

IMPROVE 81

Summer 2024

81 INSIDER

The Corridor Improvement Program Turns Five!

Motorists and residents along Interstate 81 in Virginia had a key role in creating the I-81 Corridor Improvement Program (CIP), which was officially established on July 1, 2019.

VDOT and its partner agencies spent much of 2018 on a study of the interstate’s 325 miles. The team mapped areas with higher-than-average crash frequency and severity, hours of delay, and incidents causing lane closures lasting more than an hour. A dozen public meetings along the corridor garnered more than 2,000 comments from stakeholders, helping the study team zero in on potential “hot spots” and identify possible solutions.

The study, presented to the Commonwealth Transportation Board in December 2018, identified more than 100 potential capital projects along the corridor. It recommended moving forward with 64 projects costing an estimated \$2 billion dollars. The CIP also called for numerous operational improvements and evaluated possible funding sources such as fuels taxes or limited tolling along the corridor.

The CTB adopted the plan and submitted

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How Did We Get Here?

Public Hearings held in 2018 highlighting potential CIP projects along I-81



The Corridor Improvement Program Turns Five! (continued)

it to the General Assembly for consideration. In April 2019, legislators and the Governor approved the final version of the CIP. The legislation included a dedicated funding stream, partly derived from regional taxes on gasoline and diesel fuel sales.

Construction projects in the I-81 CIP include widening, truck-climbing lanes, auxiliary lanes, and extensions of acceleration or deceleration lanes. Operational enhancements include digital message signs, additional traffic cameras, enhanced Safety Service Patrol coverage, and improvements to parallel routes such as Route 11 and Route 460. The study estimates that the CIP will result in 450 fewer crashes a year, and reduce traffic delays by more than 6 million hours a year.

I-81 Advisory Committee In Action



July 2022 Meeting - VDOT speaks to the I-81 Advisory Committee

October 2023 - I-81 Advisory Committee receives updates on CIP projects



WHAT HAVE WE DONE?

Completed Projects

CONSTRUCTION PROJECTS



24 Acceleration/Deceleration Lane Extensions at 19 different interchanges

- Completed between 2020 and 2023

1 Auxiliary Lane

- Connects southbound exit 54 (Groseclose) on-ramp with off-ramp to Smyth Rest Area
- Completed 2022

1 Truck Climbing Lane

- Extends about 1.3 miles along northbound I-81 just north of exit 39, Smyth County
- Completed 2023

9 Curve improvements

8 sets of flashing chevron signs to warn of roadway curves

- All completed by end of 2019 (first year of CIP)

1 high-friction pavement treatment

- Southbound just south of exit 39, Smyth County; includes 1 mile of animal-control fencing
- Completed 2022



MULTIMODAL IMPROVEMENTS

✓ **Virginia Breeze intercity bus service added "Highlands Rhythm" route to Bristol**

✓ **Western Rail Initiative includes expanded passenger service to Roanoke**

✓ **I-81 CIP funds supported expansions**

WHAT HAVE WE DONE? (continued)

OPERATIONAL IMPROVEMENTS



Safety Service Patrol

- Added routes, trucks and personnel in all three districts
- First improvement to be implemented – July 2019

Traffic cameras

- About 50 new cameras installed throughout corridor
- Completed 2021
- Viewable on [511Virginia.org](https://www.511virginia.org)

Digital Message Signs

- 30 new signs throughout corridor
21 on I-81; 9 on nearby roadways
- Completed 2021



81 TRIP (Towing and Recovery Incentive Program)

- Promotes quick and safe clearance of commercial vehicle crashes
- Program expanded to I-81 in May 2021



Arterial Route Improvements

- Traffic-signal and communications upgrades on designated detour routes
- Some intersection improvements to assist with commercial vehicle movements
- Many improvements have been completed; the rest will be done in 2025

Is It Working?

The first five years of the I-81 CIP offer encouraging signs that it is improving safety and traffic flow along the 325-mile corridor in Virginia.

Flashing chevron signs, which warn of challenging curves, were among the first improvements to be completed. The flashing chevrons have been operational since late 2019 in eight locations throughout the VDOT Districts - Bristol, Salem and Staunton.

