively reviews traffic collisions pre-and-post-implementation to determine collision types and factors. The 12-month evaluation of the mid-Valencia pilot includes a year's worth of collision data (August 2023 through July 2024).

Overall Collision Totals and Rates

Since the center-running bikeway pilot was implemented in August 2023, 28 traffic collisions occurred on Valencia Street between 15th and 23rd streets. Compared to pre-pilot conditions, which is based on the previous five years of traffic collision data, the pre-pilot average annual total collisions are about 26 a year, or 2 fewer than current conditions with the center-running bikeway pilot.

Although the total collisions in a year since the pilot started is more than the average total of pre-pilot conditions, the data shows that collisions are trending down in current conditions. During the early days of the pilot, traffic collisions in the project area spiked to rates higher than pre-pilot conditions. This was expected due to the behavior change and adaption that usually occurs with a new street design or change in traffic operations and circulation. Additionally, during the planning and design phase of the center-running bikeway pilot, project staff interfaced with staff members from transportation departments in other cities that also implemented center-running bikeway facilities. They shared that their facilities also experienced a spike in collision rates during the initial months post-implementation, but after some time the collision rates trended downward and improved from pre-implementation conditions. This is the same phenomenon that the center-running bikeway experienced.

While overall collisions are still slightly higher than pre-implementation conditions, when the average monthly collision rate is broken down by transportation mode, bike-related and pedestrian-related collisions are slightly lower than pre-implementation conditions.



Moreover, when comparing the first year of bike-related collisions on the center-running bikeway against the side-running bikeway installed on the northern section of Valencia (between Market to 15th streets and implemented in early 2019), the collision trends show similar patterns. During the initial months of the side-running bikeway on the northern section of Valencia Street, the average monthly collision rates spiked above pre-implementation conditions, stayed high through one-year post-implementation, but trended downward over time. When examining 3 years of post-implementation bike-related collisions on the northern side-running bikeway of Valencia Street, the average monthly collision rate is below the pre-implementation rate (pre: 0.7 a month; 3-years post: 0.6 a month), and with five years of data, it has continued to decrease (pre: 0.7 a month; 5-years post: 0.5 a month).

A similar trend has been observed with the center-running bikeway, with a high initial spike in the collision rate, but decreasing over time. In fact, with a year's worth of data, the average monthly rate of the center-running bikeway is already lower than pre-implementation conditions, outperforming the side-running design on Valencia Street between Market to 15th streets in the same timeframe.

Traffic Collision Average Monthly Rate (Bike-Related Collisions Only)

Northern Valencia Side-Running		Mid-Valencia Center-Running	
Time Period	Average Monthly Rate	Average Monthly Rate	Time Period
Pre-implementation	0.7	1.0	Pre-Implementation
3-month post	1.7	1.3	3-month post
5-month post	1.2	1.2	5-month post
8-month post	1.1	0.9	8-month post
12-month post	0.8	0.8	12-month post

Traffic Collisions – One Year Post-Implementation (Bike-Related Collisions Only)

Northern Valencia Side-Running		Mid-Valencia Center-Running	
Month-Year	Collisions	Collisions	Month-Year
January-2019	3	2	August-2023
February-2019	1	2	September-2023
March-2019	1	0	October-2023
April-2019	1	1	November-2023
May-2019	0	1	December-2023
June-2019	0	0	January-2024
July-2019	3	0	February-2024
August-2019	0	1	March-2024
September-2019	1	0	April-2024
October-2019	0	0	May-2024
November-2019	0	2	June-2024
December-2019	0	1	July-2024
Annual Total	**10**	**10**	**Annual Total**

It should be noted that neither of the two tables above include scooter-related collisions.

Traffic Collisions by Transportation Mode

The table below breaks down the distribution of traffic collisions in the project area by transportation mode and by pre-pilot and 12-month post-implementation conditions:

Modal Breakdown of Traffic Collisions

Mode(s) Involved	% of Total
Pre-Pilot	
Bicycle Only	1%
Bicycle-Parked Car	2%
Bicycle-Pedestrian	2%
Vehicle-Bicycle	39%
Vehicle-Bicycle-Pedestrian	1%
Vehicle-Pedestrian	21%
Vehicle(s) Only Involved	34%
12-months post	
Bicycle Only	4%
Vehicle-Bicycle	32%
Vehicle-Pedestrian	18%
Vehicle(s) Only Involved	46%

In pre-pilot conditions, bike and pedestrian-related collisions made up about 66% of total traffic collisions. In post-implementation conditions, they now represent 54% of total collisions, a

decrease of eight percentage points. Bike-related collisions represented 44% of total collisions in pre-pilot conditions. In post-implementation conditions, bike-related collisions are down eight percentage points and now only represent 36% of total collisions. From pre-to-post-implementation conditions, collisions that only involve vehicles was the sole modal category that increased between pre-to-post-implementation conditions.

Bike-Related Collisions Review

Similar to the findings from the two previous evaluation periods, the 12-month evaluation continued to show a significant decrease in mid-block bike-related collisions in the project area. The intersection is now the primary location where bike-related collisions are occurring.

Roadway Location of Bike-related Collisions

Evaluation Period	Intersection	Mid-block
Pre-Pilot	51%	49%
12-months post	80%	20%

The rise in bike-related collisions at the intersection is due to vehicles violating the project area's vehicle left/U-turn restriction. It is the top reason for bike-related collisions in post-implementation conditions, and the category by itself is the same percentage total as the combined top five reasons from pre-implementation conditions.

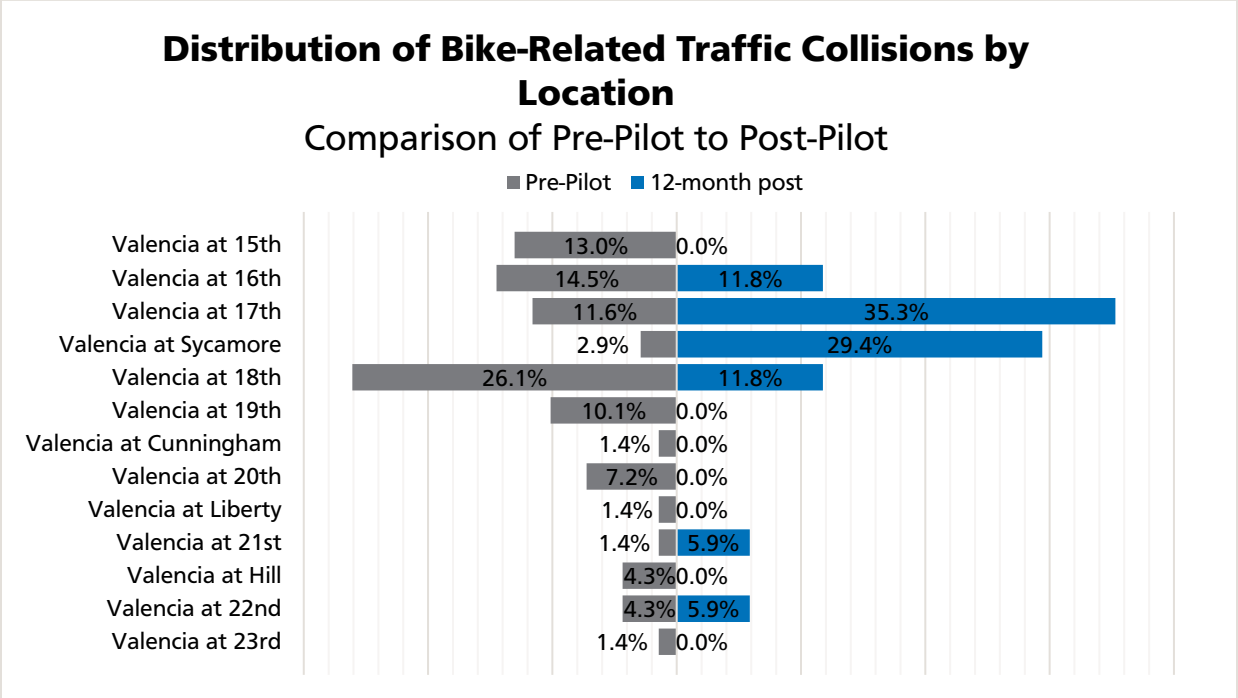
Pre-Pilot Bike-Related Collision Reason (Top 5)

Cause	% of Total
Unsafe turn or lane change prohibited	22%
Opening door on traffic side when unsafe	19%
Violation of right-of-way - left turn	14%
Unsafe speed for prevailing conditions	8%
Overtaking and passing unsafely	7%

12-month Post-Implementation Bike-Related Collision Reason (Top 5)

Cause	% of Total
Violation of right-of-way - left turn/U-turn	70%
Motor vehicle in bicycle lane prohibited	10%
Lane straddling or failure to use specified lanes	10%
Red signal - driver or bicyclist responsibilities	10%
N/A	N/A

If all vehicles had obeyed the no vehicle left/U-turn restriction from the pilot design, it is estimated that the center-running bikeway would have reduced bike-related collisions from 12 to only three annually.



Looking at bike-related collisions by location, post-implementation conditions are more concentrated in the northern portion of the project area, specifically between Valencia from 16th to 18th streets. In pre-implementation conditions (five years of data), bike-related collisions were also concentrated in the northern portion of mid-Valencia but were also more distributed throughout the project area.

Pedestrian-Related Collisions Review

Regarding pedestrian-related collisions and their location along the roadway, pre-to-post-implementation conditions remained about the same. Pre-pilot, a great majority (77%) of pedestrian-related collisions occurred at the intersection and in post-pilot that figure is slightly higher (80%).

Roadway Location of Pedestrian-related Collisions

Evaluation Period	Intersection	Mid-block
Pre-Pilot	77%	23%
12-months post	80%	20%

During pre-pilot conditions, the main reason for pedestrian related collisions was due to a driver or bicyclist failing to yield the right-of-way to pedestrians in the crosswalk. This represented 52% of pedestrian-related collisions. However, in post-implementation conditions, drivers or bicyclists failing to yield to pedestrians has dropped to 20% of all pedestrian-related collisions and the major reason is due to pedestrians failing to yield to other modes when they are outside of the crosswalk.

