

# Publicly-Supported Road Diet Reduces Speeds in Alexandria

Alexandria Department of Transportation and Environmental Services

## KEY ELEMENTS:



Public support



Speed reduction

Community members can provide valuable insights into pedestrian safety on their streets, adding support to local projects such as the King Street Road Diet in Alexandria, Virginia. The City of Alexandria's Complete Streets policy requires that city maintenance and capital projects improve the transportation network for all users, so when a 1.8 mile segment of King Street was slated for resurfacing, the city had an opportunity to address longstanding community concerns and seek feedback on design options for improving the corridor.

This section of King Street has a bus line, residences, multiple churches, a community center, and a high school. A Complete Streets project on King Street would meet the vision for a more walkable Alexandria that is described in both the city's Transportation Master Plan and the local school district's Strategic Plan.<sup>1,2</sup>

## IMPLEMENTATION

City staff presented the public and advisory boards with a range of design options for the King Street project. At a minimum, maintenance work done in conjunction with street resurfacing would have included sidewalk maintenance, ADA-compliant bus

stops, and upgraded curb ramps. Staff also presented options for more comprehensive corridor improvements such as a Road Diet, buffered bike lanes, new crosswalks, vehicle turning restrictions, and crosswalk visibility enhancements. In addition to dedicated space for bicyclists and shorter, safer pedestrian crossings at seven locations, the city also identified driver benefits from slower vehicle speeds, increased sight distance, and the addition of a center turn lane.



Figure 1. Pedestrian crossing at a pedestrian refuge island.<sup>3</sup>

The public engagement effort included public meetings, civic association meetings, meetings with local neighborhood groups, updates to boards and commissions, and meetings with the local high school's Parent Teacher Association (PTA). An online survey captured 760 responses, including 200 project-area residents. Sixty-six percent



U.S. Department of Transportation  
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For more information, please contact:

Alexandria Department of Transportation and Environmental Services, 703.746.4025, <https://www.alexandriava.gov/TES>

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EDC-4 STEP: [https://www.fhwa.dot.gov/innovation/everydaycounts/edc\\_4/step.cfm](https://www.fhwa.dot.gov/innovation/everydaycounts/edc_4/step.cfm)

of respondents supported the proposed comprehensive improvements. Input from the public and advisory boards also led the City to study, and ultimately approve, a speed limit reduction from 35 mph to 25 mph for a 0.8-mile segment of the project.

Before construction began, the City notified the public through variable message boards, e-news, social media, and emails to civic associations and the high school PTA.

Construction was completed between July and October 2016. The City's Complete Streets Design Guidelines was a resource for the final design of the street, which included:<sup>4</sup>

- Removal of a travel lane (Road Diet).
- Landscaped pedestrian refuge islands at seven crossings.
- New crosswalks (three across King Street, four across side streets).
- No turn on red sign near the high school.
- Upgraded curb ramps, sidewalk maintenance, and ADA-compliant bus stops.
- Speed limit reduction to 25 mph for 0.8 miles within the project boundary.
- Buffered bike lanes.
- Three reconfigured intersections.
- Left turn lanes at intersections and center turn lane throughout.

"Having projects like this in our city that highlight the safety impact engineering changes like this can make for the community will only make it easier in the future to continue to redesign our streets for all users of the roadway."

—Hillary Orr, Special Assistant to the City Manager

### RESULTS

City staff reported that while there was some opposition to the changes, the community ultimately came together around the need for improved safety. To evaluate the project, staff collected data on speeds, vehicle volumes, and vehicle-involved crashes. A consulting group also conducted a traffic analysis of intersection level-of-service and travel time delays one year after project completion. Zero reported traffic crashes occurred in the first year of implementation, compared to an annual average of seven crashes during the ten years prior to the project. Average vehicle speeds were still higher than the posted speed limit, but 85th percentile speeds decreased by 4 percent near the high school and 18 percent for the rest of the segment where the speed limit was lowered. Two intersections needed remedial actions—signal timing modifications to alleviate unexpected delays and a protected left turn signal phase to reduce potential conflicts between turning vehicles, pedestrians, and other vehicles. Post-project studies also indicate that traffic diversion has not been a problem.

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### References

1. City of Alexandria, Resolution 2621—Complete Streets Policy. (2014). <https://www.alexandriava.gov/uploadedFiles/localmotion/info/gettingaround/Alexandria%20Complete%20Streets%20Policy%202014.pdf>
2. Alexandria City Public Schools, ACPS 2020 Strategic Plan. (2015). <https://www.acps.k12.va.us/domain/798>
3. Alexandria Department of Transportation and Environmental Services.
4. Alexandria Department of Transportation and Environmental Services, Alexandria Complete Streets Design Guidelines. (2016). <https://www.alexandriava.gov/uploadedFiles/localmotion/info/gettingaround/Alexandria%20Complete%20Streets%20Design%20Guidelines.pdf>