



COMMONWEALTH of VIRGINIA

Commonwealth Transportation Board

W. Sheppard Miller, III
Chairperson

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Agenda item # 10

RESOLUTION OF THE COMMONWEALTH TRANSPORTATION BOARD

December 4, 2023

MOTION

Made By: Dr. Smoot **Seconded By:** Mr. Fowlkes

Action: Motion Carried, Unanimously

Title: Approval of Interstate 81 Corridor Improvement Program Progress Report and Support for Future Actions Relating to I-81 Improvement Projects

WHEREAS, pursuant to Chapter 743 of the 2018 Acts of Assembly, the General Assembly directed the Commonwealth Transportation Board (Board), to study financing options for improvements to Interstate I-81 (I-81) and, with support from the Office of Intermodal Planning and Investment, to develop and adopt an I-81 Corridor Improvement Plan (Plan); and

WHEREAS, on December 5, 2018, the Board adopted the Plan, which identified targeted improvements for potential financing and evaluated such improvements using the statewide prioritization process; and

WHEREAS, Chapters 837 and 846 of the 2019 Acts of Assembly established Chapter 36 (§ 33.2-3600 *et seq.*) of Title 33.2 of the *Code of Virginia*, creating the I-81 Corridor Improvement Fund (Fund), and directing the Board to establish the I-81 Committee (Committee), to adopt an I-81 Corridor Improvement Program (Program), to update the Program by July 1st of each year and to report to the General Assembly the status and progress of implementation of the Program (I-81 Corridor Improvement Program Progress Report) by December 15th of each year; and

WHEREAS, pursuant to § 33.2-3603, the Board established the I-81 Committee on May 15, 2019; and

WHEREAS, pursuant to § 33.2-3602, the I-81 Corridor Improvement Program shall, at a minimum:

1. Allocate year by year the revenues, if any, from the Fund and bond proceeds, if any, backed by the Fund to projects and strategies identified in the Plan adopted by the

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Board in 2018 and as may be adopted from time to time;

2. Include a financing plan to support such allocation; and
3. Include a schedule for all new projects and strategies identified in the Plan adopted by the Board; and

WHEREAS, prior to the adoption of such Program, the Board shall review the recommendations of and consult with the I-81 Committee; and

WHEREAS, pursuant to § 33.2-3602, the I-81 Corridor Improvement Program Progress Report must include, at a minimum:

1. The safety and performance of the Interstate 81 Corridor, including the number of incidents, the average duration of incidents, the number and average duration of incidents involving lane closures, and the person-hours of delay along the Interstate 81 corridor;
2. An assessment of the effectiveness of the operational strategies and capital projects implemented and funded through the Program;
3. The status of capital projects funded through the Program; and
4. The current and projected balances of the Fund.

WHEREAS, the I-81 Committee received a briefing on I-81 Corridor Improvement Program progress on October 2, 2023 and that information has been captured in the 2023 I-81 Corridor Improvement Program Annual Progress Report; and

WHEREAS, the I-81 Corridor Improvement Program Progress Report completely satisfies the above-referenced requirements set forth in § 33.2-3602; and

WHEREAS, the I-81 Corridor Plan initially identified 106 projects for consideration and prioritized 64 projects for funding, in addition to multimodal and operational improvements with projects to be implemented through 2033 based on the current 2023 revenue assumptions and debt model; and

WHEREAS, two of the originally prioritized projects remain to be added to future Six-Year Improvement Programs (SYIP), pending sufficient allocations to fully fund them within the six-year window, as required by § 33.2-214 E. of the *Code of Virginia*:

- UPC 116196-- Add northbound lane from MM 116 to MM 128 in the Salem District
- UPC 116281-- Widen to 3 lanes northbound and southbound from MM 313 to MM 317 in the Staunton District; and

WHEREAS, additional projects were included in the original Corridor Plan, but not prioritized for funding: and

WHEREAS, southbound widening between Exits 137 and 128 in the Salem District would add a third lane on the southbound side of I-81, and while not yet included in the program for funding, could realize an anticipated savings of \$75 million from construction and mobilization if performed in parallel with the currently scheduled project (UPC 116197) for the northbound side; and

WHEREAS, on October 31, 2023, Delegate Austin, Chairman of the I-81 Advisory Committee, at the request of the Committee, requested Governor Youngkin to provide funding to support continued advancement of the following projects within the I-81 Corridor Plan:

- UPC 116196-- Add northbound lane from MM 116 to MM 128 in the Salem District
- UPC 116281-- Widen to 3 lanes northbound and southbound from MM 313 to MM 317 in the Staunton District
- Southbound widening between Exits 137 and 128 in the Salem District to be done concurrently with the northbound side widening project within the same termini (2023 estimate: \$308 million inclusive of \$75 million in savings if done concurrently with the northbound side); and

WHEREAS, at the recommendation of the Virginia Department of Transportation, the Board wishes to express its acknowledgement and support for certain actions relating to the above-referenced I-81 improvement projects.

NOW, THEREFORE, BE IT RESOLVED, the Board approves the annual I-81 Corridor Improvement Program Progress Report, attached hereto as Appendix A, as required by § 33.2-3602 of the *Code of Virginia* and directs that the report be submitted to the General Assembly by December 15, 2023, in accord with processes required for submission of such reports.