Pre-Pilot Pedestrian-Related Collision Reason (Top 5)

Cause	% of Total
Driver or bicyclist to yield right-of-way at crosswalks	52%
Crossing between controlled intersections (Jaywalking)	10%
Unsafe speed for prevailing conditions	10%
Pedestrian suddenly entering into vehicle path close enough to create an immediate hazard	6%
Remaining reasons are all tied with each other at 3% each	N/A

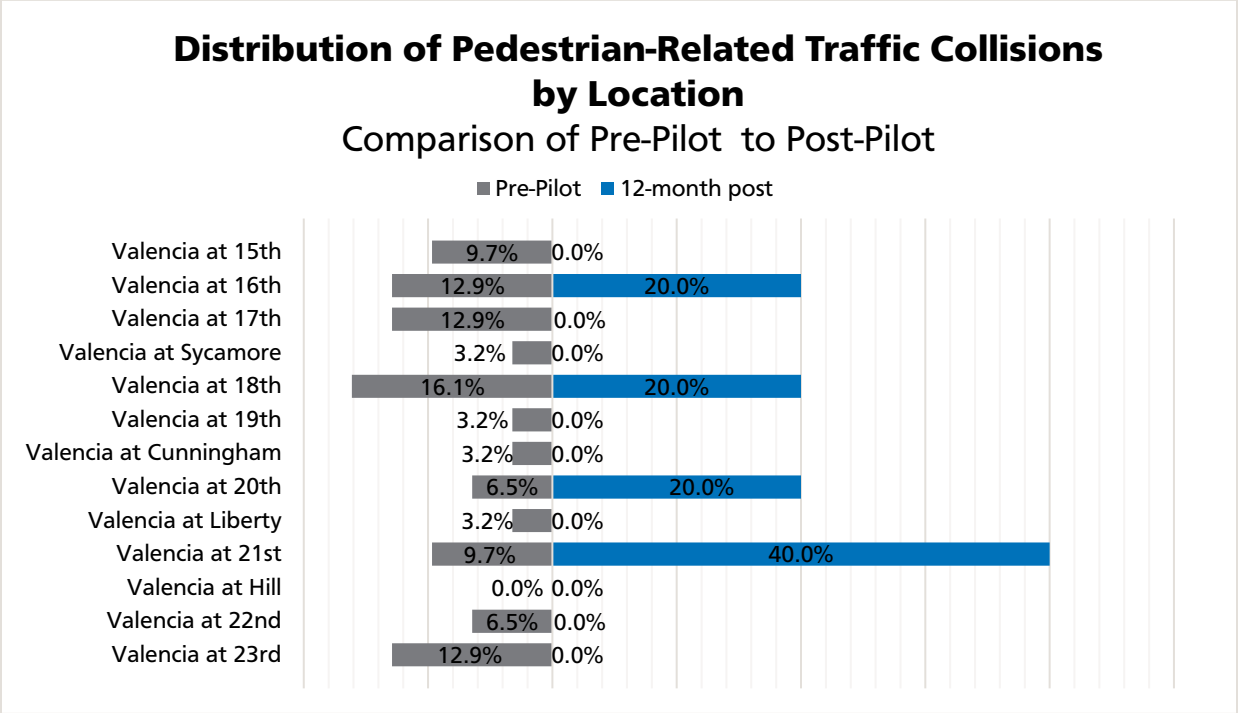
12-month Post-Implementation Pedestrian-Related Collision Reason (Top 5)

Cause	% of Total
Pedestrians must yield right-of-way outside of crosswalks	40%
Driver or bicyclist to yield right-of-way at crosswalks	20%
Violating special traffic control markers	20%
Unknown	20%
N/A	N/A

Regarding the movement from the party at fault from the primary contributing factor of pedestrian-related collisions in pre-pilot conditions, they were split between vehicle left/U-turns and vehicle right turns. Of these, vehicle left/U-turns were the most common, accounting for 63% of collisions caused by this contributing factor. From a total pedestrian-collision standpoint, this contributing factor and movement (i.e., Driver or bicyclist to yield right-of-way at crosswalks – vehicle left/U-turn) represented 32% of all pedestrian-related collisions on this section of Valencia Street, or two collisions annually.

To improve pedestrian safety, the pilot design implemented vehicle left/U-turn restrictions in the northbound and southbound directions at all intersections in the project area. Since the implementation of the center-running pilot, it's estimated that the vehicle left/U-turn restriction on Valencia Street in the northbound and southbound directions has reduced those collisions by 50%, or to one collision a year.

One pedestrian collision in post-implementation conditions was due to a vehicle disobeying the vehicle no left/U-turn restriction. If all vehicles obeyed the vehicle no left/U-turn restriction, pedestrian-related collisions would have been reduced from about six to four annually.

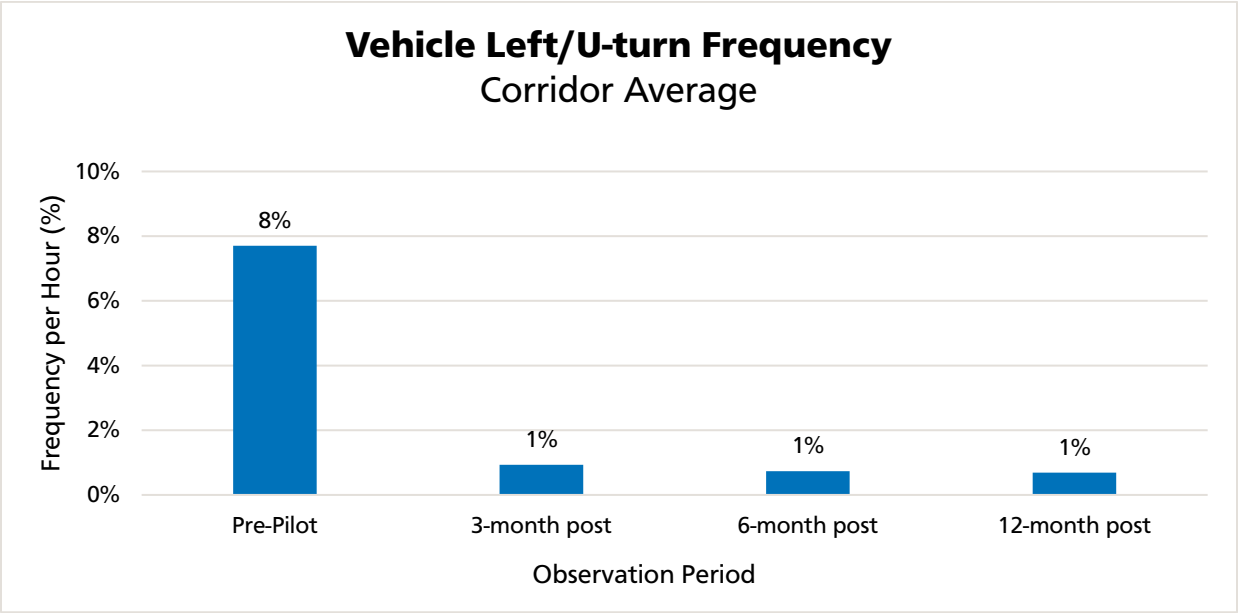


Pedestrian-related collisions are evenly distributed along the corridor in pre-pilot conditions (five years of data). In post-implementation conditions, the same pattern is found. As time progresses and more collision data is available, it is expected that the post-implementation distribution of collisions by location will resemble the pre-pilot conditions if pedestrian collision rates remain steady.

Metric 2 – Vehicle Left Turn Frequency (turn restriction compliance)

To determine effectiveness in design, vehicle left/U-turn frequency was analyzed. Vehicle turning movement counts were collected during the 2-hour AM and 2-hour PM peak periods.

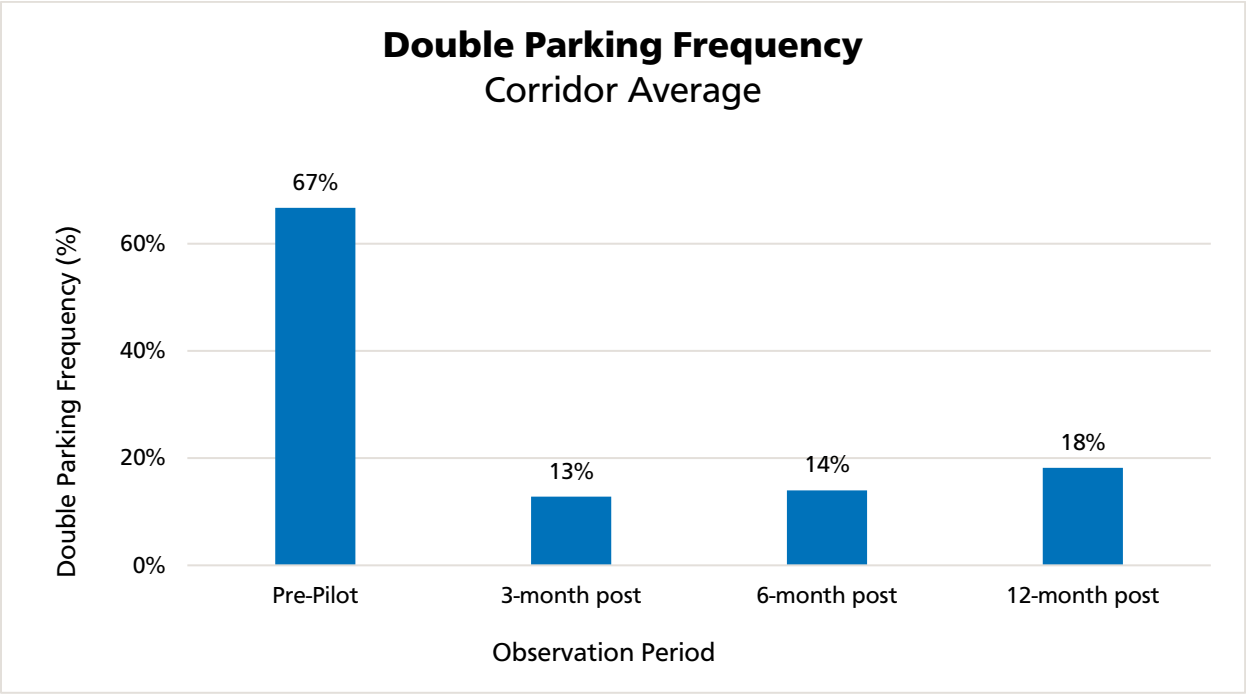
Overall, vehicle left and U-turn frequency has remained at a low rate of about 1% per hour, which is similar to the findings from the previous two evaluation periods. In pre-implementation conditions, the average vehicle left turn frequency was about 8% per hour, which is about 38 left or U-turn movements in the AM period and 68 in the PM period. From the 12-month evaluation analysis, the 1% per hour is about four illegal vehicle left/U-turn movements in the AM period and four in the PM period at each intersection.