The signs have been effective, according to crash data from the three-year time periods before and after their installation. On I-81 southbound in Shenandoah County near Mount Jackson, lane-departure crashes have been reduced by 43%. At a series of three curves near the Botetourt/Rockbridge County line, lane-departure crashes on northbound I-81 have fallen by 44%.

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Flashing Chevrons

Shenandoah County

Mile Marker 272.7 - 271.8, Southbound

One curve | Installed September 2019

-43% reduction in lane-departure crashes in the curve

Botetourt/Rockbridge Counties

Mile Marker 172.9 - 175.5, Northbound

Three curves | Installed September 2019

-44% reduction in lane-departure crashes in the three curves



Flashing chevrons at work in Wytheville

Is It Working? (continued)

Operational improvements are also helping shorten the delays caused by crashes and other incidents involving commercial vehicles. VDOT expanded its Towing and Recovery Incentive Program (TRIP) to I-81 in spring 2021. Roadway-clearance time has averaged 27 minutes faster since the program was put in place.

Those minutes are crucial. Until an incident is cleared, closed travel lanes create unwanted delays for every driver – and the potential of secondary crashes as faster-moving traffic approaches slowed or stopped vehicles.

I-81 CIP widening projects will begin opening to traffic by 2026, and measuring their effectiveness will require several years of data. But these projects will certainly benefit the corridor, says Program Delivery Director Dave Covington. “Additional lanes and wider shoulders help ease congestion, give drivers more confidence, and offer more room to react to sudden changes in traffic.”



I-81 TRIP working in Augusta County



I-81 TRIP response



The People Behind the Projects: Ben Mannell, Transportation and Mobility Planning

Meet some of the VDOT team members who offer expertise, dedication, and innovative thinking to the I-81 CIP. Our Summer 2024 profile is Ben Mannell, Assistant Director of VDOT's Transportation and Mobility Planning Division. Ben served as VDOT's Project Manager for the I-81 Corridor Improvement Plan, a 2018 study that included in-depth traffic analysis and a series of public meetings throughout the corridor.

How did the I-81 CIP get started, and what was your role in it?

General Assembly legislation directed the Commonwealth Transportation Board (CTB) to develop and adopt the I-81 CIP, following an examination of the entire corridor to identify needed improvements and methods of financing them. I believe the legislation intended to apply a performance-based planning approach to identifying the most cost-effective solutions to top safety and congestion areas along the corridor, and to seek public support for the improvements. Legislators also wanted to learn about options for dedicated revenue to fund identified improvements. The effort really began in May 2018 under the umbrella of the Office of Intermodal Planning and Investment (OIPI), with VDOT serving as the study lead with support from the Virginia Department of Rail and Public Transportation (DRPT).

What have been some of the greatest challenges for improving I-81?

Topography and the high percentage of truck traffic were two significant factors. I-81 does not have the same volume of traffic as some of the more urban interstates. However, when you incorporate mountainous terrain and a high volume of trucks, congestion and safety quickly become issues.

Funding for delivering the improvements was also a challenge. I-81 is approximately 325 miles in Virginia – our longest stretch of interstate. VDOT had maintained and operated the interstate since the first sections opened in the late 1950s, but there had been limited expansion over that time period. Funding limitations were one of the primary factors. We built a case for action on the corridor by taking a stepwise approach using performance measures as well as feedback from the public on where key problems were located; developing solutions to specifically address those issues; and finally identifying options for dedicated funding to implement those solutions.

Why is this effort so important?

This effort served as a template for how to conduct and develop subsequent interstate corridor studies. We looked at everything from operations to transit and roadway capital improvements. We used a performance-driven process with a public-engagement component, followed that up by identifying targeted improvements, and finally applied funding to top priorities. That process provided the public and decision makers with confidence that there was a logical approach to identifying and ultimately delivering projects.

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People Behind the Projects (continued)

The success of the I-81 effort ultimately led to the creation of a dedicated funding program for all interstates: the Interstate Operations and Enhancement Program in 2021. This is intended to improve safety, reliability, and travel flow along interstate highway corridors in the Commonwealth through the development and funding of operational and capital improvements.

