

Roadway Reconfiguration Guidance

Improving safety is a top priority for the Virginia Department of Transportation (VDOT). One of the strategies for achieving this goal is by implementing roadway reconfigurations. This safety strategy can be implemented by modifying pavement markings during repaving projects or through new construction projects. Implementing striping and marking changes with the repaving program allows improvements in safety by addressing speeding, reducing crossing distances for pedestrians, and adding bike lanes in a very cost-effective manner.

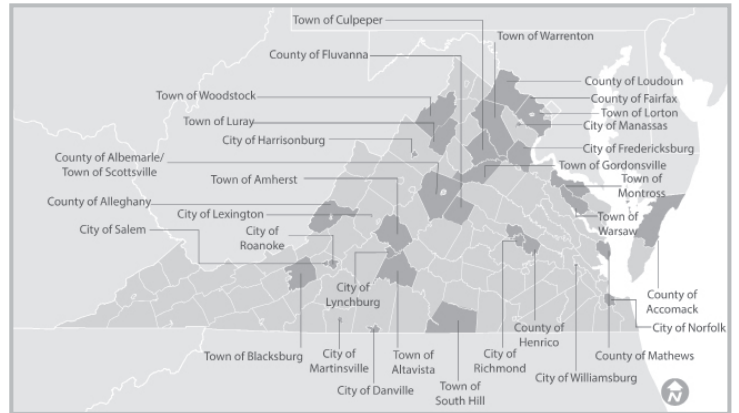
VDOT'S ROADWAY RECONFIGURATIONS ACROSS THE STATE

REDUCE
VEHICULAR
SPEEDS

ENCOURAGE
ECONOMIC
GROWTH

IMPROVE
ROADWAY
SAFETY

CREATE SPACE FOR
BICYCLISTS AND
WALKERS



What is a Roadway Reconfiguration?

Roadway reconfigurations change the utilization of the pavement space, typically by restriping, to either remove one or more lanes or narrow them thereby adding bike lanes, turn lanes and/or parking. Roadway Reconfigurations that remove a travel lane are sometimes referred to as Road Diets.

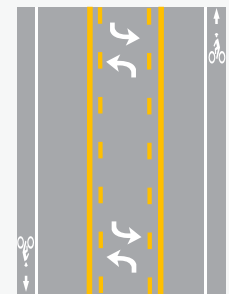
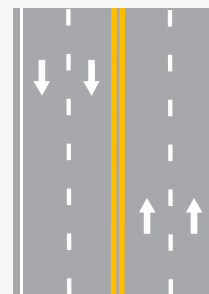
The typical roadway reconfiguration converts a 4-lane, undivided roadway to a 3-lane roadway with a two-way left turn lane and bike lanes. The pavement space on Bluemont Way shown below was reconfigured in this manner.



Bluemont Way (Before)



Bluemont Way (After)



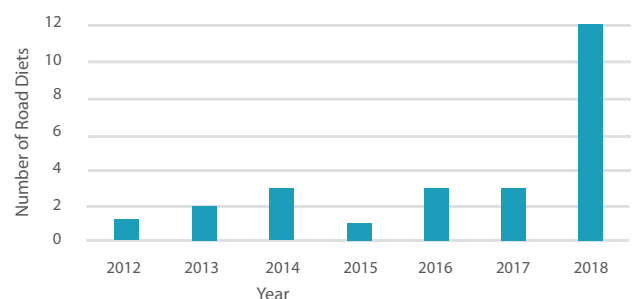
Roadway Reconfigurations Across the Commonwealth

At least 30 localities in Virginia have planned or implemented a roadway reconfiguration project since 2010.

44% of Roadway Reconfigurations in Virginia were 4 lane to 3 lane conversions.

(Source: Ohlms, Peter et. al. HOW'S THAT DIET WORKING: PERFORMANCE OF VIRGINIA ROAD DIETS, 2019)

REPORTED ROAD DIETS IMPLEMENTED IN VIRGINIA



WORKING WITH LOCALITIES TO IMPLEMENT SAFETY IMPROVEMENTS

VDOT works with localities to improve the transportation network's safety and multimodal connectivity. Local support for the improvements is an important step in the process. Some localities note the locations they would like roadway reconfigurations in a locally adopted comprehensive plan. Another method of communicating local support is the passage of a resolution by a local governing board. Localities should communicate their preferences to their VDOT Residency Administrator who will then work with the District Traffic Engineer to evaluate the requests.

