

TRAFFIC COUNT DATA ANALYSIS

LOCATION: 6th Street between Park Avenue and Bellflower Boulevard

In 2022, Eliot Street and Colorado Street were closed to traffic for the Colorado Lagoon Open Channel Project. Those two streets provided east-west access from Bellflower Boulevard to Park Avenue. The traffic detour around the project area directs traffic to 7th Street for east-west travel. The Traffic Engineering Division collected vehicular count and speed data in early 2023 to determine whether detoured traffic is also following 6th Street around the project.

6th Street is a two-lane street which allows on-street parking on both sides of the street except for the north side of 6th Street west of Santiago Avenue. Additionally, 6th Street has a posted speed limit of 25 mph. 6th Street is classified as a "Bicycle Boulevard" where pedestrian and bicycle traffic have priority and motor vehicle traffic is discouraged with diverters and traffic calming devices like traffic circles. Bicycle Boulevards are designed for speed limit of 25mph and daily traffic volumes under 4,000 vehicles. Upon construction of the Bicycle Boulevard calming devices, traffic counts were collected to determine their effectiveness. Those counts will serve as a baseline of typical vehicle statistics for comparison to data collected in 2023.

Previous Evaluation: 2021

During the traffic study performed in December of 2021, 6th Street east of Santiago Avenue was observed to have an average of 1390 vehicles per day. This segment was also shown to have an 85th percentile speed of 29 mph with an average speed of around 24 mph. 6% of vehicles traveled over 30 mph with only 0.4% of vehicles going over 35 mph. Additionally, no vehicles were observed traveling over 40 mph. 6th Street west of Santiago Avenue was observed to have an average of 1372 vehicles per day. The 85th percentile speed of this segment was observed at 32 mph with an average speed of around 26 mph. The recorded data indicated that around 20% of vehicles traveled over 30 mph and 3% of vehicles traveled at a speed over 35 mph. From this data, 0.4% of all vehicles between Santiago Avenue and Terraine Avenue traveled over 40 mph. Vehicle volumes and average speeds were in line with expectations for a Bicycle Boulevard.



Conditions in 2023

During the 6th Street traffic study performed in March of 2023, the segment east of Santiago Avenue was observed to have an average of 3053 vehicles per day. 85th percentile speeds were 30 mph with an average speed of 26 mph. 20% of vehicles traveled over 30 mph while only 2% of vehicles went over 35 mph. Additionally, 0.02% of vehicles traveled over 40 mph. 6th Street west of Santiago was observed to have an average of 4151 vehicles per day. This segment has an 85th percentile speed of 38 mph with an average speed of 33 mph. Around 82% of vehicles traveled over 30 mph with 40% of these vehicles traveling at a speed over 35 mph. Additionally, 9% of the observed vehicles were traveling over 40 mph.

Comparison to Typical Conditions

In 2021, traffic volumes and speeds were fairly consistent on either side of Santiago, with both segments experiencing fewer than 1400 vehicles per day and 85th percentile speeds between 27 and 32mph. In 2023, volumes and speeds have risen, but at different rates on either side of Santiago. The segment west of Santiago has seen volumes and speeds increase more significantly than the eastern segment. Between December 2021 to March 2023, average daily traffic east of Santiago Avenue more than doubled while the traffic west of Santiago Avenue nearly tripled. The segment east of Santiago Avenue along 6th Street also experienced a slight increase in the 85th% Speed with the 2021 recorded speed of 29 mph increasing to 32 mph in 2023. However, the segment west of Santiago Avenue experienced a higher increase with the 85th% speed increasing from 32 mph to 38 mph with a small number of vehicles traveling at speeds greater than or equal to 50 mph. Since Colorado Street is closed west of Santiago, as many as 1000 vehicles per day appear to be diverting from the end of Colorado through Alamitos Heights to 6th Street.

The 85th percentile speed of 32mph for the east segment is still within the expected range for a street with a posted limit of 25mph, and vehicle volumes are at the higher range of acceptability for a street with "sharrow" bikeway markings. The 85th percentile speed of 38mph on the west segment is now exceeding the expected range for the 25mph speed limit, and there are instances of speeds more than double the speed limit. While volumes are also within the acceptable range for a street with a striped bike lane, they are more than three times the typical levels.