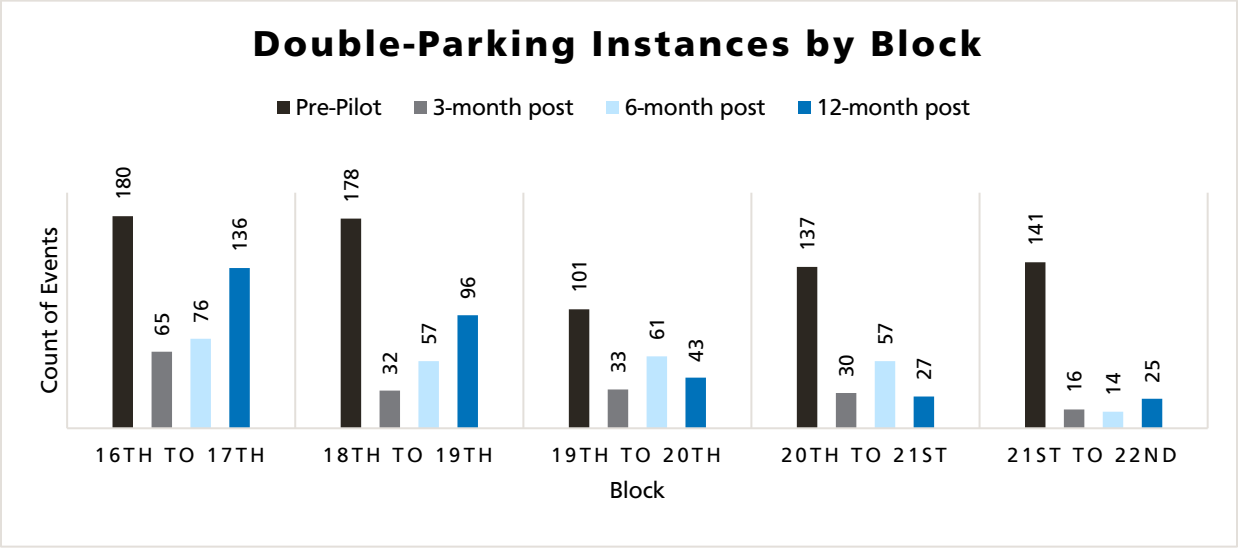


Metric 3 – Frequency of Double-Parking

Frequency of double-parking is one of the primary metrics used to assess the efficacy of the curb management plan and success of the overall design. Double-parking occurs when there is not enough space for vehicles to pull up to the curb, either because the curb is fully occupied, and/or because the curb does not provide sufficient space for the vehicle to easily and quickly pull in and out of the curb. The result is a vehicle illegally and temporarily parked in the bicycle lane, travel lane or center turn lane.

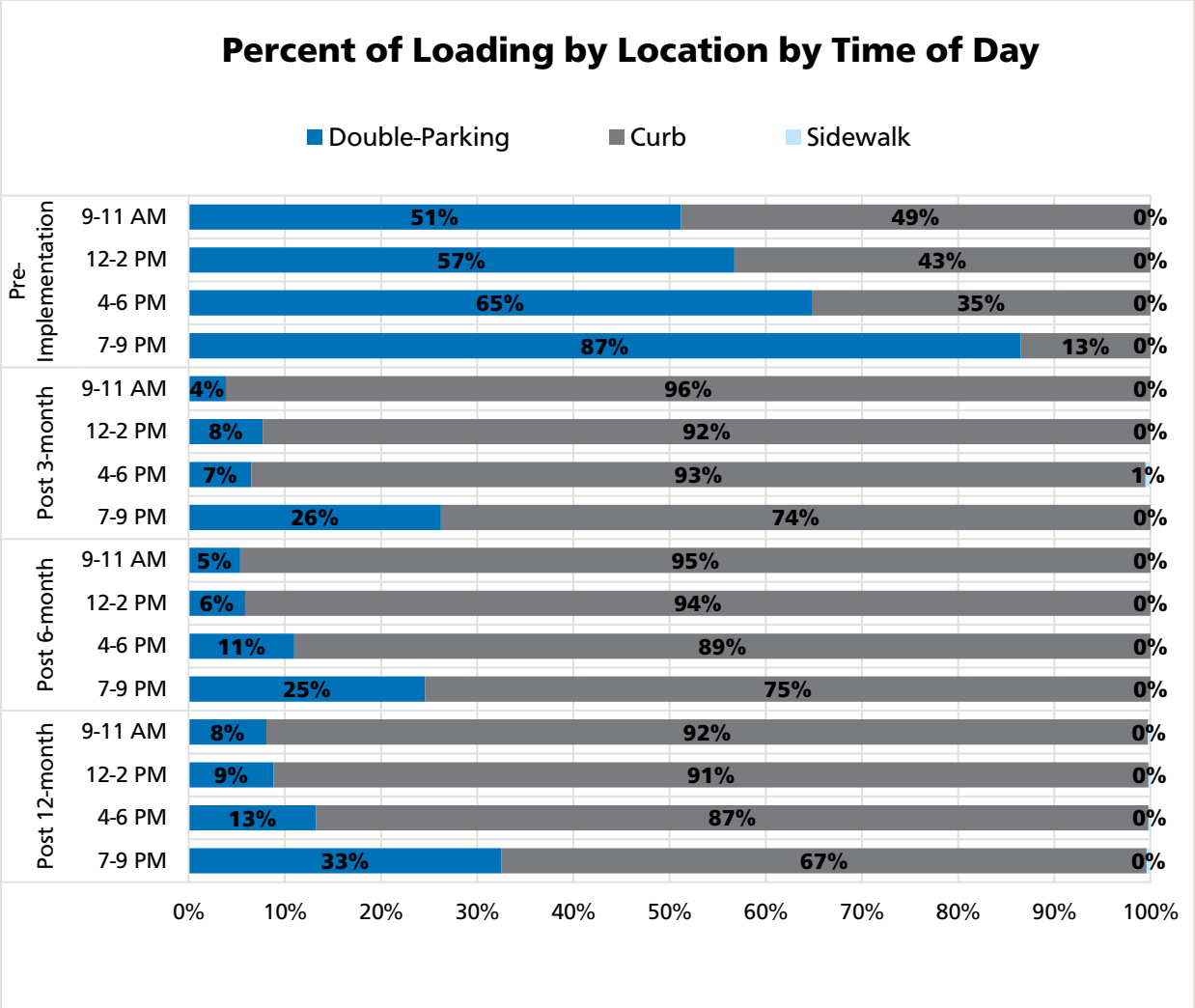
Double-parking frequency in the 12-month evaluation period showed a similar pattern to the past two evaluation periods and remained at a lower level than in pre-implementation conditions (67% versus 18% of all loading events), but there was a slight increase in double-parking events (about a four-percentage point increase from the 6-month evaluation period). The small increase in double-parking events coincide with recent updates to the pilot design's curb management plan, which increased the number of general metered parking spaces and reduced the amount of loading along the project. These revisions were made and informed by community engagement with merchants along the project area.



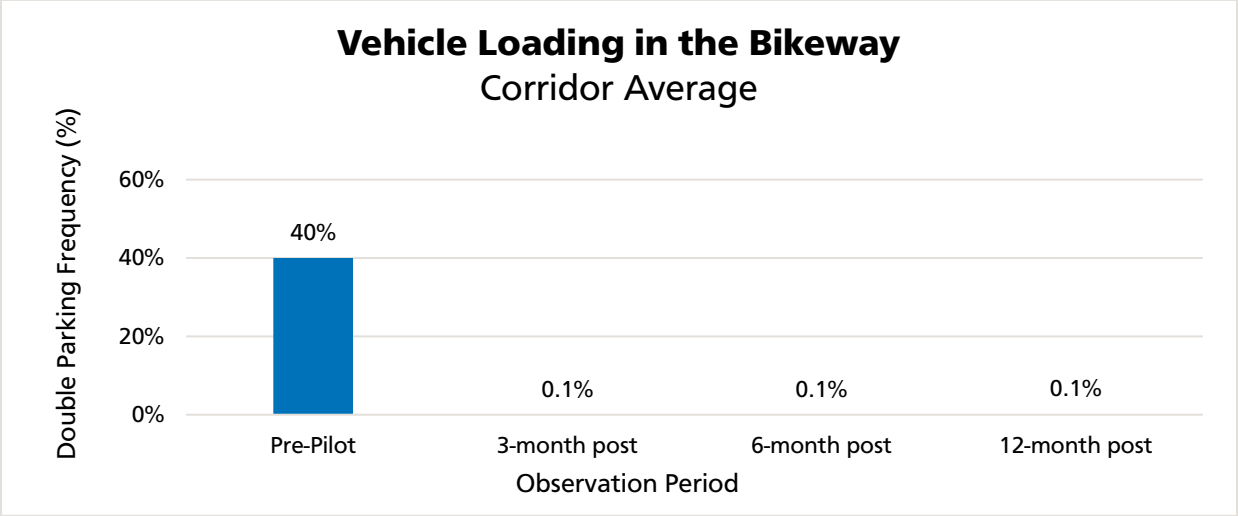


The largest increases in double-parking are occurring near the northern portions of the project area.

