

HARRY W. NICE/THOMAS “MAC” MIDDLETON BRIDGE REPLACEMENT PROJECT

NEWBURG, MD TO DAHLGREN, VA

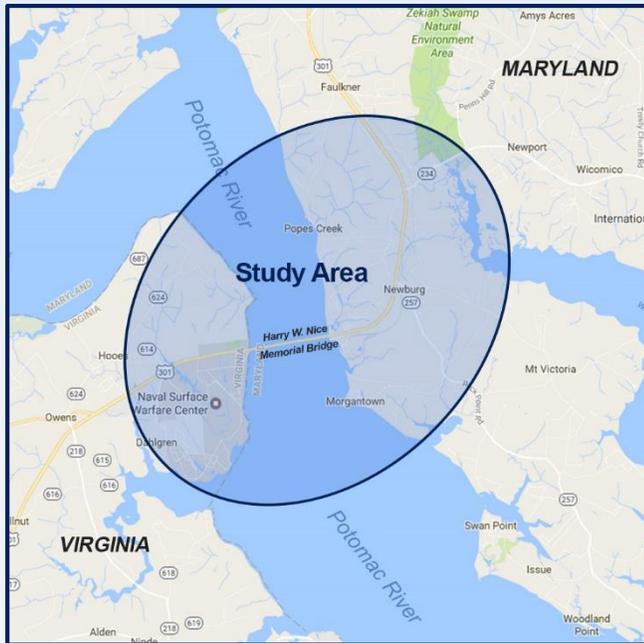
Bicycle/Pedestrian Path Decision

January 24, 2020

Project Overview

Project Location

- Charles Co., MD & King George Co., VA
- Newburg, MD To Dahlgren, VA



TOLL FACILITIES

- 1 Thomas J. Hatem Memorial Bridge (US 40)
- 2 John F. Kennedy Memorial Highway (I-95)
- 3 Fort McHenry Tunnel (I-95, I-395)
- 4 Baltimore Harbor Tunnel (I-895)
- 5 Francis Scott Key Bridge (I-695)
- 6 Intercounty Connector (ICC)/MD 200
- 7 William Preston Lane Jr. Memorial (Bay) Bridge (US 50/301)
- 8 Governor Harry W. Nice Memorial/Senator Thomas "Mac" Middleton Bridge (US 301)