BE IT FURTHER RESOLVED, that the Board hereby acknowledges and supports:

- Inclusion of the Southbound widening between Exits 137 and 128 in the Salem District in the I-81 Corridor Improvement Plan and consideration of the Project in future updates to the Six-Year Improvement Program, the next being the FY2025-2030 Six-Year Improvement Program to be considered by the Board in June 2024, (provided that anticipated allocations are sufficient to fully fund the project through construction). It is intended that this project is advanced with the northbound side (UPC 116197), currently planned to start construction in 2025.
- Adding the remaining two projects included in the original prioritized list of I-81 projects to the Six-Year Improvement Program in the following order at such time as updated revenue assumptions and debt model support their inclusion:
 - ~ UPC 116281 Widen to 3 lanes northbound and southbound from MM 313 to MM 317 in the Staunton District
 - ~ UPC 116196 Add northbound lane from MM 116 to MM 128 in the Salem District

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CTB Decision Brief

Approval of the I-81 Corridor Improvement Program Progress Report and Support for Future Actions Relating to I-81 Improvement Projects

Issue: Chapters 837 and 846 of the 2019 Acts of Assembly established Chapter 36 (§ 33.2-3600 *et seq.*) of Title 33.2 of the *Code of Virginia*, creating the Interstate 81 (I-81) Corridor Improvement Fund (Fund), and directing the Commonwealth Transportation Board (Board) to establish the I-81 Committee; to adopt an I-81 Corridor Improvement Program (Program); to update the Program by July 1st of each year; and to report to the General Assembly the status and progress of implementation of the Program (I-81 Corridor Improvement Program Progress Report) by December 15th of each year. Approval by the Board of the I-81 Corridor Improvement Program Report for 2023 is sought. In addition, acknowledgement and support of the Board is sought for future actions relating to I-81 Improvement Projects.

Facts: In enacting Chapter 743 of the 2018 Acts of Assembly, the General Assembly of Virginia directed the Board to study financing options for improvements to I-81, and with assistance from the Office of Intermodal Planning and Investment (OIPi), to develop and adopt an I-81 Corridor Improvement Plan (Plan). The Board approved the Plan on December 5, 2018, which identified targeted improvements for potential financing and evaluated such improvements using the statewide prioritization process.

The 2019 Acts of Assembly established the Fund, the Program, and the I-81 Committee. The Act also requires the Board to update the Program by July 1 of each year and to report to the General Assembly on the status of implementation of the Program by December 15 of each year.

Sources of revenues initially dedicated to the Fund include a newly-established truck registration fee, an I-81 corridor regional fuels tax, and statewide diesel and road taxes. Funds to support the Program became available July 1, 2019.

In 2020, the General Assembly passed legislation that limited the imposition of regional fuels taxes to only those localities that I-81 passes through. This adjustment to the original fuel tax mechanism is not anticipated to impact the financial health of the Fund. Furthermore, as per the 2020 Interstate Operations and Enhancement Program (IOEP) omnibus legislation, I-81 receives an allocation of funds from the IOEP equal to the ratio of vehicle miles travelled (VMT) on I-81 by vehicle Class 6 or higher, to total VMT by vehicle Class 6 or higher on all Interstate highways. Beginning in FY2021, the truck registration fees and road tax revenue from the Program were dedicated to the Commonwealth Transportation Fund. Adoption of the FY24-FY29 SYIP included a plan for financing the Program and estimated proceeds from I-81 bonds and Transportation Infrastructure Finance and Innovation Act (TIFIA) financing.

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Approval of the I-81 Corridor Improvement Program Progress Report and Support for Future Actions Relating to I-81 Improvement Projects

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The current and projected allocations of the Program based on the FY2024-2029 Six-Year Improvement Program, is reflected below:

	FY24*	FY25	FY26**	FY27**	FY28	FY29	Total
Total Available	\$1,209.2	\$204.0	\$487.3	\$470.3	\$224.3	\$234.9	\$2,830.1

*FY24 and prior years

** Allocations include planned debt financing

Moneys in the Fund shall only be used for capital, operating, and other improvement costs identified in the Program. Of the 64 capital projects included in the I-81 Corridor Improvement Plan and Program, 34 have been completed. The FY24-29 Six-Year Improvement Program was adopted by the Board on June 21, 2023, and included both operational improvements and 46 of the 48 remaining capital improvement projects identified in the Plan.

Pursuant to § 33.2-3602 (A), the I-81 Corridor Improvement Program shall, at a minimum:

1. Allocate year by year the revenues, if any, from the Fund and bond proceeds, if any, backed by the Fund to projects and strategies identified in the Plan adopted by the Board in 2018 and as may be adopted from time to time;
2. Include a financing plan to support such allocation; and
3. Include a schedule for all new projects and strategies identified in the Plan adopted by the Board.

Prior to the adoption of the Program, the Board shall review the recommendations of and consult with the I-81 Committee.

Pursuant to § 33.2-3602 (D), the I-81 Corridor Improvement Program Progress Report must include, at a minimum:

1. The safety and performance of the Interstate 81 corridor, including the number of incidents, the average duration of incidents, the number and average duration of incidents involving lane closures, and the person-hours of delay along the Interstate 81 corridor;
2. An assessment of the effectiveness of the operational strategies and capital projects implemented and funded through the Program;
3. The status of capital projects funded through the Program; and
4. The current and projected balances of the Fund.

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The current I-81 Corridor Improvement Program Progress Report reflects the minimum requirement as required by § 33.2-3602.

The I-81 Committee, which includes Board members of the Bristol, Salem and Staunton construction districts, received briefings on the status of the Program and met on October 2, 2023. The I-81 Committee was provided the draft I-81 Corridor Improvement Program Progress Report for review and comment.

The Corridor Plan initially identified 106 projects for consideration and prioritized 64 projects for funding, in addition to multimodal and operational improvements, with projects to be implemented through 2033 based on the current revenue assumptions and debt model.

Two of the originally prioritized projects remain to be added to future Six-Year Improvement Programs (SYIP), pending sufficient allocations to fully fund them within the six-year window, as required by § 33.2-214 E. of the *Code of Virginia*:

- UPC 116196—Add northbound lane from MM 116 to MM 128 in the Salem District
- UPC 116281-- Widen to 3 lanes northbound and southbound from MM 313 to MM 317 in the Staunton District; and

Further, additional projects were included in the original Corridor Plan, but not prioritized for funding. These additional projects included Southbound widening between Exits 137 and 128 in the Salem District.

On October 31, 2023, Delegate Austin, Chairman of the I-81 Advisory Committee, at the request of the Committee, requested Governor Youngkin to provide funding to support continued advancement of the following projects within the I-81 Corridor Plan:

- UPC 116196 Add northbound lane from MM 116 to MM 128 in the Salem District
- UPC 116281 Widen to 3 lanes northbound and southbound from MM 313 to MM 317 in the Staunton District
- Southbound widening between Exits 137 and 128 in the Salem District to be done concurrently with the northbound side widening project within the same termini (2023 estimate: \$308 million inclusive of \$75 million in savings if delivered concurrently with the northbound side, UPC 116197)).