Moreover, although double-parking has improved overall, it continues to be an issue later in the day and particularly late at night. The vast majority of vehicles that continue to double-park do so at night, where double-parking is up to slightly more than 25% of loading activity, and it is mainly occurring among ride-hails (i.e., Uber, Lyft) and food delivery service vehicles.



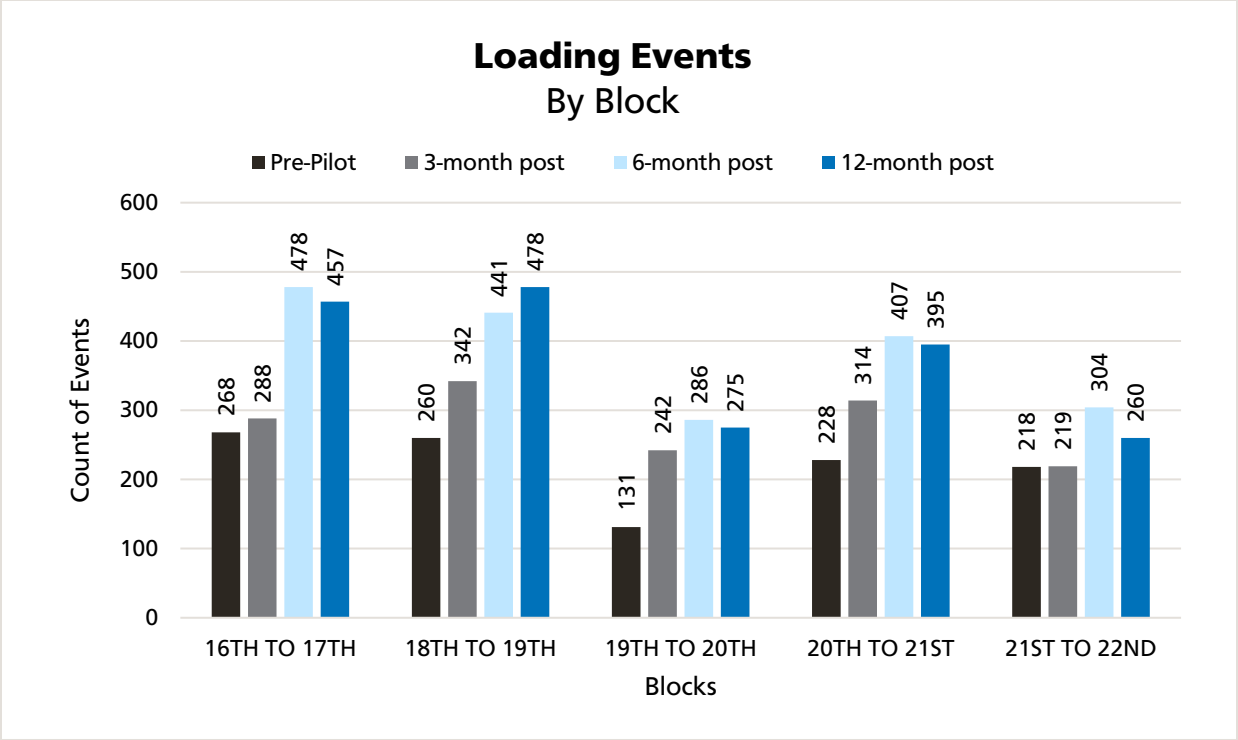
Regarding vehicles loading in the bikeway, which was a major traffic safety issue in pre-pilot conditions that led to many of the street's bicycle-related collisions, **the frequency of this event continues to be at a low level of 0.1% of all loading events.**



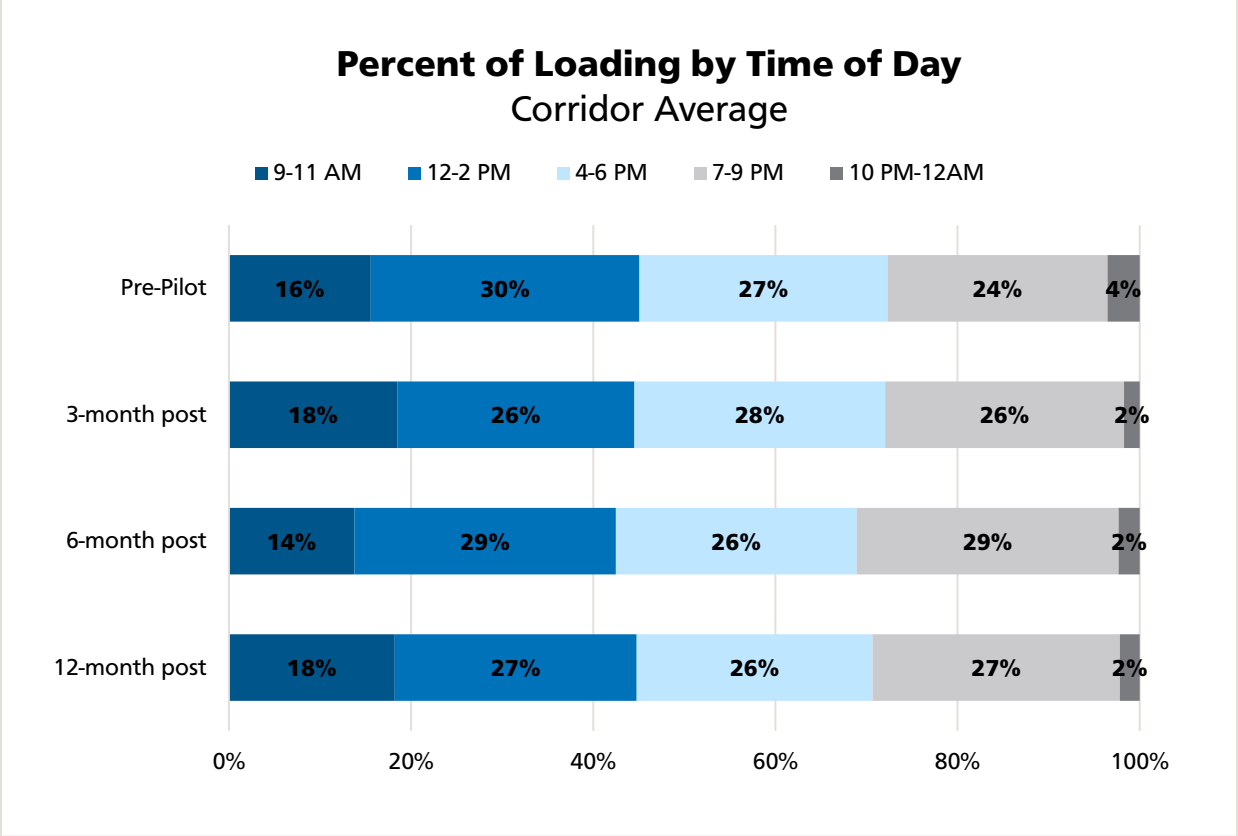
Note: Loading data does not show events of vehicles entering the center-running protected bikeway to bypass double parked vehicles or to make illegal U-turns mid-block. The events recorded in this metric are only events where a vehicle stops to unload or load goods and passengers. Please refer to metric 5 for bikeway encroachment events that do not involve dwelling in the bikeway facility.

Metric 4 – Review of Vehicle Loading Activity and Loading Characteristics

Loading events decreased by 3% between the 12-month and 6-month evaluation periods but are up 69% between the 12-month evaluation period and pre-pilot conditions.



In the 12-month evaluation period, temporal distribution of loading, meaning the amount of loading that occurs at different times of day, remained fairly consistent with pre-pilot conditions. This is similar to the finding in the previous two evaluation periods.



There was a very slight change in vehicle loading dwell times (the time it takes to complete the loading activity) when comparing the pre-implementation conditions to the post-implementation conditions for all three evaluation periods. Overall, the majority of vehicles are loading for less than 5 minutes. There was a slight increase in loading at a duration that is greater than 30 minutes (three percentage point increase) between the 12-month evaluation and the other two evaluation periods.

Time Group	Pre-Pilot	3-month post	6-month post	12-month post
Less than 5 min	70%	66%	67%	61%
5 to 30 min	27%	30%	29%	32%
Greater than 30 min	3%	4%	4%	7%