Project Overview



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Project Overview



US 301 Northbound Virginia approach

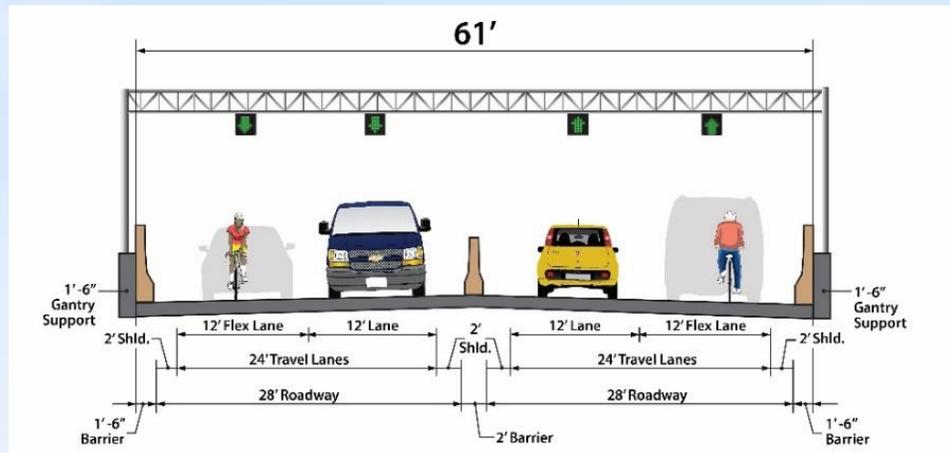


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Bid Alternative Results



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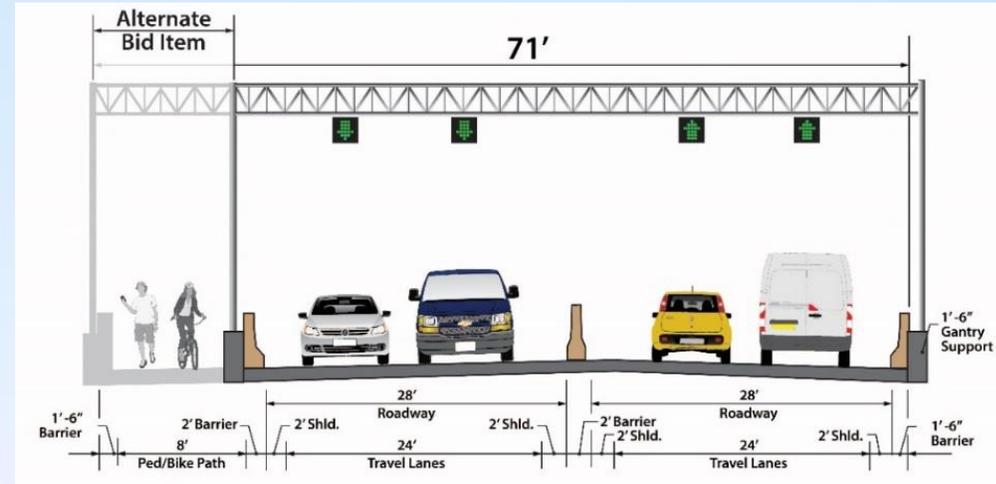


Base Bid

Lane Sharing for Bicycle Accommodations

Total = \$462,957,000

CTP total = \$635.8 M



Add-Alternate Bid

Barrier Separated 8' wide Shared-Use Path,
separated from traffic with a barrier.

Bike Path = \$63,988,300

Total = \$526,945,300

CTP total = \$707.5 M

Demand Analysis

Bike/Ped Path Usership Projections



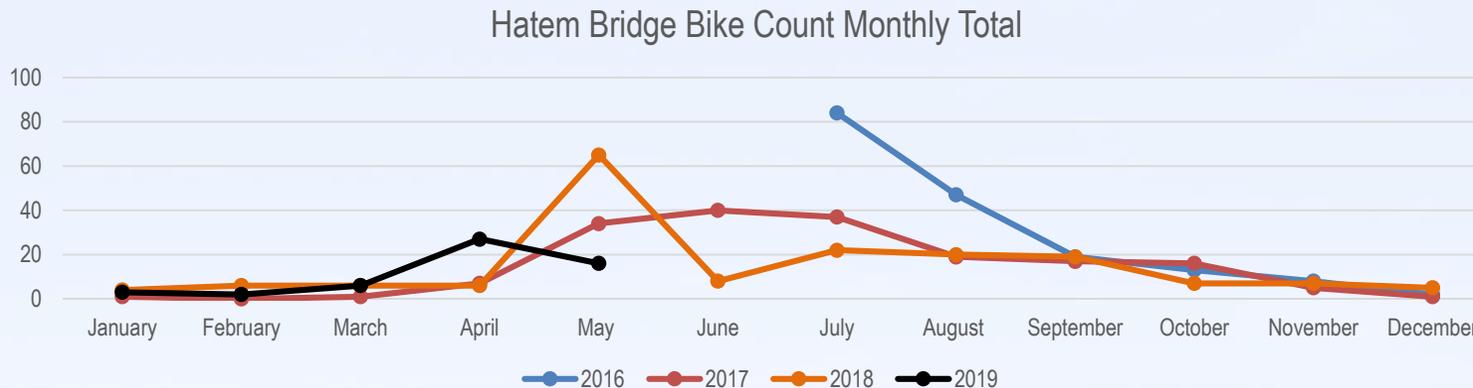
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Woodrow Wilson Bridge (WWB) Comparison:

WWB Vicinity (within 3 Miles)		NMB Vicinity (within 3 Miles)	
Jurisdiction	Population	Jurisdiction	Population
PG Co, MD	38,361	Charles Co, MD	4,886
Washington, DC	16,167	KG Co, VA	<u>4,977</u>
Alexandria, VA	<u>53,197</u>		
Total Area Population:	107,725	Total Area Population:	9,863

- The Nice/Middleton Bridge (NMB) vicinity population is about 9% of the Woodrow Wilson Bridge area population.
- Based on WWB bike counts, estimated Nice/Middleton Bridge daily trips on the trail = **46 trips/day**

Hatem Bridge (Lane Sharing) Monthly Bike Count (Low – 0, High – 84, Average – 16):