Table 1: Volume and Speed Results

Year	Location Along 6th St	Type	MPH											Total
			<15	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	
2021	Near Terraine Avenue	ADT	46	194	623	450	71	6	0	0	0	0	0	1390
		%ADT	3.31%	13.96%	44.82%	32.37%	5.11%	0.43%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
2021	Near Panama Avenue	ADT	25	101	388	582	239	31	5	1	0	0	1372	
		%ADT	1.82%	7.36%	28.28%	42.42%	17.42%	2.26%	0.36%	0.07%	0.00%	0.00%	100.00%	
2023	Near Terraine Avenue	ADT	37	177	823	1419	524	66	6	1	0	0	3053	
		%ADT	1.21%	5.80%	26.96%	46.48%	17.16%	2.16%	0.20%	0.03%	0.00%	0.00%	100.00%	
2023	Near Federation Drive	ADT	10	20	87	633	1730	1304	311	43	9	3	4151	
		%ADT	0.24%	0.48%	2.10%	15.25%	41.68%	31.41%	7.49%	1.04%	0.22%	0.07%	0.02%	100.00%

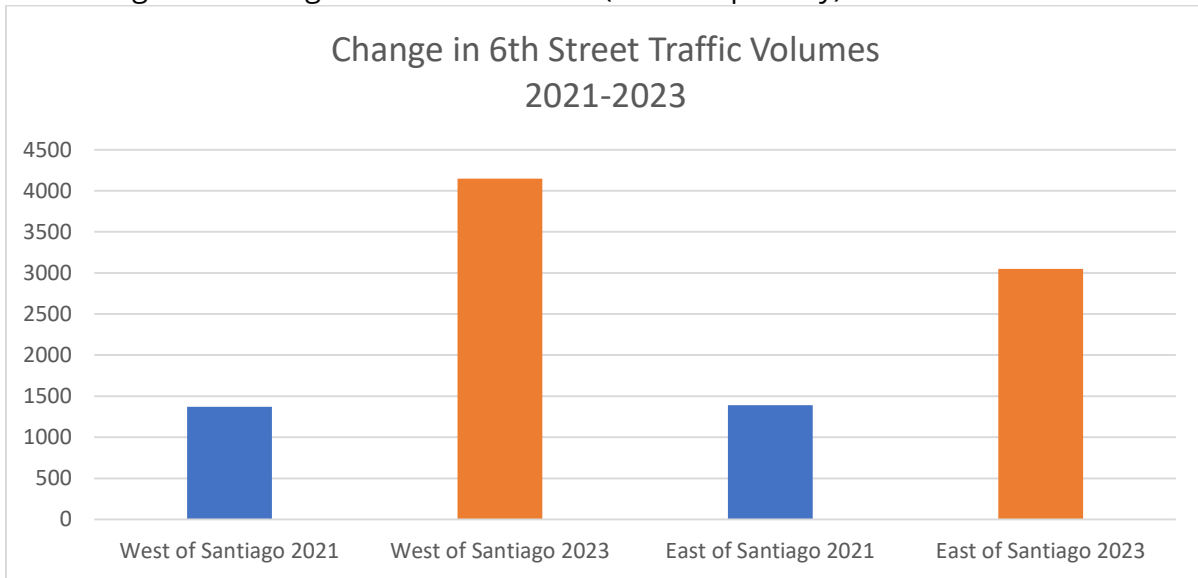
Figure 1: Distribution of Speeds on 6th Street



Speed profiles shifted toward higher speeds between 2021 and 2023, with a significant increase in 35+ mph speeds west of Santiago.



Figure 2: Change in vehicle volumes (Vehicles per day) from 2021 to 2023



Conclusion

Traffic volumes on 6th Street between Park Avenue and Bellflower Boulevard have increased significantly since 2021. The increase in number of vehicles and vehicle speed on the segment west of Santiago is more acute than the east segment. Since vehicle speeds on the western segment have been recorded at double the posted limit and 6th Street appears to be used as a cut-through, the City Traffic Engineer recommends temporary traffic calming devices for that segment. Devices which influence speeds downward, such as vertical delineators or speed humps should be effective in reducing the instances of speeding.

RECOMMENDED: Jose Jimenez **04/17/2023**
 Traffic Engineering Associate I Date

APPROVED: Paul Van Dyk **04/17/2023**
 Acting City Traffic Engineer Date