Recommendations: Approval is recommended for the submission of the annual I-81 Corridor Improvement Program Progress Report, attached hereto as Appendix A. In addition, it is recommended that the Board acknowledge and support:

- Inclusion of the Southbound widening between Exits 137 and 128 in the Salem District in the I-81 Corridor Improvement Plan and consideration of the Project in future updates to the Six-Year Improvement Program, the next being the FY2025-2030 Six-Year Improvement Program to be considered by the Board in June 2024, (provided that anticipated allocations are sufficient to fully fund the project through construction) It is intended that this project is

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Approval of the I-81 Corridor Improvement Program Progress Report and Support for Future Actions Relating to I-81 Improvement Projects

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advanced with the northbound side (UPC 116197), currently planned to start construction in 2025.

Adding the remaining two projects included in the original prioritized list of I-81 projects to the Six-Year Improvement Program in the following order at such time as updated revenue assumptions and debt model support their inclusion:

- ~ UPC 116281 Widen to 3 lanes northbound and southbound from MM 313 to MM 317 in the Staunton District
- ~ UPC 116196 Add northbound lane from MM 116 to MM 128 in the Salem District

Action Required by CTB: The Board will be presented with a resolution for a formal vote to approve the annual I-81 Corridor Improvement Program Progress Report and to report to the General Assembly regarding the status and progress of implementation of the Program by December 15, 2023. In addition, the resolution will provide the Board's acknowledgement and support for the recommended actions relating to the above-referenced I-81 Projects.

Result, if Approved: If approved, the I-81 Corridor Improvement Program Progress Report will be submitted to the General Assembly. Further, acknowledgement and support of the Board will be documented for (i) inclusion of the Southbound widening between Exits 137 and 128 in the Salem District in the I-81 Corridor Improvement Plan and consideration of the Project in future updates to the Six-Year Improvement Program, the next being the FY2025-2030 Six-Year Improvement Program to be considered by the Board in June 2024 (provided that anticipated allocations are sufficient to fully fund the project through construction), (ii) include this project with the currently planned northbound side in advancement to construction and (iii) adding the remaining two projects included in the original prioritized list of I-81 projects to the Six-Year Improvement Program in the following order at such time as updated revenue assumptions and debt model support their inclusion:

- ~ UPC 116281 Widen to 3 lanes northbound and southbound from MM 313 to MM 317 in the Staunton District
- ~ UPC 116196 Add northbound lane from MM 116 to MM 128 in the Salem District

Options: Approve, Deny, or Defer.

Public Comments/Reactions: None

I-81 PROGRAM PROGRESS REPORT

December 2023

Prepared for:



Prepared by:



Commonwealth
Transportation Board



INTRODUCTION

In April 2019, the Virginia General Assembly enacted legislation that Governor Ralph Northam signed into law establishing the Interstate 81 (I-81) Corridor Improvement Program and Fund, which advances the projects identified in the I-81 Corridor Improvement Plan (the Plan) for implementation. The Plan was approved by the Commonwealth Transportation Board (the Board) in December 2018 following an evaluation of the corridor. Chapters 837 and 846 of the 2019 Virginia Acts of Assembly specify the roles and responsibilities of the Board and the I-81 Committee (the Committee) to enact the I-81 Corridor Improvement Program (the Program) and Fund (the Fund).

LEGISLATIVE REQUIREMENTS

Section 33.2-3602 of the legislation requires the Board, in consultation with the Committee, to report to the General Assembly by December 15 of each year “regarding the status and progress of implementation of the Program.” This report is mandated to include:

- The safety and performance of the I-81 corridor using the following performance measures:
 - crash frequency and severity per mile, expressed in equivalent property damage only (EPDO) crashes
 - person-hours of delay per mile
 - frequency of lane-impacting incidents per mile
 - duration of a lane closure
- An assessment of the effectiveness of the operational strategies and capital projects implemented and funded through the Program
- The status of capital projects funded through the Program
- The current and projected balances of the Fund.

House Bill 2718 (Chapter 837) introduced by Delegates Steve Landes and Terry Austin, and Senate Bill 1716 (Chapter 846), introduced by Senators Mark Obenshain and William Carrico, established the I-81 Corridor Improvement Program, Fund, and Committee. Governor Ralph Northam announced amendments in March 2019, providing dedicated annual funding to the corridor, estimated at \$103 million in fiscal year 2020 and growing to an estimated \$163 million in fiscal year 2025. These funds will support the \$2 billion improvement program (estimate as of the 2018 Plan). The revenues for the Fund were provided through the creation of a new truck registration fee as well as the establishment of an I-81 corridor regional fuels tax and statewide diesel and road taxes.

During the 2020 General Assembly, House Bill 1414 (Chapter 1230) and Senate Bill 890 (Chapter 1275) included the following changes to the Program and Fund:

- Authorized the sale and issuance of bonds with an aggregate principal amount of \$1 billion
- Converted the regional fuels tax to a cents per gallon tax with the opportunity for annual growth based on the Consumer Price Index

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- Amended the regional fuels tax to only include localities through which I-81 passes or cities wholly encompassed by a county through which I-81 passes
- Allocated additional funding for the corridor through the Interstate Operations and Enhancement Program. Previously provided statewide revenue sources are committed to the Commonwealth Transportation Fund beginning in fiscal year 2021.

