

IMPROVE 81

Spring 2023

81 INSIDER

Improving Parallel Paths

The I-81 Corridor Improvement Program (CIP) includes dozens of projects that are not on the interstate. They're operational enhancements on parallel highways such as Route 11, Route 19 and Route 460.

VDOT and several contractors are steadily working their way through \$30 million worth of these projects. They include technology and communications upgrades for more than 180 traffic signals, which help maximize green-light time for motorists who have to divert from I-81. Other improvements include new digital message signs (DMS) and closed-circuit cameras that stream live on 511Virginia.org.


"These projects help minimize congestion when there are incidents on I-81," said Kunal Kothawade of the VDOT Staunton District traffic engineering division. "DMS will offer travelers vital information before they get on the interstate so they can avoid traffic."

Fiber-optic cable connectivity will help VDOT establish fast and reliable communication with these message boards, traffic signals and cameras."

Current and Upcoming Projects in VDOT's Staunton District

- Traffic signal upgrades, new DMS boards and traffic cameras near four interchanges in Augusta County and exit 313 in Frederick County. A contract was awarded in February 2023, and construction should start in spring or summer 2023.
- Technology and communication upgrades at five signals near exit 240 in Rockingham County and three signals near exit 323 in Frederick County. Construction is scheduled to begin in spring 2023.
- Technology and communication upgrades at five intersections near exit 317 in Frederick County. Construction should start in late 2023 or early 2024.
- Technology and communication upgrades on Route 250 near I-81 exit 222 were completed in early 2023. Similar enhancements are scheduled for spring 2023 at intersections near exits 313 and 315 in Frederick County.

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Contractors install a new wireless link to enhance communication among traffic signals near I-81 in the Winchester area

Improving Parallel Paths (continued)

Current and Upcoming Projects in VDOT's Salem District

- Recently completed signal and communication upgrades at six intersections on Route 11 and Route 419 in Roanoke County.
- Technology and communication improvements at 26 traffic signals in the cities of Salem and Roanoke. Construction began in January 2023 and is scheduled for completion in December 2023.
- Fifty traffic signals in the towns of Christiansburg, Radford, Pulaski and Dublin. Construction on these technology and communication upgrades should start in summer 2023 and take about two years to complete.

“These upgrades will allow us to make light changes remotely and immediately upon the start of congestion,” said Salem District Traffic Engineer Jenn Robertson. “We will also be able to have pre-determined signal timings ready so that as soon as an incident happens, the signals will start their new timing before the traffic has a chance to back up too much.”

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Contractors install conduit at a busy Roanoke intersection along a detour route for nearby I-81. New video-detection devices and communications lines improve signal timing and coordination.

Improving Parallel Paths (continued)

Bristol District projects include recently completed upgrades at 16 VDOT-maintained traffic signals along the I-81 corridor between exit 5 (Bristol) and exit 80 (Fort Chiswell).

“We added equipment that detects emergency response vehicles and upgraded the vehicle detection technology,” said VDOT Bristol Assistant District Administrator for Operations Brian Holt. “Equipment maintained by the localities will receive similar upgrades as well as updates to traffic signal cabinets and communications technology.”

In addition to the parallel route improvements, the I-81 CIP has already brought about 50 cameras and 30 DMS boards to the interstate. Other operational enhancements also include more Safety Service Patrols, the I-81 Towing and Recovery Incentive Program (81TRIP), and intersection turning-radius improvements near three interchanges in Rockbridge County.

Current and Upcoming Projects in VDOT's Bristol District

- Improvements at 24 signals in the city of Bristol and town of Wytheville. Construction is expected to begin in spring or summer 2023.
- Upgrades for 24 signals in the towns of Marion and Abingdon. This project is scheduled to be advertised in spring 2023, with construction to follow later in the year.



Three adjacent traffic signals at exit 80 in Wythe County recently received video-detection and communications upgrades.



The People Behind the Projects: Alex Vandyke

Meet some of the team members who offer expertise, dedication and innovative thinking to the I-81 Corridor Improvement Program (CIP).

Alex Vandyke is a senior transportation engineer at the VDOT Salem District who has been a part of the design process for several I-81 CIP projects.

How have you been involved with the I-81 CIP?

I am a part of the Salem District's I-81 Project team and became involved with the CIP soon after its creation. The first project I had a little part of was the ramp extensions at exit 89 in Pulaski County. I helped oversee the development of the widening project that is under construction now from exit 137 to 141, and the Troutville rest area ramp extensions that just wrapped up. Our team is currently working on the widening project from exit 143 to 150, and we are looking into the northbound widening project from 128 to 137.

My part has included tasks such as reviewing plans, coordinating meetings, speaking with members of the public, assisting in the development of contracts and helping keep the projects moving forward.

How will these projects benefit drivers on the interstate?