Demand Analysis

Bike/Ped Path Usership – Census Data



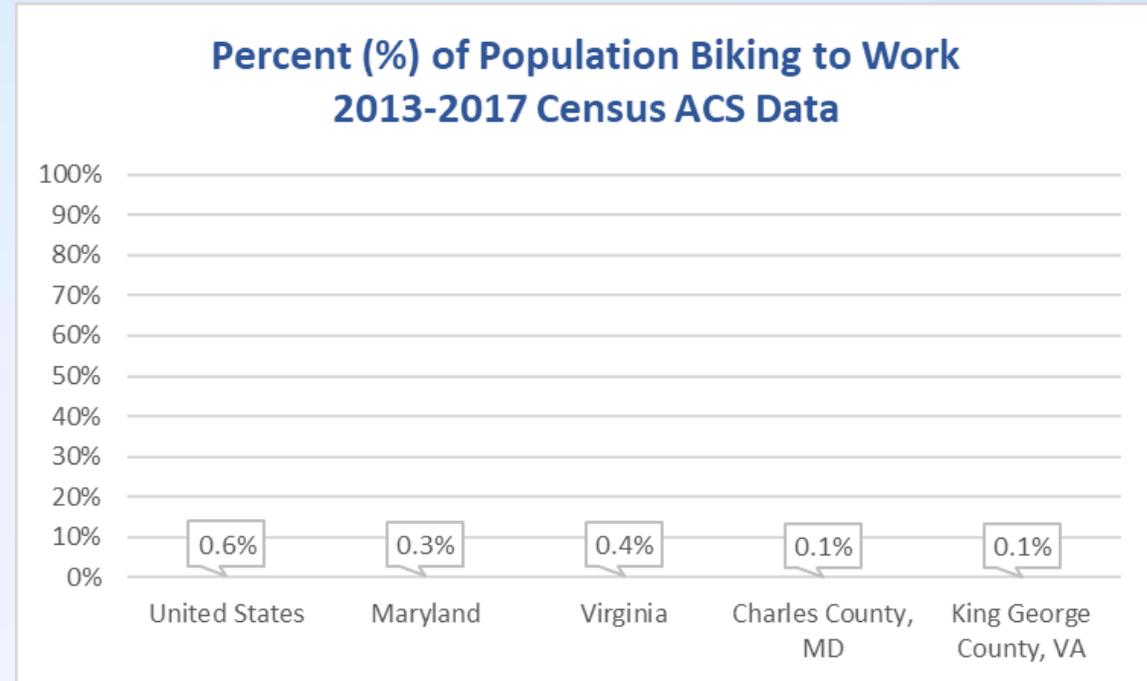
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Additional Census Bureau Data on Bicycling to Work:

- 2013-2017 American Community Survey 5-Year Estimates – Population that Bicycle to Work.
- Census data supports the order of magnitude reasonableness of the usage estimate

Source:

https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_17_5YR_S0801&prodType=table



Demand Analysis

Bike/Ped Path Usership Estimate



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Costs for each mode:

- With this previous estimate, and the costs for the bridge and separated path, the following information is calculated:

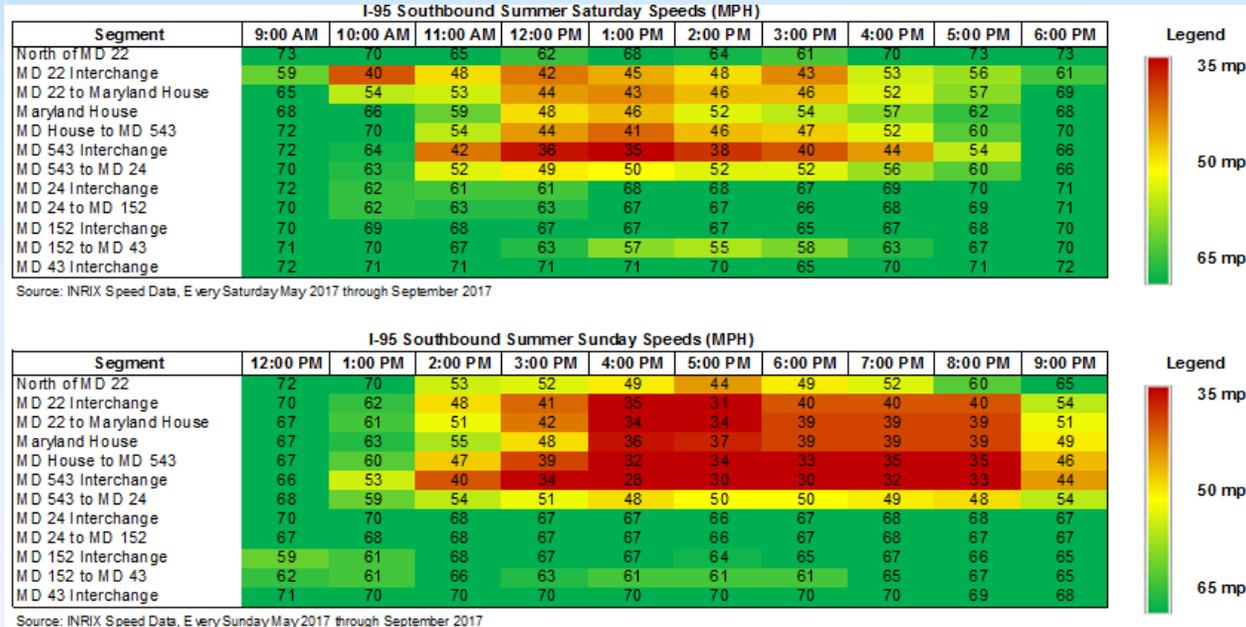
Trips	Average Daily Traffic	Contract Construction Cost (<u>not</u> CTP) Bridge Roadway / Path	Estimated Construction Cost per Average Daily User
Vehicular Trips	18,800	\$463 M	\$25,000
Trail-User Trips	46	\$64 M	\$1,300,000

Capital Program Project Alternative

I-95SB Phase 1 (Maryland House Travel Plaza to MD24)



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- 2018 SB I-95 Traffic Volume at Maryland House Travel Plaza
 - AM Peak Hour = 3,350; PM Peak Hour = 3,560; Summer Sunday Peak Hour = 6,635
 - Weekday ADT = 54,155; Weekend ADT = 65,230
- 2018 Summer (May –Sept) congestion on SB I-95 between MD 22 and MD 24
 - 18 hours of congestion per weekend (Saturday and Sunday)
 - The section of roadway ranked within top 10 weekend bottlenecks in Maryland
 - Max queue approximately 6 miles