TIMELINE OF EVENTS

2021 I-81 Corridor Improvement Report submitted to the General Assembly	JAN 2022		2022 I-81 Corridor Improvement Report submitted to the General Assembly	JAN 2023	
	FEB 2022	Construction of the first major widening project in the I-81 Corridor Improvement Program begins		FEB 2023	
	MAR 2022			MAR 2023	
	APR 2022		Construction of Staunton widening project between Exits 221 and 225 begins	APR 2023	
	MAY 2022			MAY 2023	Completion of the first auxiliary lane project in the I-81 Corridor Improvement Program
	JUNE 2022			JUNE 2023	
	JULY 2022		Construction of three truck climbing lanes begins	JULY 2023	Construction of two acceleration and two deceleration lane extension projects in Smyth County completed
	AUG 2022	Preliminary engineering of the Staunton widening project between Exits 221 and 225 completed		AUG 2023	
	SEPT 2022			SEPT 2023	
Construction of two acceleration lane extension projects in Rockbridge County completed	OCT 2022			OCT 2023	
	NOV 2022			NOV 2023	
	DEC 2022	Commonwealth Transportation Board approved the 2021 I-81 Corridor Improvement Program Report and sent to the General Assembly		DEC 2023	Commonwealth Transportation Board to approve the 2023 I-81 Corridor Improvement Program Report and send to the General Assembly

CURRENT AND PROJECTED BALANCES OF THE FUND

As of October 2023, the Virginia Department of Transportation (VDOT) documented the current and projected funds available and Program allocations. The current and projected six-year balances of the Fund are summarized in **Table 1**. Current revenue projections and debt assumptions support completing the original I-81 program by 2033. Estimated schedules for capital improvement projects, including completed projects, projects amended to the SYIP, and the capital improvement projects yet to be adopted into the SYIP, are available in **Appendix A** and online at www.improve81.org.

Table 1: Current Versus Projected Funds Available based on the FY 2024-2029 SYIP (in millions of dollars)

Source	Through FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	Total
I-81 Regional Fuels Tax	\$296.5	\$88.1	\$91.5	\$94.4	\$96.5	\$98.7	\$100.9	\$866.6
I-81 Allocation from IOEP	\$266.0	\$85.8	\$112.5	\$120.0	\$122.4	\$125.6	\$134.0	\$966.3
Other Sources Prior to FY 2021/ Other	\$24.6	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$24.6
Prior Year Revenue Adjustment	\$0.0	(\$1.3)	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	(\$1.3)
Interest Income	\$8.6	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$8.6
Total	\$595.7	\$172.6	\$204.0	\$214.4	\$218.9	\$224.3	\$234.9	\$1,864.8
Planned Debt for Construction	\$203.1	\$237.9	\$0.0	\$272.9	\$251.4	\$0.0	\$0.0	\$965.3
Total	\$798.8	\$410.5	\$204.0	\$487.3	\$470.3	\$224.3	\$234.9	\$2,830.1

Note: FY = Fiscal Year, IOEP = Interstate Operations and Enhancement Program

Sources: Regional Fuels Tax estimate provided by the Virginia Department of Taxation, December 2022

Interstate Operations and Enhancement Program, Commonwealth Transportation Fund Six-Year Financial Plan, June 2023

In 2020, the General Assembly passed legislation that limited the imposition of regional fuels taxes to only those localities through which I-81 passes. This adjustment to the original fuel tax mechanism is not anticipated to impact the financial health of the Fund. Furthermore, as per the 2020 Interstate Operations and Enhancement Program (IOEP) omnibus legislation, I-81 receives an allocation of funds from the IOEP equal to the ratio of vehicle-miles traveled (VMT) on I-81 by Class 6 vehicles or higher to total VMT on all interstates. Beginning in FY 2021, the truck registration fees and road tax revenue from the Program were dedicated to the Commonwealth Transportation Fund. Adoption of the FY 2022-2027 SYIP included a plan for financing the Program and estimated proceeds from I-81 bonds and Transportation Infrastructure Finance and Innovation Act (TIFIA) financing.

STATUS OF PROJECTS FUNDED THROUGH THE PROGRAM

The FY 2024-2029 SYIP was adopted by the Board on June 21, 2023, and included 30 of the 31 capital improvement projects identified in the Plan. The safety service patrol improvements identified in the Plan were implemented in July 2019. Before the end of 2020, the initial eight acceleration and deceleration lane extension projects, the eight curve improvement projects, and most of the new camera installations were completed. In 2021, the remaining camera and changeable message sign installations were completed along with the construction of three ramp extension projects in the Staunton District. Major progress was made on the extension of acceleration and deceleration lanes from 2022 to 2023 with construction completed on 12 projects during that time. In addition, the auxiliary lane project in Smyth County was completed in 2023, the first completed auxiliary lane project of the I-81 Corridor Improvement Program. A high-friction overlay project was also completed in Smyth County in 2023. **Figure 1** outlines the status of the projects as of October 2023 by project type. A table summarizing the status of individual capital improvement projects can be found in **Appendix B**.

Figure 1: Status of Projects Funded Through the Program

	Project Type	Status	Total Projects	Estimated Completion	
Capital	Widening	10	10	2033	
	Acceleration/ Deceleration Extension	25	10	35	2033
	Auxiliary Lane	1	4	5	2028
	Truck Climbing Lane	5		5	2025
	Shoulder Widening	1		1	2030
	Curve Improvements	8		8	Completed
Operations	Safety Service Patrol Expansion	1		1	Completed
	Towing and Recovery Incentive Program	1		1	Completed
	Camera Installation	42		42	Completed
	Changeable Message Sign Installation	30		30	Completed

Legend: Complete Programmed

Source: Virginia Department of Transportation, 2023

PERFORMANCE OF THE I-81 CORRIDOR

Figure 2 through **Figure 5** show how the four performance measures have changed over three multi-year periods. These figures also show the capital improvement projects that have been completed and the ones that are still underway or planned. The performance measures documented in the Plan and adopted by the Board in late 2018 were based on data through 2017. The emergence of the COVID-19 pandemic in 2020 caused a vehicle-miles traveled (VMT) reduction of 15% on I-81, while VMT returned to pre-pandemic levels in 2021 and was sustained in 2022. Therefore, data from 2020 was removed from the multi-year performance measure data periods used in this report since reduced travel on I-81 skewed the data when compared to 2019, 2021, and 2022 data. Crash data were compared between the three five-year periods: 2015-2019, 2016-2021, 2017-2022; the five-year periods of 2016-2021 and 2017-2022 are without 2020 data. A supplementary histogram displaying crash frequency and severity per mile for truck-related crashes is included in **Appendix C**. Delay and incident data were compared for the three two-year periods: 2018-2019, 2019-2021, 2021-2022. The 2019-2021 time period excludes 2020 data.