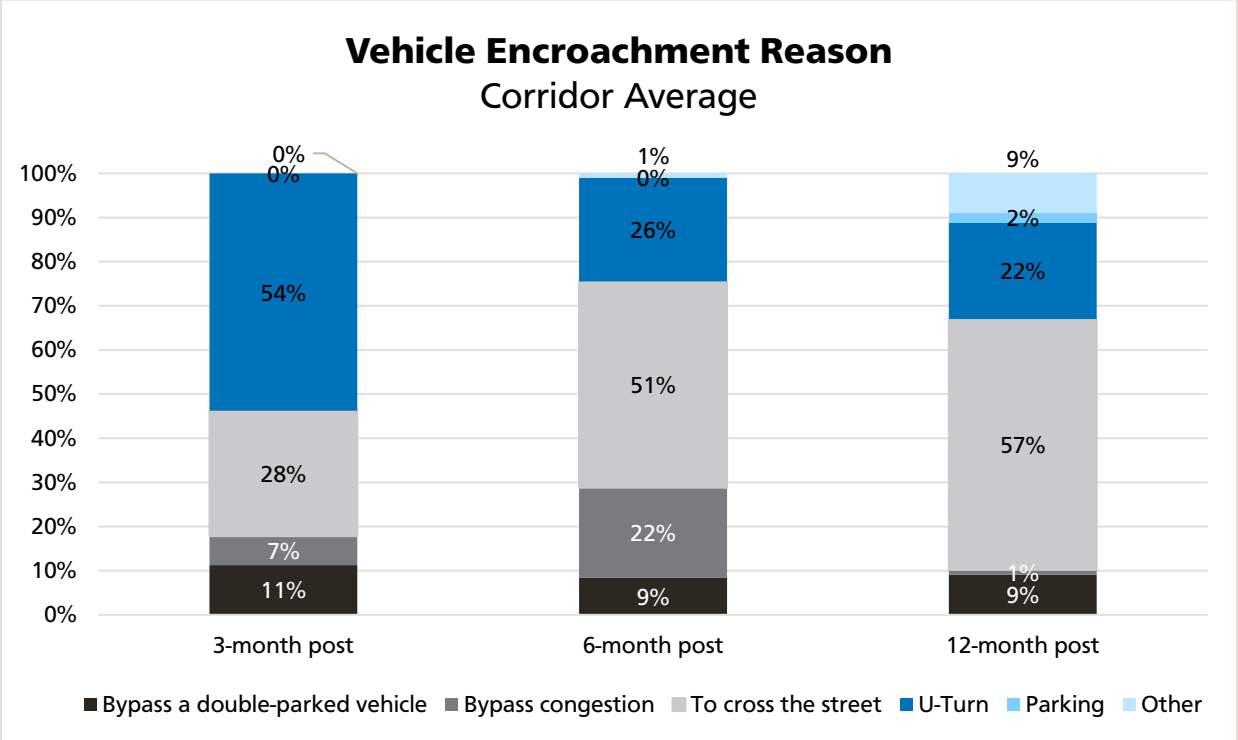
The data does not indicate that loading characteristics have changed drastically since the design and associated curb management plan was implemented.

Metric 5 – Frequency of Vehicle Encroachment into the Bikeway

Since the vehicle loading metric only recorded bikeway encroachment from vehicles that were loading goods or people, other mid-block activities, such as U-turns, slight/full encroachment to bypass a double-parked vehicle in the travel lane, full encroachment to bypass congestion, or other reasons were also observed. Data was collected during 2-hour AM, midday, and PM periods.

The hourly encroachment rate was calculated to determine the bikeway encroachment frequency. The finding from the 12-month evaluation period for this metric is similar to the previous two periods. **On average, about 1% of vehicles, or about 4-5 vehicles, encroach the bikeway per hour** for the reasons stated above**.**

The most common reason for bikeway encroachment (57% of the time) is a vehicle entering the bikeway to cross the street.



Note: U-turns made mid-block on any street in a business district are illegal.

Metric 6 – Bicycle Signal Compliance Rate

Bicycle signal compliance is an important metric in measuring design effectiveness at the intersection, especially since signal separation is a key component of the center-running bikeway's design. The intersection is the place along a roadway that can experience a higher

number of user conflicts since it is the point where multiple modes of transportation and directions of travel must meet and negotiate right-of-way to continue their trip.

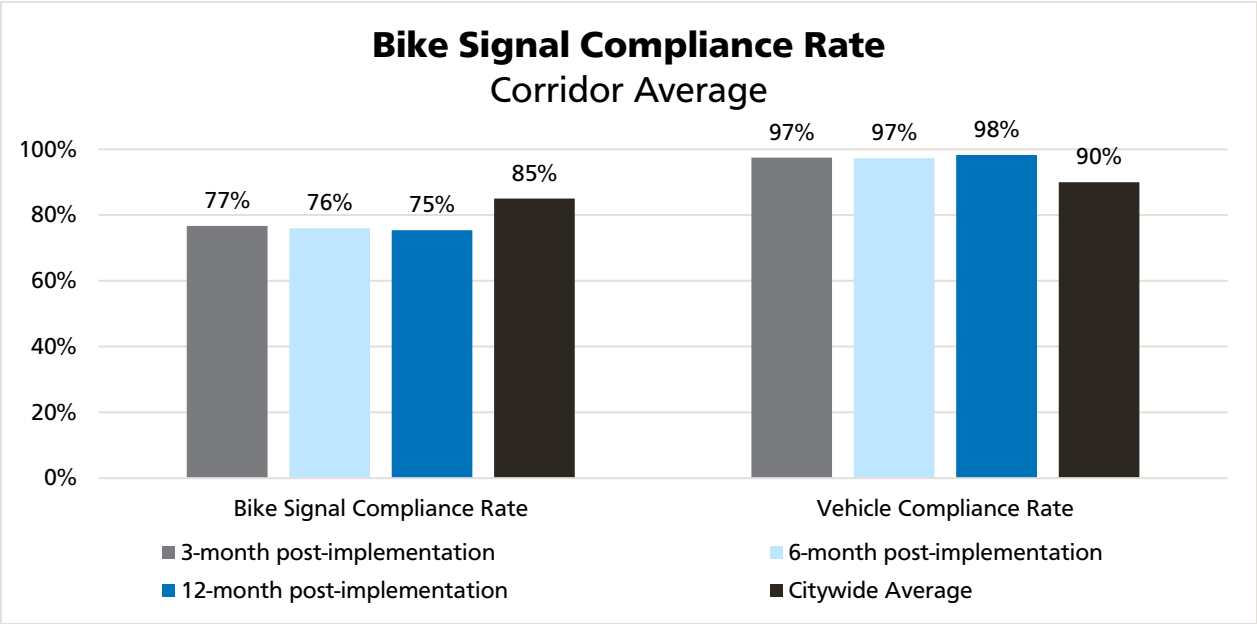
The bicycle signal compliance metric refers to two forms of compliance:

1. People on bicycles obeying a separate bicycle signal at an intersection that gives them the right-of-way.
2. Compliance of vehicles obeying the traffic signals or restrictions when bicycles are given a separate green signal.

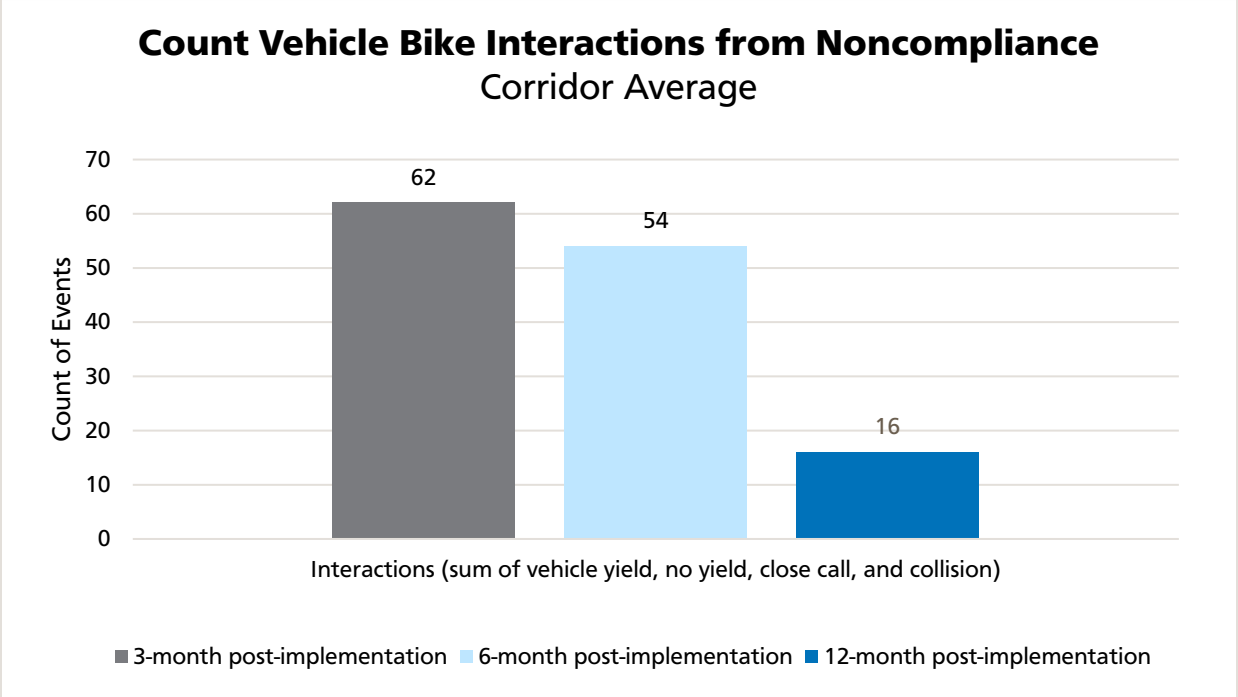
Observations were conducted during 2-hour AM peak, midday and PM peak periods along several blocks in the project area. Both terminus points where bike signal separation exists (Valencia at 15th Street and Valencia at 23rd Street) were observed. Two intersections where people on bicycles utilize the vehicle signal (Valencia at 16th Street and Valencia at 18th Street) were also observed to account for the slightly different traffic control device.

With the 12-month evaluation, of all observations of people on bicycles passing through the intersections, **75% complied with the traffic control device that gave them the right-of-way**. This means that about almost a quarter of the time, a person bicycles through an intersection, they are doing so without having the legal right-of-way and potentially creating an interaction and conflict with another mode of traffic. The citywide average at other intersections with bike signal separation is about 85% compliance, meaning the compliance rate on this section of Valencia is below average.

In contrast, **vehicles complied with the traffic control device or no left turn and no right turn on red restrictions 98% of the time,** which is eight percentage points higher than the citywide average for vehicle compliance at other intersections with bike signal separation. The data does not differentiate whether the noncompliance is because of noncompliance with the traffic signal, a vehicle making a restricted left-turn, or a vehicle making a restricted right turn on red. It is possible that the violations observed are more likely due to noncompliance with the turn restriction, since the compliance rate is similar to the frequency of vehicle left turn metric.



Vehicle and bike interactions that result from bike signal noncompliance (either by vehicles or people on bikes) decreased significantly between the 3 and 6-month post-implementation evaluation periods to the 12-month post-implementation period (70% decrease in interactions when comparing the 6-month and 12-month post-implementation periods).