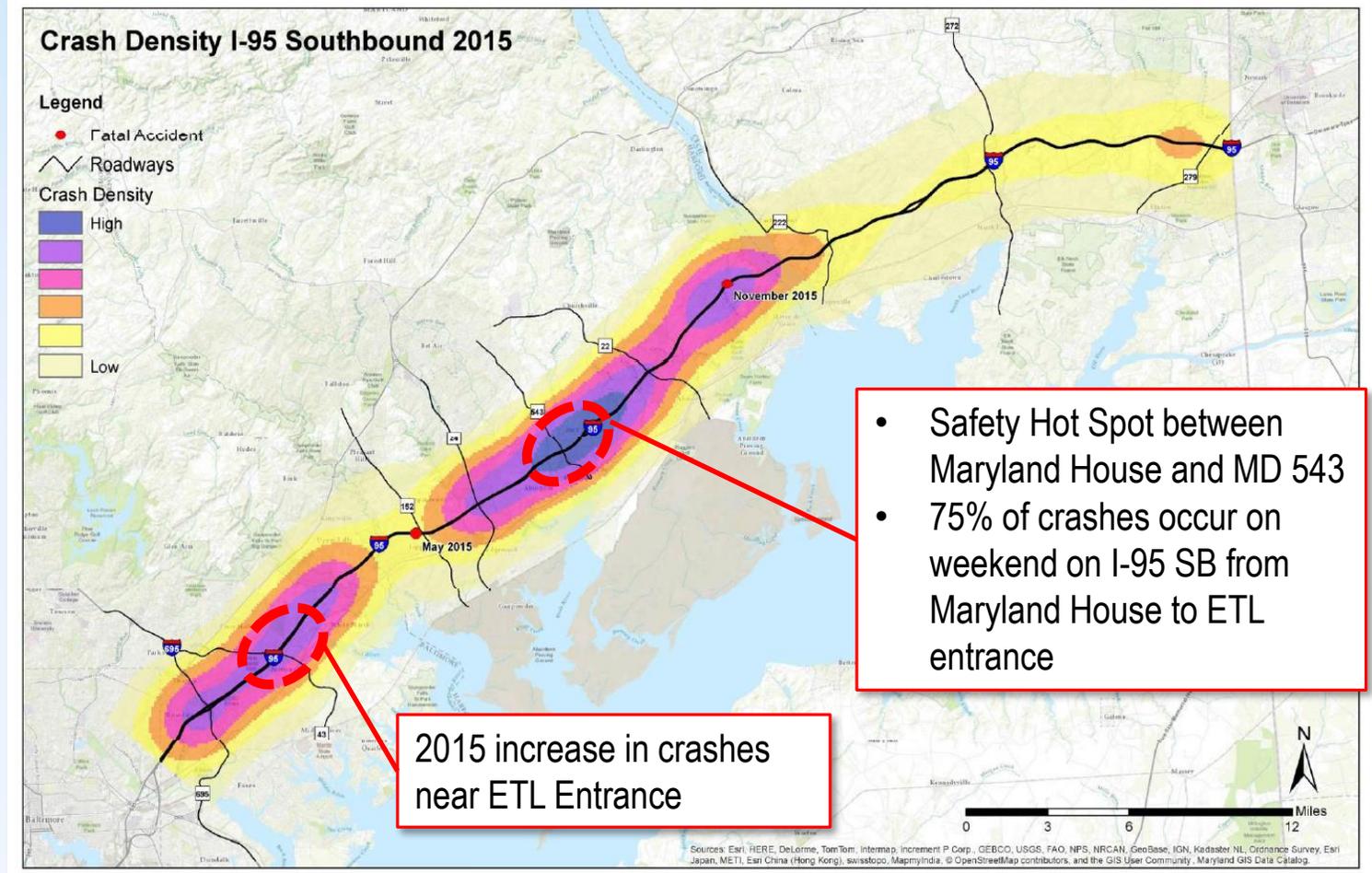
Capital Program Project Alternative

I-95 SB Phase 1 (Maryland House Travel Plaza to MD24)



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- Safety Analysis (2013 – 2017):
 - 35 crashes
 - 8 Injury Crashes
 - 1 Fatal Crash



Background

Public / Stakeholder Input

Analysis

Other Considerations



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Capital Program Project Alternative

I-95SB Phase 1 (Maryland House Travel Plaza to MD24)

- **Part-Time Shoulder Use (Hard Shoulder Running)**
 - Addresses Hot Spot 1 & 2
 - 20% Travel Time Reduction During Summer Weekend
 - Interstate congestion and safety relief
 - Improve freight mobility in State's 3rd busiest truck corridor