To show the effectiveness of a program of projects, the study team relied on a minimum of one year of data following the implementation of the program or project. **Table 2** through **Table 5** contain corridor-wide summaries for each two- or five-year period for the four performance measures. The performance measure data has fluctuated on a segment-by-segment and corridor-wide basis in the years since the plan was developed. The number of lane-impacting incidents lasting longer than one hour has steadily decreased as well as the number of hours of lane closure.

This decrease in incidents, lane closures, and hours of lane closures may be attributed to the implementation of the Towing and Recovery Incentive Program (TRIP), which aims to improve the response time to incidents so traffic can move again. The number of lane-impacting incidents decreased similarly between northbound and southbound traffic. However, the 11% decrease in total hours of lane closures was mainly driven by the decrease in total hours of lane closures on northbound I-81.

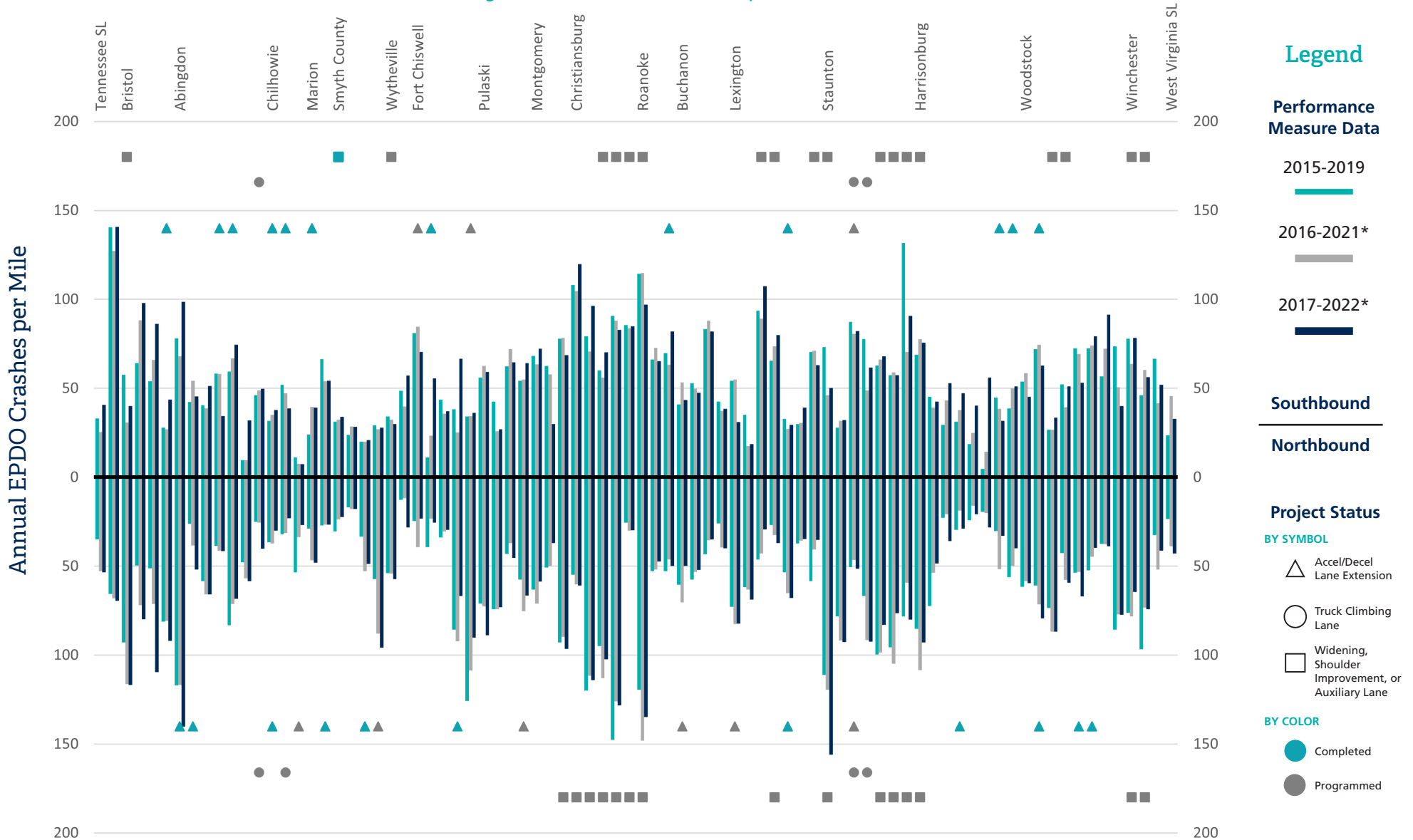
I-81 is experiencing an increase in the other two performance measures: person-hours of delay and equivalent property damage only (EPDO). Total person hours of delay increased by 3.4%, returning to levels experienced from 2018-2019. Total EPDO crashes have also increased by a similar percentage as total person hours of delay. However, most of the increase in EPDO crashes during the latest five-year data period is attributed to southbound I-81. The prevalence of work zones on I-81 has impacted the total EPDO crashes on I-81, where the total number of work zone related crashes has increased by 172% between 2019 and 2022.

In future years, it will continue to be challenging to evaluate the impact of completed construction projects on the performance measures for the following reasons.