Coordinating improvements with repaving cycle

Local requests for roadway reconfigurations should be brought to the attention of VDOT as early as possible. This will give VDOT time to evaluate the corridors, ensure local support, and develop striping plans if deemed appropriate. If the roadway is selected for repaving in the future, the roadway reconfiguration may be able to be included in the annual repaving contract. If a corridor that is a good candidate for a roadway reconfiguration has good pavement quality, or requires features other than pavement markings it may be better to pursue funding through traditional grant programs like the Highway Safety Improvement Program, TA-set aside, SMART SCALE, or Revenue Sharing.

VDOT supports localities by:

✓ PARTICIPATING IN PLANNING PROCESS

✓ FUNDING STUDIES

✓ COMPLETING DESIGN

✓ PROVIDING STAFF REVIEW/INPUT

Town of Amherst Bike Lanes



The Town of Amherst requested VDOT study installing bike lanes along Business 29 in the town. VDOT analyzed the request looking at turning movements, volumes and widths. The town held a public meeting on the concept and it received broad public support. Town Council approved the plan and it was implemented in August 2017 as a part of a repaving.

Good Roadway Reconfiguration candidates for 4-3 lane conversions

FACTORS THAT SUPPORT IMPLEMENTATION:

- Less than 16,000 AADT
- Long spacing between signals
- Rear-end or speed-related crashes
- Minimal Driveways

Fairfax County and VDOT Paving and Restriping Coordination

Fairfax County has worked closely with VDOT NOVA District to develop a streamlined process for leveraging their repaving program to implement safety and multimodal improvements on VDOT streets. The County works in parallel with the annual repaving process to analyze, design and approve safety improvements through roadway reconfigurations. This work has paid off in lowering top end speeding on VDOT roads by up to 15 mph, reducing rear end crashes, adding bicycle lanes and creating shorter crossing distances for pedestrians. The County holds a meeting in each magisterial district each spring before repaving to get public feedback.

SAFETY IMPROVEMENTS REALIZED

Significant safety improvements have been realized across the nation as well as in the Commonwealth following implementation of roadway reconfigurations.

LAWYERS ROAD

VDOT worked with Fairfax County to implement a roadway reconfiguration along Lawyers Road. VDOT worked with the County to collect before and after data on crashes and community perception of the project. The results were overwhelmingly positive.

Fairfax County's Benefits of Implementations

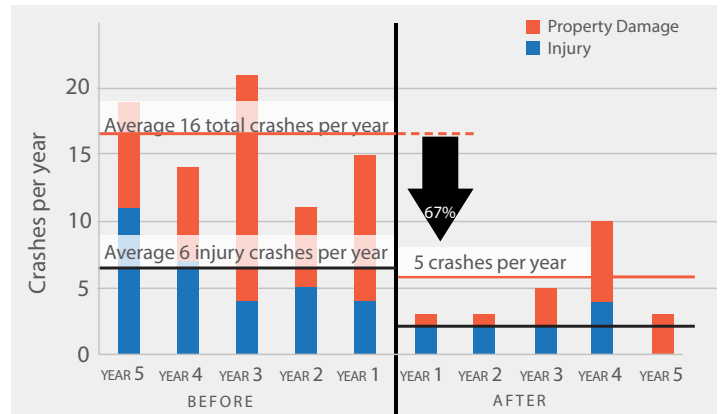
- ✓ ADDS NEW BIKE LANES
- ✓ CRASH REDUCTION
- ✓ TOP END SPEEDS DECREASE

Benefits of Lawyers Road Roadway Reconfiguration

- Reduced Crashes 68% in the five years after implementation
- 69% of respondents said Lawyers Road seems safer after the roadway reconfiguration was implemented
- 47% of respondents bicycled on Lawyers Road more often than before, indicating that the roadway reconfiguration encourages cycling as a travel mode.
- 74% of respondents said the project improved Lawyers Road



Lawyers Road Before and After.



Lawyers Road Crashes Reduced.

Annandale Road Lane Diet

Annandale Road was restriped from two overly-wide 16' travel lanes and parking lanes to a new configuration that included narrow travel lanes, bike lanes, and parking lanes. This project reduced average traffic speeds to below 35 mph and 85th percentile speeds to below 39 mph throughout the corridor.