What goes through your mind as you drive past I-81 construction projects and completed improvements?

Personally, I feel a sense of pride. When I first came to VDOT in the late 1990s, we were conducting studies to determine how to improve I-81. One of my first jobs was looking at traffic forecasting and balancing volumes on those early studies. Those were excellent efforts, but it was challenging to see a path forward from a revenue and financial standpoint. Now 20 years later, it feels good to be involved in helping to identify and deliver much-needed improvements along the corridor and actually seeing projects come to fruition.

As always, there is more work to be done, but what we have achieved feels like major progress.

Is the eventual goal to have at least three lanes in each direction? If not, why not?

I know many folks would really like to have that, but we have to work within the given financial constraints. That said, there is a dedicated revenue stream directed to the corridor now, and that funding will remain in place as long as it is supported by the public and the General Assembly. That funding will go towards future 81 corridor improvements. We are delivering major widenings in each of the metro areas of the corridor. In the next five years, the public is really going to see some dramatic improvements. Over time, I think you will see more of the corridor become three lanes in each direction. Continuing to use the performance-based approach we have in place helps to build trust with the public and decision makers. We're following a logical, data-driven process to address the needs.



I-81 Corridor in Roanoke County

Making an Impact



Virginia has made a major commitment to the I-81 corridor to enhance safety and reliability while supporting job growth and economic development. Hundreds of businesses, local governments, colleges and universities rely on the interstate as a critical lifeline.

The I-81 Corridor Improvement Plan, completed in late 2018, reported that 42% of Virginia's commercial-truck traffic is on I-81, the highest percentage of any interstate in the Commonwealth. Around the same time, a report from the American Road & Transportation Builders Association (ARTBA) noted that a fourth of all manufacturing jobs in Virginia are found along the I-81 corridor.

The Roanoke area is home to many of those manufacturers who rely on the interstate to receive materials and transport finished products. "Transportation efficiency and safety are critical to businesses looking to establish or expand operations," says Roanoke County Economic Development Director Megan Baker. "Investing in I-81 improvements can have long-lasting benefits for economic development, job creation and quality of life."

Frederick County says a thoughtfully planned and maintained roadway network is essential for businesses to thrive in their community. "The Board of Supervisors was very active and engaged during the development of VDOT's I-81 Corridor plan," says Vice Chair Judith McCann-Slaughter. "The board continues to advocate for those projects to be done as soon as possible to meet growing transportation challenges in our area."

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Making an Impact (continued)

The ARTBA report projected that a \$2 billion investment in I-81 improvements would generate more than \$4.3 billion in business output, wages and tax revenue along the corridor. The estimated economic impact includes more than 15,000 jobs – at least half of them outside the construction industry.

Higher education is among the sectors that benefit from the interstate. Emory & Henry College provides a \$96 million economic impact to southwest Virginia. The college is adjacent to I-81 exit 26 in Washington County and hopes to take advantage of that location with a new multi-sports complex and equestrian center.

Jennifer Pierce, Vice President for External Affairs at Emory & Henry, welcomes interstate construction projects and operational improvements. “I-81 is essential to the prosperity of Emory & Henry,” Pierce says. “Our convenient campus location just off the interstate is very appealing to families and visiting sports teams.”