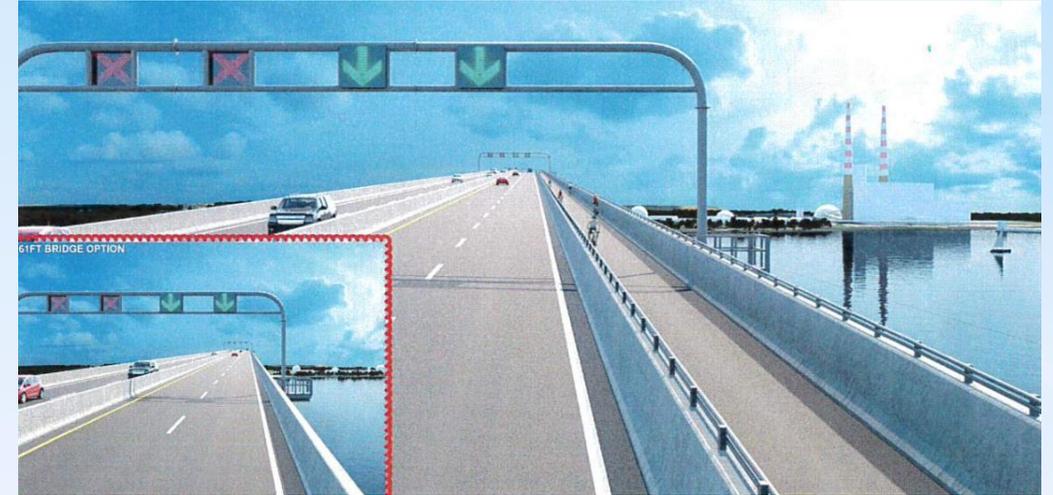


Authority Board Unanimous Capital Program Decision

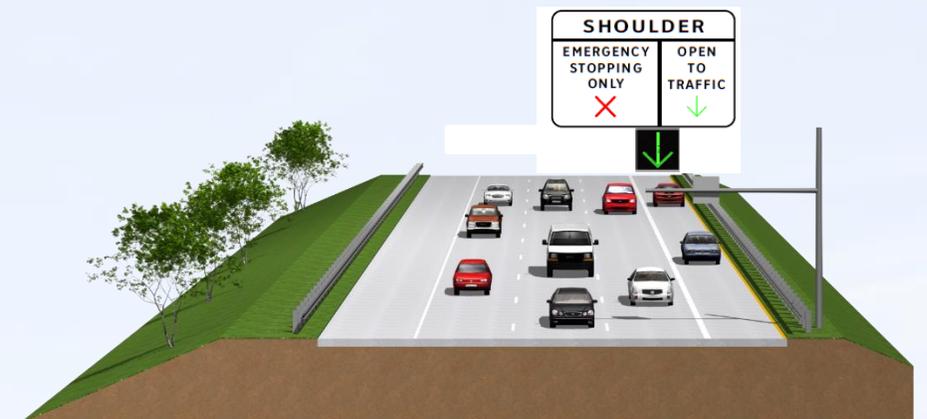


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Add Alternative providing for a
Barrier Separated Shared-Use Path
to Nice-Middleton Bridge



Add I-95SB (Maryland House Travel
Plaza to MD 24) Safety and
Congestion Improvements



Lane Sharing Safety Features



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To address safety considerations with the Base Bid (Lane Sharing) Option and promote ridership, MDTA has incorporated several design features to enhance safety, including:

- Bicycle-compatible bridge joints,
- Additional signing,
- Intelligent Transportation Systems (ITS), like bicycle warning beacons
- Real time monitoring from MDTA operations center



MD Bridges with Bike Accommodations

Analysis - Comparison



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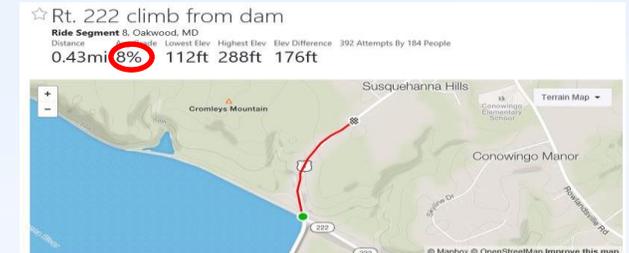
Bridge	Route / Location	Travel Lanes	Bicycle and Pedestrian Access	Additional Considerations
Hatem Bridge	US 40 / Cecil and Harford Counties	4	Shared lane only	Restrictions apply to bicycle access. Pedestrian access prohibited.
Conowingo Dam	US 1 / Cecil and Harford Counties	2	Shared lane only	Restrictions apply to bicycle access. Pedestrian access prohibited.
Thomas Johnson Bridge	MD 4 / Calvert and St. Mary's Counties	2	Shared lane with +/- 2' Shoulders	Posted that Bicycle Access is Unadvised. New Expansion Planned - Not funded for construction
MD 231 at Patuxent River	Charles and Calvert Counties	2	Shared Lane only	<2' Shoulders
US 11 at Potomac River	Washington County	2	Shared Lane only	<2' Shoulders
MD 313 at Nanticoke River	Dorchester and Wicomico Counties	2	Shared Lane only	+/- 2' Shoulders



Shared Lanes at US 1 over Conowingo Dam

NOTE: There have been no reported bicycle related incidents over the last 5 years on US 1 at the Conowingo Dam

* Source: MD SHA Office of Traffic and Safety Development Support Division





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Potential Alternative Bicycle Accommodations

Convert Existing Bridge to Bicycle/ Pedestrian Facility

- County declined to take ownership of the existing bridge

Provide Bicycle Taxi Service

- Free service to bicycle bridge crossings

Special Event Police Escorts

- MDTA currently accommodates special events crossings on multiple Maryland bridge facilities for 10 K runs, Special Olympics events, and others.
- Recreational Bicycle Events are accommodated on multiple Maryland facilities, and the Nice-Middleton Bridge would be as well.