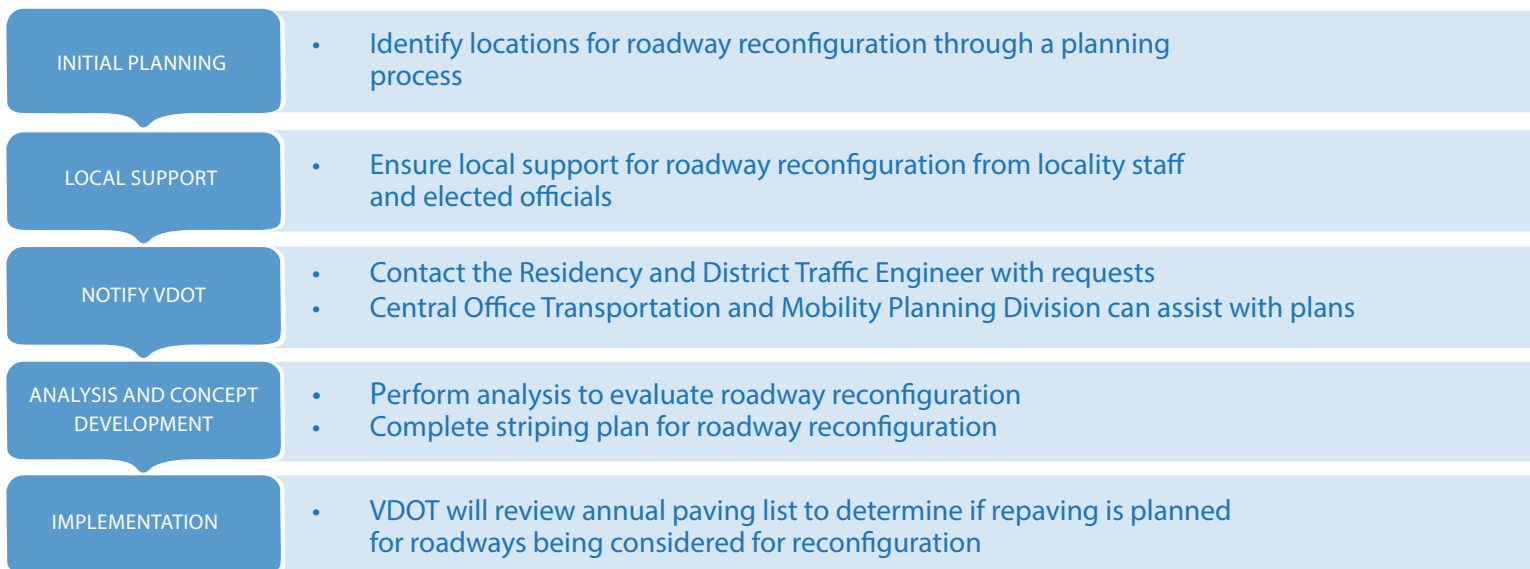
Annandale Road (Before)



Annandale Road (After)

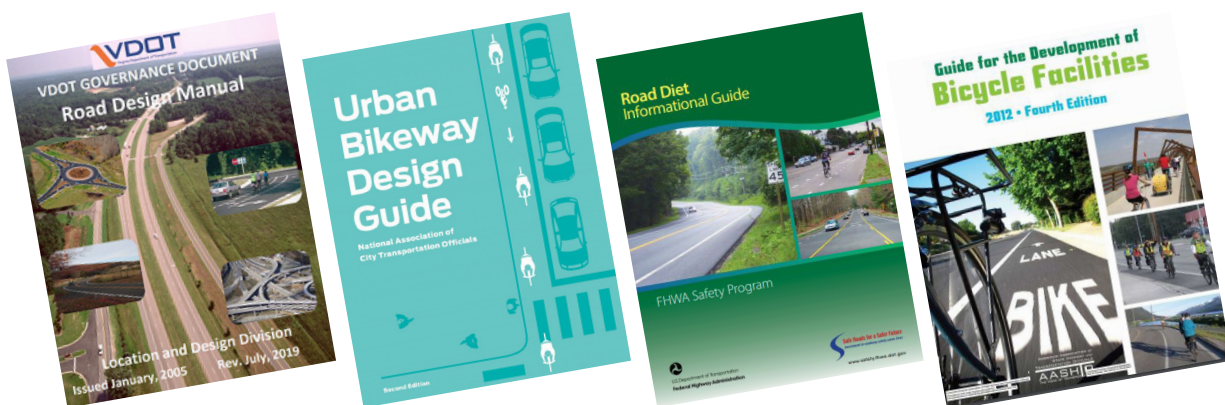
IMPLEMENTATION PROCESS

VDOT encourages localities and stakeholders to work with the VDOT Resident Administrator and District Traffic Engineer to identify opportunities for roadway reconfigurations that include multimodal facilities on the VDOT roadway network. The VDOT District Office will work with localities through a five-step process to identify and implement roadway reconfigurations through the annual repaving program. This general approach has successfully implemented roadway reconfigurations in many communities, improving safety and adding multimodal facilities to their transportation network.



RESOURCES AND CONTACT INFORMATION

There are many guides available to assist in complete street's design, below are a few that are recommended by VDOT. All but the AASHTO Bicycle Facility Guide are available for free online.



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