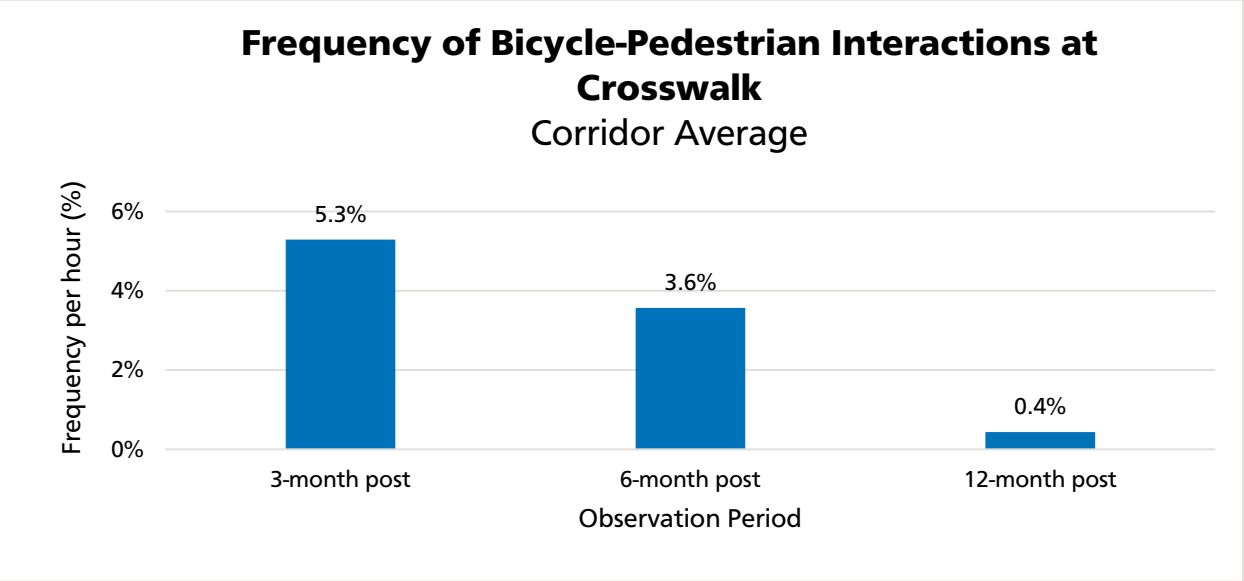
Close calls, which were low in both previous periods (about 5 or 8% of all interactions) decreased to only 1 in the 12-month period and represents 6% of the outcomes from a vehicle-bike interaction due to bike signal noncompliance by either vehicles or people on bikes.

Metric 7 – Frequency of Bicycle-Pedestrian Interactions and Close Calls at the Intersection

Bicycle-pedestrian intersection interactions and close calls were observed to determine the pilot design's impact on bicycle and pedestrian conflicts at the crosswalk. If all users obeyed the right-of-way, bicycle and pedestrian interactions should be minimal with the pilot design.

Observations were conducted during the 2-hour AM and 2-hour PM peak periods. The data does not indicate whether an interaction happened because one of the parties violated the right-of-way (I.e., crossing or proceed through when they do not have a green light or walk signal).

From the 12-month evaluation period, on average 0.4% of pedestrians crossing at the crosswalk are expected to interact with a person bicycling through the intersection or making a turn from or to a cross street per hour. This rate is a decrease from both the previous two evaluation periods.



Additionally, the result or outcome of the interactions did not change much between periods. The majority of the time, a person bicycling yields to the crossing pedestrian, and this rate has increased over time.

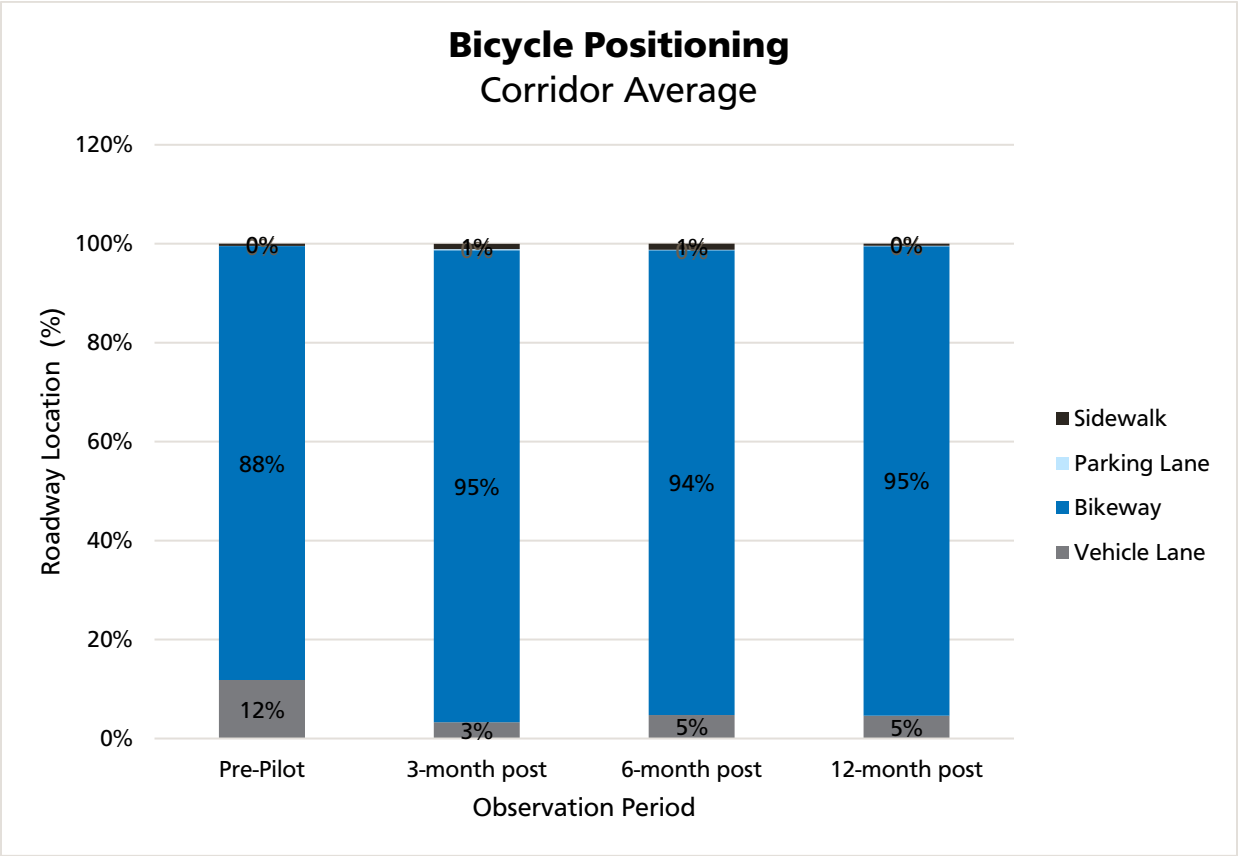
Result of Bicycle-Pedestrian Interactions at the Crosswalk

Result of Interaction	3-month post	6-month post	12-month post
Pedestrian Yield	26%	25%	13%
Bike Yield	59%	57%	67%
Close Call	15%	18%	21%
Collision	0%	0%	0%

Metric 8 – Bicycle Positioning

Bicycle positioning refers to the location of a bicyclist within the cross section of the street (i.e., within a bike facility, in a vehicle lane, in the curb lane, on the sidewalk, etc.). Bicycle position can be an indicator for the effectiveness of a bikeway in safety, comfort, and sizing. The ideal condition is a high proportion of people on bikes on the street to be bicycling in the bikeway. Bicycle positioning observations were conducted on several blocks along the project area during the 2-hour AM peak and 2-hour PM peak periods.

From the 12-month evaluation period, 95% of people bicycling in the mid-Valencia pilot project area are doing so in the center-running protected bikeway. This rate is similar to the previous two evaluation periods. Compared to pre-pilot conditions, bicycling in the bikeway improved by seven percentage points.



The center-running protected bikeway has reduced a vast majority of bicycling in the vehicle travel lane between pre-to-post implementation conditions. In pre-pilot conditions, about 88% of people on bikes were bicycling in the Class II bike lanes, and 12% were in the travel lane. Bicycling in the travel lane was more prevalent, approximately almost twice as likely, in the sections of Valencia where there was not a center turn lane between 15th and 19th streets. Since the center turn lane between 19th Street and Cesar Chavez was frequently used by large commercial vehicles for loading and there are less instances of loading in the bikeway on this section of Valencia, it is most likely that bicycling in the travel lane in pre-implementation conditions was due to a blocked bike lane from vehicle loading. The bike positioning metric findings from all three evaluation periods indicate that the center-running protected bikeway is creating a more comfortable traveling environment for people on bikes.

Metric 9 – Typical Daily Vehicle Speed

Typical daily vehicle speed was analyzed to evaluate safety along the project area. Vehicle speed is a major contributing factor to traffic collisions and severity of collisions. Managing vehicle speeds is a key goal of traffic safety projects. Daily vehicle speeds were calculated at the 50th percentile (median), 85th percentile and the mean.

Compared to pre-implementation conditions, most drivers are driving at a safe speed and all speed metrics show at least a 2 mph decrease. Additionally, most drivers are driving at or below the speed limit (20 mph).

Typical Daily Vehicle Speeds

Speed Statistic	Pre-Pilot	3-month post	6-Month post	12-month post
Median	19	18	17	17
85th Percentile	24	23	22	22
Mean	19	18	17	18

Metric 10 – Average Daily Vehicle Volume

Change in vehicle volume was measured to evaluate mobility changes along the mid-Valencia project area. Average daily vehicle volume was determined by taking the average 24-hour volume of several locations along the project area.