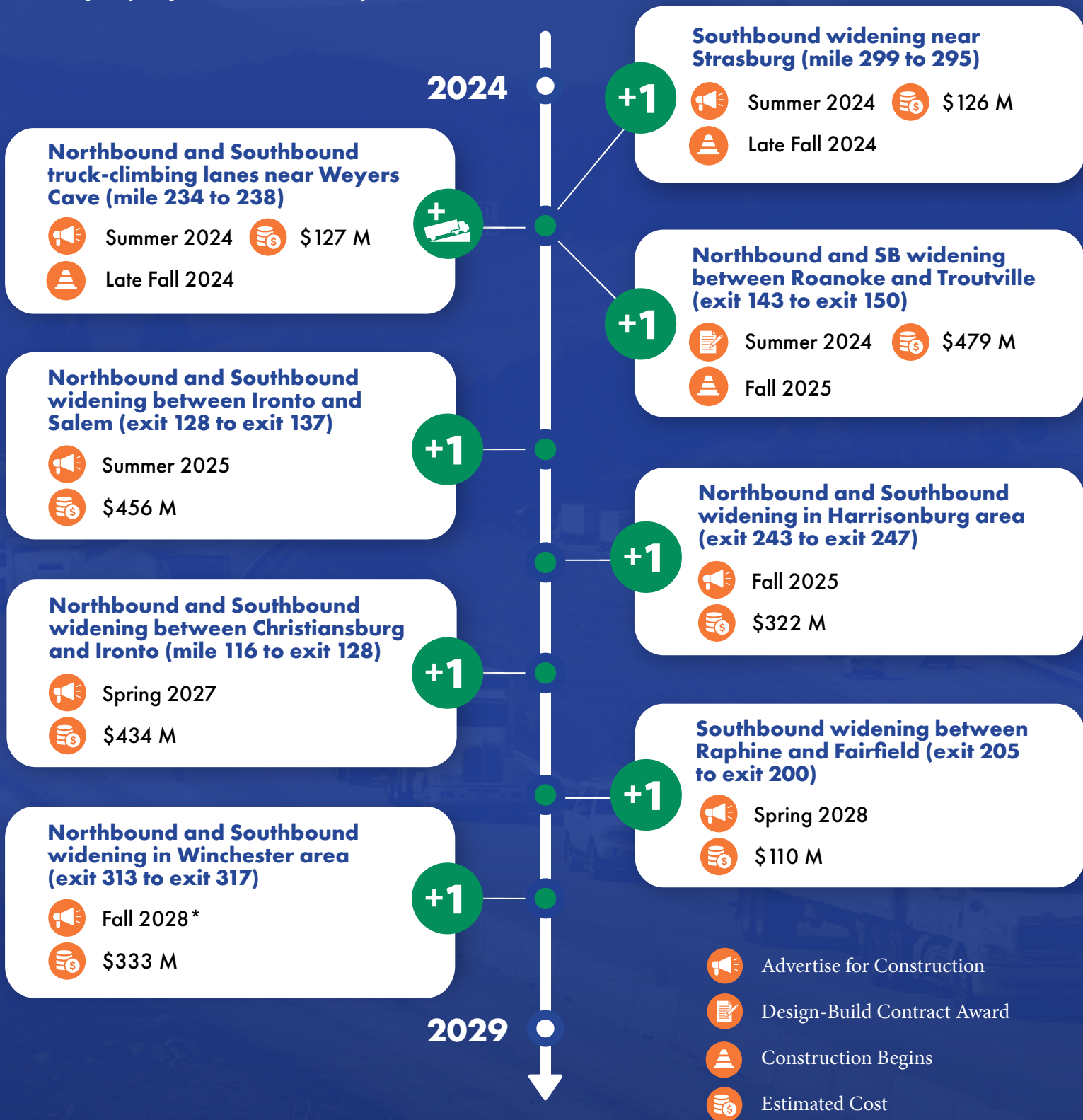
Commerce on I-81



Construction on I-81

WHAT'S NEXT?

Major projects on the way



*schedule dependent on funding



Keep in Touch

Have a question or comment regarding the I-81 CIP? Connect with VDOT’s Improve81 communications team!

CONTACT THE VDOT CUSTOMER SERVICE CENTER (24/7/365)

- 

VDOT Customer Service app:
<https://my.vdot.virginia.gov/>
- 

vdotinfo@vdot.virginia.gov
- 

1-800-FOR-ROAD
(1-800-367-7623)

An agent will answer your questions and/or forward your questions and comments with contact information you provide to the appropriate I-81 CIP team member.

CONNECT WITH US

For access to I-81 VDOT district Twitter feeds, regional 511 traffic feeds, overall district news and district traffic alerts, visit improve81.org and click on “Contact Us”.

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