- The data has fluctuated in the years since the Plan was developed
- Performance measure impacts of active work zones
- Performance measure data for 2020 are not reflective of a typical year due to COVID-19
- Lack of a sufficient time for projects to be implemented and to develop a performance trend

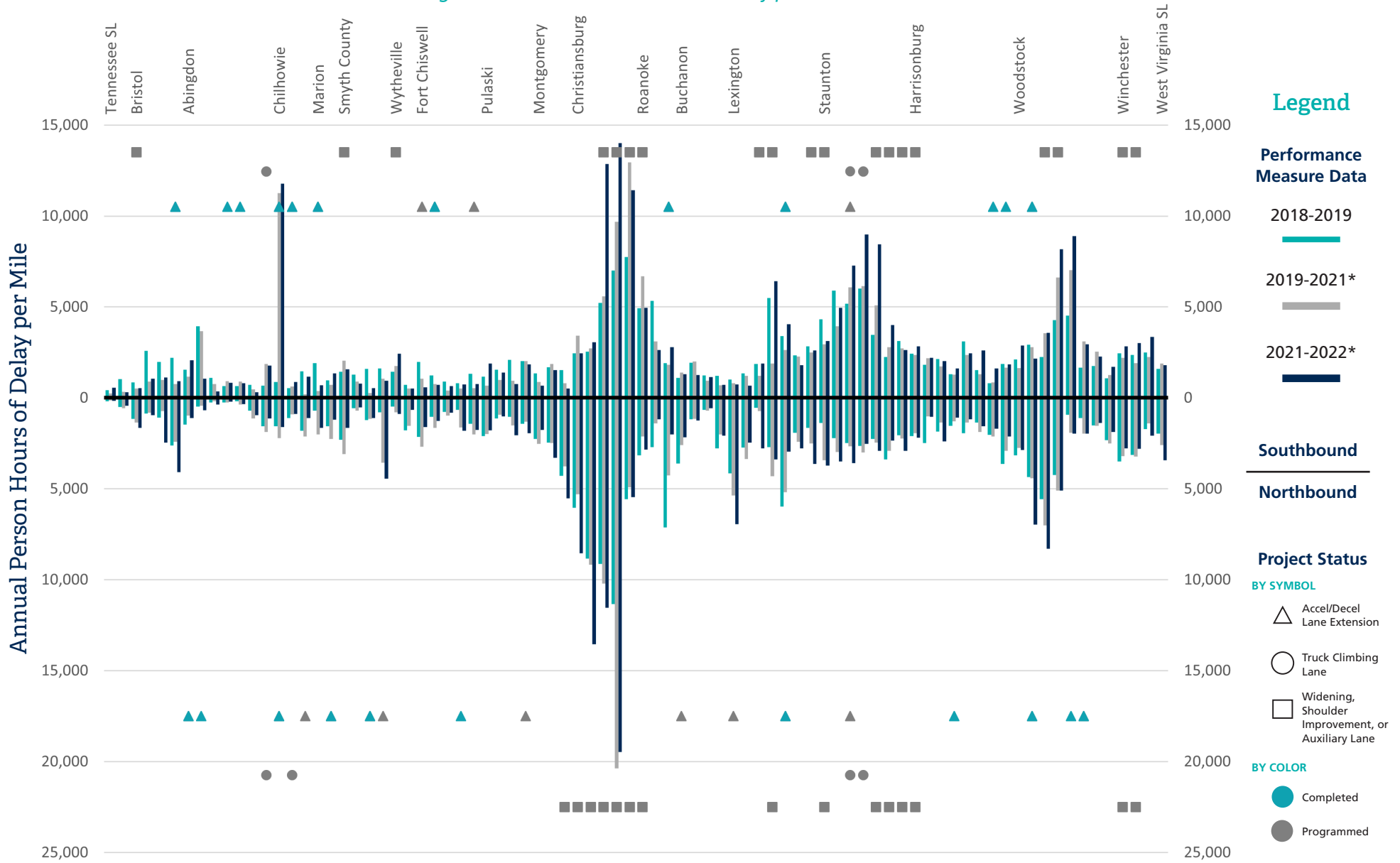
I-81 PROGRAM PROGRESS REPORT

Figure 2: Annual EPDO Crashes per Mile



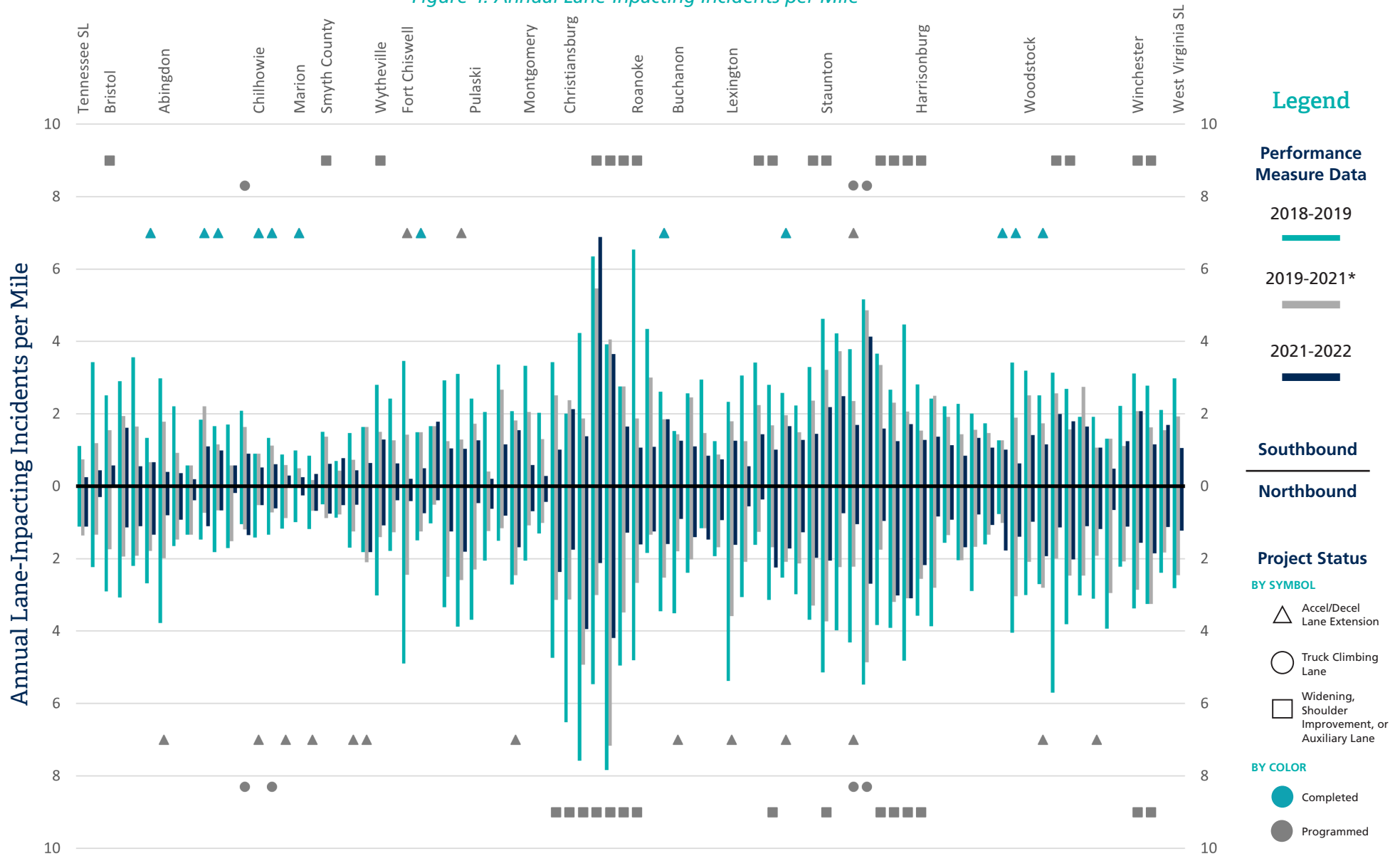
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Figure 3: Annual Person Hours of Delay per Mile