After all these projects are complete, interstate drivers should experience less congestion as they travel through the greater Roanoke area. With less congestion, travel times along the corridor should be more stable thus making it easier for travelers to know when they will get to their destination. We also design these projects with safety in mind. Upon completion we anticipate fewer crashes,

and when crashes do occur their effects should be lessened.

Describe how working on the I-81 CIP differs from other projects.

The size and complexity of the I-81 projects have been different than many of the projects I've worked on in the past. I used to work in traffic engineering where I managed smaller maintenance projects like replacing pavement markings and upgrading guardrails. They were relatively simple and quick to develop, but the I-81 projects are much more involved with many details. The design-build delivery method is also new to me. I have definitely learned so much!

What do you look forward to most about the changes that are happening on I-81?

I look forward to the interstate being more reliable. I don't drive it every day but when I do, I'll check 511Virginia.org or Google Maps to look at traffic conditions to see if there are any incidents and to determine if I need to find another route. I'd imagine most of the daily I-81 users are doing this as well. In the future, I'm hoping there will be less need to be concerned about traffic conditions before a trip.

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The People Behind the Projects: Alex Vandyke (continued)

What has been the biggest challenge of your involvement with the I-81 CIP?

The biggest challenge has been trying to keep up with all of the different – and moving – pieces on these very large projects. Every VDOT section (Environmental, Materials, Construction, Traffic Engineering, etc.) is involved, and many of the tasks require input from multiple people. There is also an interdependency between various permits, certifications and approvals, so trying to keep track of everything is critical to the success of the projects.

What have you enjoyed the most about working on the I-81 CIP?

For the same reason that it is challenging. It has been enjoyable to have an opportunity to broaden my knowledge and learn more about how a large project comes together. I've also enjoyed getting to work with a wider group of VDOT and consultant staff as well as have opportunities to talk with citizens about the upcoming work. It is also satisfying to know that these projects should benefit Virginia for years to come.

Construction Updates

Staunton District

Contractors have been taking soil and rock samples in the median at I-81 mile marker 237 near the Augusta-Rockingham county line. This geotechnical work is part of the engineering and design process for new truck-climbing lanes, which are scheduled for construction beginning in 2025.

Bristol District

Contractors are extending the southbound I-81 acceleration lane at exit 17 in Abingdon (Washington County). This will help motorists reach interstate speed before merging with traffic. It is part of an interchange improvement project jointly funded by the I-81 CIP and Virginia's SMART SCALE program.



Geotechnical work for future truck-climbing lanes

Phillips Construction LLC was awarded a \$13 million contract for the project, which should be complete in spring 2023.

In Smyth County along northbound I-81, W-L Construction & Paving has a \$7.6 million contract to build a new truck-climbing lane.

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Contractors working to extend the acceleration lane to southbound I-81 at exit 17

Construction Updates (continued)

It is about 1.3 miles long, just north of exit 39 in the Seven Mile Ford area. Construction began in fall 2022 and is scheduled for completion in spring 2024. Most work takes place behind concrete barriers along the right shoulder, but northbound drivers should be alert for heavy equipment entering and exiting the work zone.

Truck-climbing lanes enhance safety and improve traffic flow in areas of I-81 with steep grades, where commercial vehicles often slow to well below the speed limit. The additional lane on this project will extend about 1,000 feet beyond the crest of the hill, giving trucks room to regain adequate speed before merging back into the main travel lanes.

W-L Construction & Paving is also extending the southbound I-81 acceleration lane at exit 47 near the town of Marion. When this project is complete in spring 2023, motorists will have additional space to reach interstate speed before merging with traffic.

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A new acceleration lane onto southbound I-81 at exit 47 should be complete in spring 2023



Earthwork for a new truck-climbing lane along northbound 81 in Smyth County

Construction Updates (continued)

Salem District

The first widening project in the I-81 CIP is about a fourth of the way through its four-year construction process. Design-build contractor Archer Western Construction LLC is widening northbound and southbound I-81 between exit 137 and exit 141 in the Salem area.



Contractors building a barrier between northbound and southbound I-81 in Roanoke County

Near the northern end of the project, contractors are building the permanent median wall between northbound and southbound traffic. Crews have also started to replace the bridges over Route 112 (Wildwood Road), Route 635 (Goodwin Avenue) and Route 619 (Academy Street). Stormwater drainage work is about 70 percent complete.

I-81 motorists should be alert for 24/7 shoulder closures, nighttime lane closures and construction vehicles moving in and out of the work zone in several areas. In summer 2023, interim completion of some road and bridge work will allow traffic to shift toward the median. Final completion of the \$179 million project is scheduled for early 2026.

The Troutville Rest Area along I-81 southbound in Botetourt County reopened in December 2022, and contractors finished up

final construction work over the winter. The rest area now has extended deceleration and acceleration lanes to enhance safety, and a dozen additional parking spaces for commercial trucks.






The on-ramp from the Troutville Rest Area has been extended 2,100 feet



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

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, go to [Improve81.org](https://www.improve81.org), look at the website menu bar then select "Contact Us" and scroll to the bottom of the page.

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