The corridor's average daily vehicle volume change between pre- to 12-month post-implementation is a 14% decrease. Based on the threshold for typical daily variation (i.e., the daily change in volume that constitutes normal deviations unaffected by seasonality or other variables), this change is considered very slightly significant.

Compared to the 3 and 6-month evaluation periods, vehicle volumes have increased by about 15%.

Average Daily Vehicle Volumes

Valencia Between	Pre-Pilot	3-month post	6-month post	12-month post	%Δ *(Pre to 12-mo)*
15th St and 16th St	9,300	5,400	7,300	7,200	-23%
18th St and 19th St	8,600	6,800	5,800	7,100	-17%
21st St and 22nd St	8,200	6,900	7,100	8,100	-1%

Metric 11 – Average Daily Bicycle Volume

Change in bicycle volume was measured to evaluate mobility changes along the mid-Valencia pilot project area. Academic literature has shown that daily bicycle volume can be an indicator of safety and comfort. Typically, the more comfortable or safe a facility is perceived to be by users or potential users, the more people are using it.

Average daily bicycle volume was determined by taking the average 24-hour volume of several locations along the project area. **The average daily bicycle volume is estimated to have increased by 2% from pre- to 12-month post-implementation conditions.** Based on the threshold for typical daily variation (i.e., the daily change in volume that constitutes normal deviations unaffected by seasonality or other variables), this change is considered not significant. The level of users between pre- and post-implementation conditions are about the same.

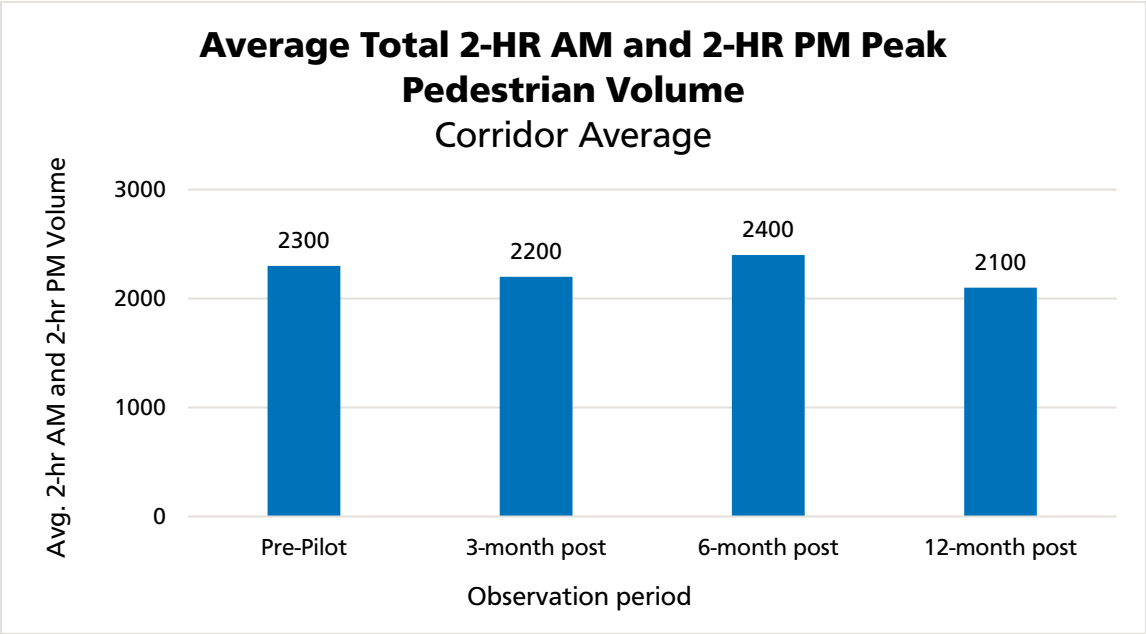
Average Daily Bicycle Volumes

Valencia Between	Pre-Pilot	3-month post	6-month post	12-month post	%Δ *(Pre to 12-mo)*
15th St and 16th St	3,400	3,300	3,200	3,400	0%
18th St and 19th St	3,500	3,900	3,600	3,800	+9%
21st St and 22nd St	3,400	3,400	3,300	3,300	-3%

Metric 12 – Average Daily Pedestrian Volume (2-Hr AM and 2-Hr PM Peak Periods)

Change in pedestrian volume was measured to evaluate mobility changes along the mid-Valencia pilot project area. Using turning movement counts during the 2-hour AM and 2-hour PM peak periods, average pedestrian volume was compared between pre- to post-implementation conditions.

Overall, it is estimated that the average 2-hour pedestrian volume during the AM and PM peak periods has decreased by 8% between pre-to 12-month post-implementation. Based on the threshold for typical daily variation (i.e., the daily change in volume that constitutes normal deviations unaffected by seasonality or other variables), this change is considered not significant.



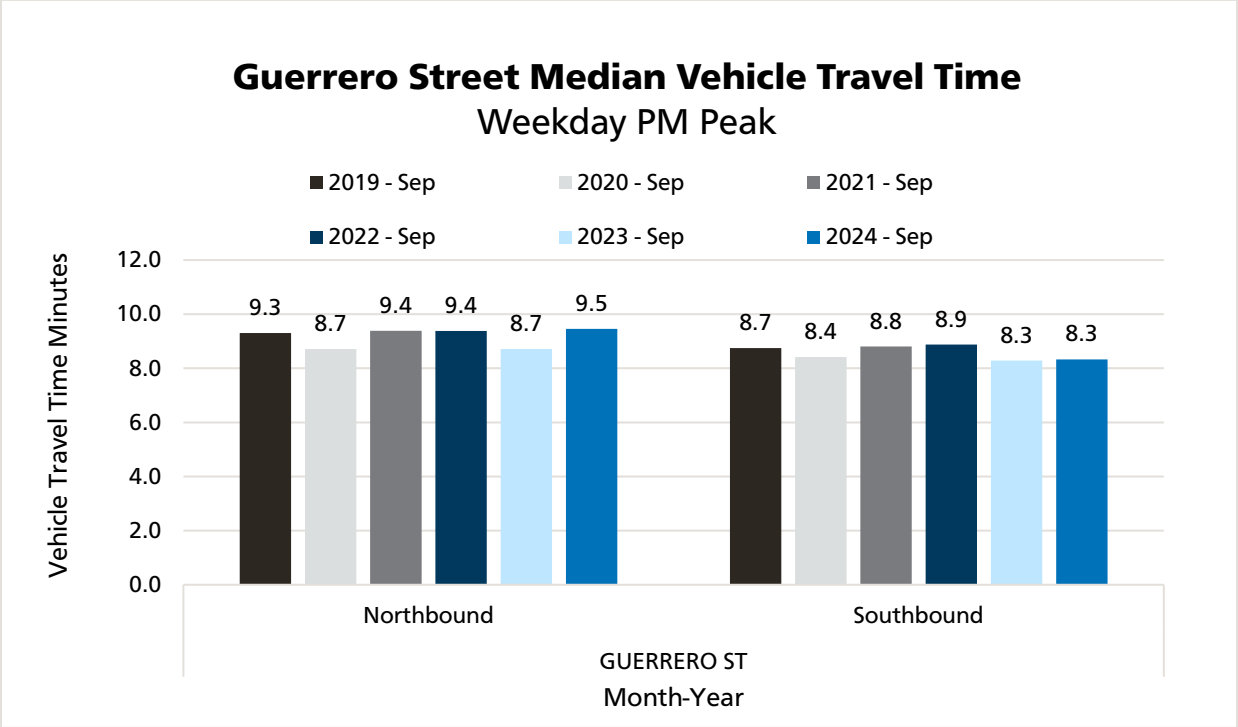
The estimated average 24-hour pedestrian volume of a single block on Valencia between 15th to 23rd streets is about 7,500 people.

Metric 13 – Traffic Impacts on Adjacent Streets

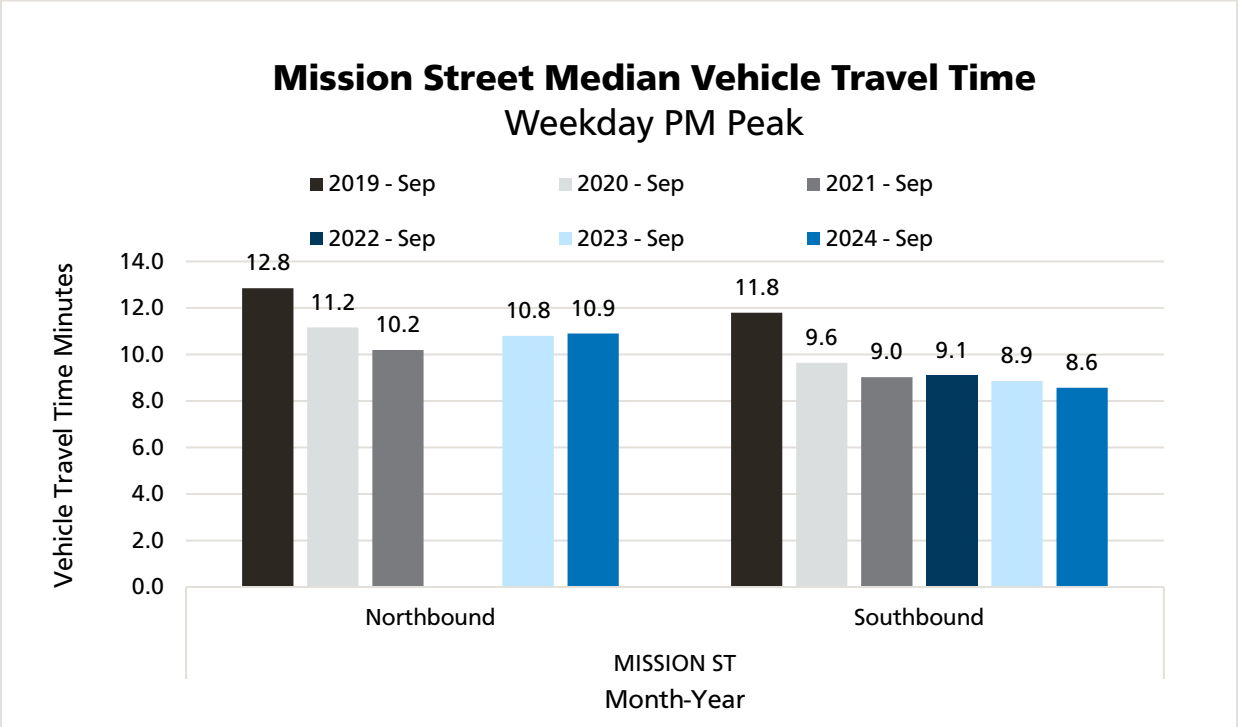
Traffic impacts were evaluated using vehicle travel time to measure possible increases in congestion on parallel neighboring streets resulting from the pilot design. Median vehicle travel time was measured, and the data was obtained using mobile phone and GPS data. For the analysis, the 12-month evaluation used the same parameters as the previous evaluation periods, which selected one month from the evaluation period timeframe and examined it across previous years during the weekday PM-peak period on Guerrero and Mission streets. South Van Ness Avenue was included in the 6-month evaluation period analysis, but because data is not available for all months and years, it was removed from this evaluation period.