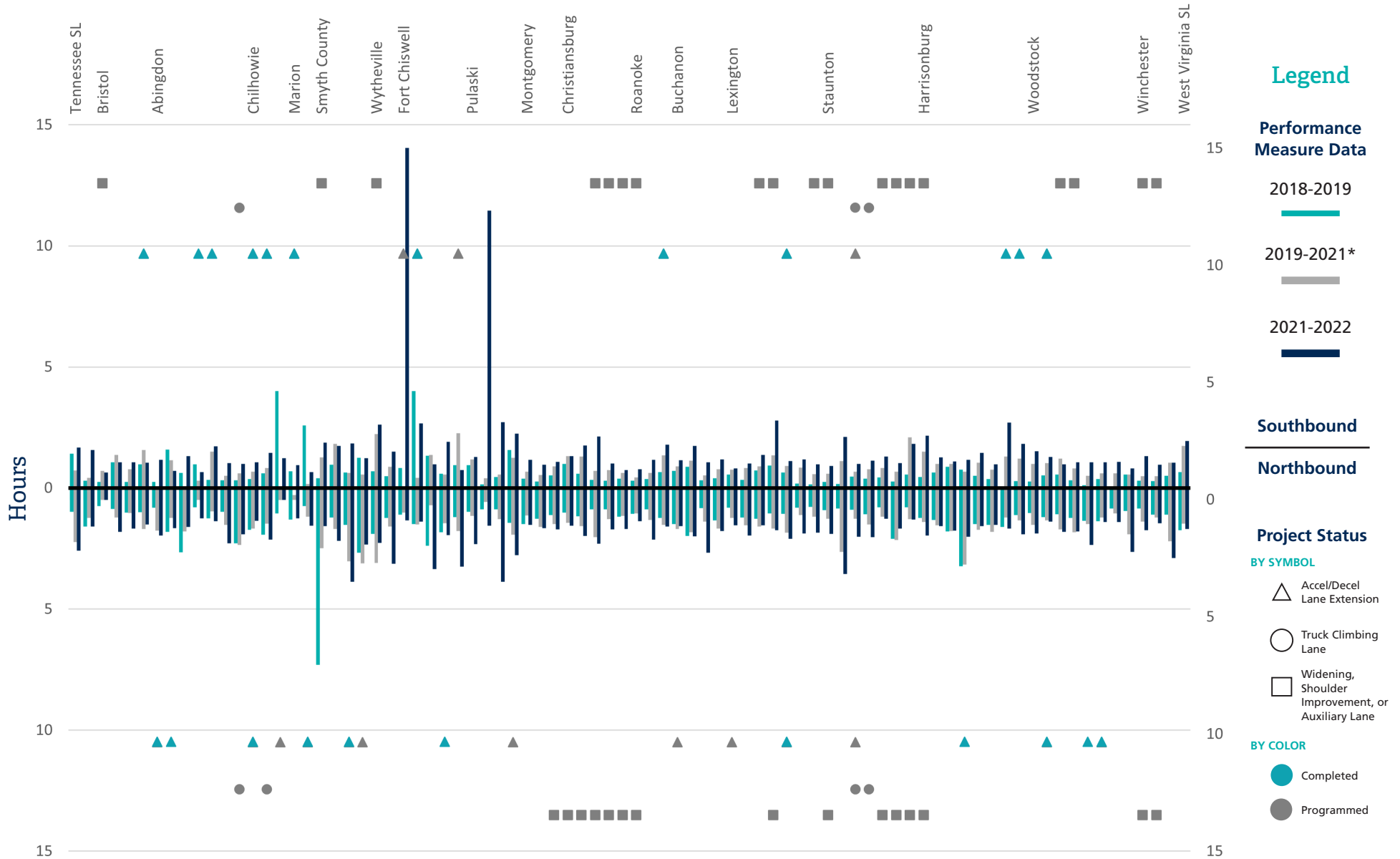
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Figure 4: Annual Lane-Inpacting Incidents per Mile



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Figure 5: Average Duration of a Lane Closure (Hours)



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Table 2: EPDO Crashes

End of Five-Year Period	Northbound	Southbound	Total	Percent Change from Previous Period
2019	49,095	50,012	99,001	-
2021*	52,519	47,880	100,399	+1.4%
2022*	52,852	50,639	103,491	+3.1%

*2016-2021 and 2017-2022 without 2020 data

Table 3: Person-Hours of Delay

End of Two-Year Period	Northbound	Southbound	Total	Percent Change from Previous Period
2019	2,116	1,471	3,587	-
2021*	1,959	1,453	3,412	-4.9%
2022	1,813	1,714	3,527	+3.4%

*2019-2021 without 2020 data

Table 4: Lane-Impacting Incidents

End of Two-Year Period	Northbound	Southbound	Total	Percent Change from Previous Period
2019	1,894	1,691	3,585	-
2021*	1,341	1,184	2,525	-29.6%
2022	820	784	1,604	-36.5%

