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It's Not Just a Sign: Traffic Calming Gives Bump to Safety



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Issue

The city of Los Angeles adopted a Vision Zero policy intending to eliminate fatal traffic deaths by 2025, but this vision will be difficult to fully achieve without lowering cut-through traffic in residential neighborhoods. To this end, the Los Angeles Department of Transportation (LADOT) has implemented traffic-calming measures throughout the city, recognizing that collisions may not be entirely preventable but can be reduced in likelihood and severity through roadway design. The department has a process whereby residents can apply for speed humps quarterly but the program is oversubscribed. Traffic calming is in high demand; however, few studies address the issue in Los Angeles within the past few years. This policy brief summarizes a study that addresses the safety outcomes of traffic-calming measures installed throughout the city in recent years, with a sensitivity toward the cost of implementation, an important constraint that Los Angeles is bound by given its size and sprawling network of streets.

Research Findings

- The severity and number of collisions reduced as a result of introducing all traffic-calming measures, including speed humps, road diets/bike lanes, partial closures, and stop signs. There was a 38% reduction in overall incidents in 2019, one year after interventions

were installed. Moreover, the number of severe/fatal incidents dropped by 75%.

- Speed humps are the most cost-effective and proven method of calming traffic. The results align with previous research that speed humps have a significant impact on the speed of vehicles. On average, speeds reduced between 0.95 mph and 2.08 mph when compared to the previous year before they were installed (Figure 1). Average daily travel in the “after” period dropped on average between 346 and 203 vehicles. Further, the average national cost of speed hump installation ranges between \$2,000 and \$5,000, making it one of the lowest-cost alternatives.
- Design measures that make a road less viable for thoroughfare (e.g., partial closures, peak-hour turn restrictions) can reduce cut-through traffic volume and related collisions. After the safety improvements, Baxter Street in Echo Park saw vehicular volume decrease roughly 40% and speed decrease between 20% to 30% along tested segments.

Study Approach

To measure the potential safety benefits of traffic-calming treatments, the researcher evaluated numerous speed humps, bike lanes, partial closures, and stop signs that were installed in Los Angeles between 2018 and 2019. Selected corridors were dispersed citywide to reflect a range of built

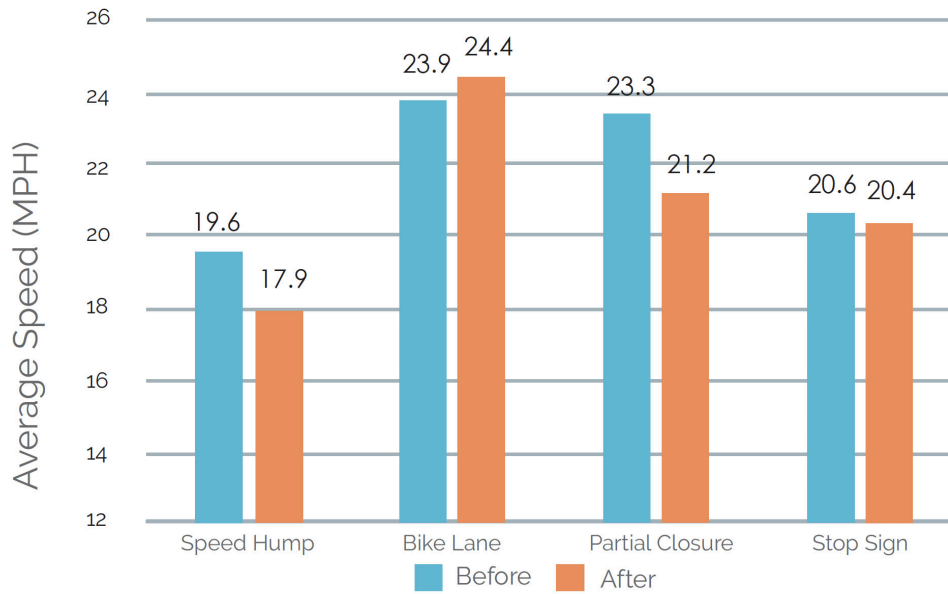


Figure 1. Average traffic speed in mph one year before and after interventions were introduced to roadway segments.

environment and demographic characteristics. Before-and-after analysis focused on roadway safety metrics, such as traffic speed, traffic count, collision frequency and severity. To conduct a final comparative cost-benefit assessment of interventions, the researcher summarized the typical costs for traffic-calming measures, retrieved from the Federal Highway Administration.

Conclusions

- At a minimum, LADOT should consider restructuring the petitioning process by lowering the threshold to apply for speed humps and have a different process for streets with a higher residential density. While speed humps are the most cost-effective and proven calming measure, they are also the most time-consuming measure to apply for. In areas where the residential composition is denser (e.g., multi-family homes, apartment buildings), LADOT could consider lowering the required number of signatures from 66% to 51% of neighbors.
- The city should consider complementing the existing request-based traffic calming process with a quantitative prioritization process to identify key areas like schools and low-income neighborhoods. LADOT relies on requests and this inherently favors the privileged and informed, not necessarily those who are most in need. The department should consult with local governance boards to liaise with residents about potential safety improvements that can be made. This way, the system is proactive rather than being primarily application-driven.
- Create a user guide in Spanish and English to enhance accessibility and increase understanding of the local benefits of traffic calming. Even if the petitioning process is eliminated, residents must know what pathways are available for calming traffic in their community.



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