The findings from the analysis showed that the mid-Valencia pilot design has not negatively impacted traffic on adjacent neighboring streets**, because median vehicle travel time changes were insignificant or decreased when compared against previous years**.

Guerrero Street, which had the most available data out of all the streets analyzed, experienced about a 45 second increase (northbound) and 3 second increase (southbound) in median travel time when comparing conditions in September 2023 to September 2024. When compared to pre-pilot conditions (September 2022), travel time remains virtually unchanged.

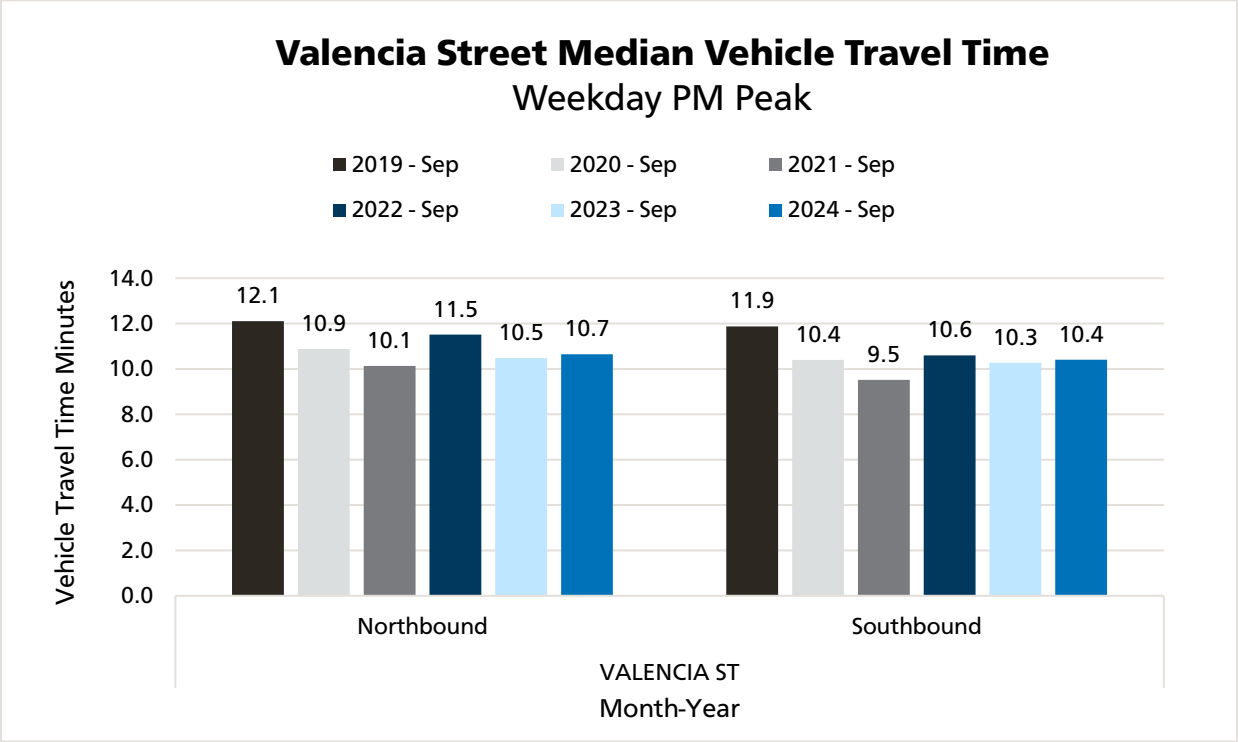


Similarly, Mission Street experienced about a 6 second increase (northbound) and 17 second decrease (southbound) in median vehicle travel time when comparing the month of September between years 2023 and 2024. Only southbound travel time data for Mission Street is available for multiple years. When comparing current travel time to their pre-pilot conditions (September 2024 vs. September 2022), median vehicle travel time has decreased by 30 seconds.



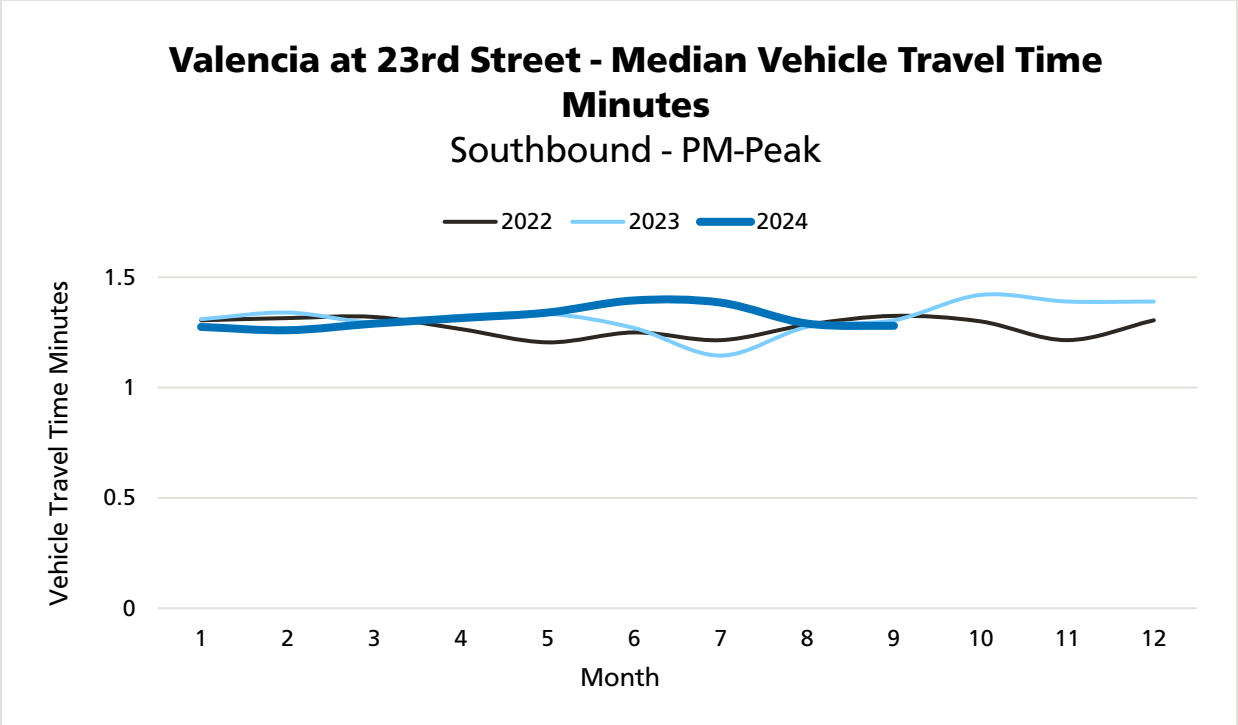
Metric 14 – Traffic Impacts on Valencia Street

Median vehicle travel time was also measured on Valencia Street between 15th to 23rd streets to determine if the pilot design impacted vehicle congestion on the street. Using the same data and parameters as the previous metric, median travel time was compared through several years during the month of September.



Based on the findings, **vehicle travel time changes were insignificant or decreased when compared against previous years**. When comparing September 2023 to September 2024 the northbound direction showed a 11 second increase and the southbound direction showed an eight second increase in median vehicle travel time. Compared to pre-pilot (September 2022), median travel time minutes in both travel directions are lower or about the same as current conditions.

Additionally, the intersection of Valencia at 23rd Street was also analyzed, because of feedback from the community about increased delays due to the new bike signal and signal retiming. For the southbound direction from August 2023 through September 2024, the median vehicle travel time increased to as much as 85 seconds, but on average required 80 seconds to pass through that block and intersection. Using the same time period for comparison, but in the prior years (August 2022 – September 2023), the typical time required to travel past this segment was about 77 seconds, 2.5 seconds less than current conditions.



Conclusion

The findings from the 12-month evaluation of the Mid-Valencia Pilot remain consistent with those observed during the 3-month and 6-month evaluation periods, demonstrating minimal changes across the metrics used. The pilot design continues to show clear improvements over pre-pilot conditions, particularly in addressing key traffic safety concerns.

Notably, the frequency of vehicle blockages in the bikeway—previously a significant safety issue—was dramatically reduced during the pilot. Similarly, occurrences of vehicle dooring and encroachment into the bikeway declined, effectively minimizing or nearly eliminating mid-block conflicts for people on bikes. These improvements have contributed to a safer and more predictable biking experience.

The curb management plan implemented as part of the pilot also successfully reduced unsafe vehicle loading behaviors, such as double-parking, further enhancing overall traffic safety.

Despite these successes, the pilot introduced a new safety challenge: an increase in illegal vehicle left or U-turns at intersections. These maneuvers have emerged as the primary cause of bike-related collisions under the pilot configuration.