*2019-2021 without 2020 data

Table 5: Hours of Lane Closures

End of Two-Year Period	Northbound	Southbound	Total	Percent Change from Previous Period
2019	2,329	1,812	4,141	-
2021*	1,945	1,542	3,487	-15.8%
2022	1,574	1,530	3,104	-11.0%

*2019-2021 without 2020 data

MULTIMODAL IMPROVEMENTS TO THE I-81 CORRIDOR

Along with the capital and operational improvements included in the I-81 Corridor Improvement Plan, several multimodal improvements were planned and implemented to provide bus transit and rail connections throughout the I-81 corridor. The Virginia Breeze bus system consists of four intercity bus routes, two of which run along the I-81 corridor. The Valley Flyer route travels between Blacksburg and Washington, D.C. and the Highlands Rhythm route travels between Bristol and Washington D.C. During FY 2023, the Virginia Breeze's on-time performance for the two I-81 routes was 79% and the percent of costs covered by fares (farebox recovery) was 56%.

The I-81 Multimodal Corridor Improvement Plan also includes for the expansion of passenger and freight rail in the New River Valley. FY 2023 saw record high ridership for Amtrak in Virginia and the I-81 corridor with a 27.2% increase in ridership to Roanoke compared to FY 2022. In June of 2022, negotiations were finalized with Norfolk Southern to improve the rail systems near the I-81 corridor.

The improvements include:

- Adding a second track 7 miles south of Manassas and extending the route between Roanoke and Washington, D.C. to include New River Valley
- Adding a second Amtrak train on the Roanoke Route
- Improving the Roanoke yard including a passenger bypass to improve efficiency
- Purchasing 28 miles of track that extend from Salem to New River Valley.

Construction of these improvements are expected to be complete in 2026, excluding the construction of the new train station at New River Valley. The New River Valley Amtrak station is approaching the completion of 30% engineering. Once the 30% engineering is completed, a precise timeline for the project will be developed.

COMMONWEALTH TRANSPORTATION BOARD ACTIVITIES

As of October 2023, VDOT has not delivered an I-81 Corridor Improvement Program update to the Commonwealth Transportation Board. According to the legislation, the Board must submit an annual progress report to the General Assembly by December 15.

I-81 ADVISORY COMMITTEE MEETING, OCTOBER 2023

October 2023 Advisory Committee Meeting

The I-81 Advisory Committee met in-person on October 2, 2023. The I-81 Program Director presented an overview of the I 81 Corridor Improvement Program and the status of operational and capital projects. The DRPT Chief of Public Transportation briefed the Committee on the operation of the Virginia Breeze

I-81 PROGRAM PROGRESS REPORT



Intercity Bus. The VDOT Chief Financial Officer (CFO) presented the financial status of the I-81 Corridor Improvement Program and outlined the project costs and funding approach of the Program. Two consultants from KPMG and IMG presented the findings and analysis from the public-private partnership market soundings. The October 2023 presentation delivered to the Committee is in **Appendix D**.

I-81 Improvements Update

The I-81 Program Delivery Director presented the status of the operational, and capital improvement projects throughout the corridor. The I-81 Program Delivery Director highlighted the following conclusions:

- Operational improvements, including curve improvements, traffic cameras, digital message signs, and safety service patrol upgrades are complete
- The remaining operational projects are arterial and signal upgrades which are set to be complete in 2025
- 23 of the 27 Bristol District capital projects are either complete (17) or under construction (6)
- 8 of the 14 Salem District capital projects are either complete (6) or under construction (2)
- 13 of the 23 Staunton District capital projects are either complete (11) or under construction (2)

I-81 Multimodal Improvements Update

The Virginia Department of Rail and Public Transportation (DRPT) Chief of Public Transportation presented the status of the Virginia Breeze, the publicly funded intercity bus service which serves the I-81 corridor, including the following takeaways:

- The Virginia Breeze Intercity Bus service from Bristol to Washington, D.C., the Highlands Rhythm, began service on November 15, 2021
- Blacksburg, Harrisonburg, and Dulles Airport are the top performing stops for the Valley Flyer and Highlands Rhythm routes
- Ridership on Virginia Breeze Intercity Bus services has grown year-over year since the reduced ridership in 2020 and 2021. FY 2023 recorded the highest ridership along the I-81 corridor since the conception of Virginia Breeze, in part to the addition of new routes such as the Highlands Rhythm and its extension of intercity service south to Bristol. DRPT estimates Virginia Breeze ridership to grow continuously in the upcoming years, 2024-2025.

The Virginia Breeze October 2023 presentation delivered to the committee is in **Appendix D**.

I-81 Corridor Financial Update

During the October 2023 advisory committee, VDOT's Chief Financial Officer presented a financial update on the I-81 corridor that included updated project estimates, refined project scoping, and debt assumption. I-81 Corridor Improvement Program's revenues and funding allocations remain at healthy levels to complete project delivery, and financial capacity to support additional projects will be available starting in the 2030s. The October 2023 presentation delivered to the committee is in **Appendix D**.

NEXT STEPS

Most of the capital improvement projects are either under construction or in the design phase, by VDOT staff, an on-call consultant, or a project-specific consultant. The following projects will begin construction in 2024.

- Bristol District
 - Extend deceleration lane at Exit 72 (northbound only)
 - Add auxiliary lane between I-77 Exit 40 and I-81 Exit 72 and extend acceleration lane (southbound only)
 - Extend deceleration lane at Exit 81 (southbound only)
- Salem District
 - Widen to three lanes between Exit 143 and Exit 150 (both directions)
- Staunton District
 - Widen to three lanes between MM299 and MM296 (southbound only)
 - Construct truck climbing lanes at Weyers Cave (both directions)

In addition, construction of the following projects will continue in 2024:

- Bristol District
 - Construct Smyth County truck climbing lane (northbound only)
 - Construct Washington County truck climbing lanes (both directions)
 - Widen to three lanes between Exit 10 and Exit 7 (southbound only)
 - Construct auxiliary lane between Exit 73 and Exit 72 (southbound only)
- Salem District
 - Widen to three lanes between Exit 137 and Exit 140 (both directions)
 - Widen to three lanes between Exit 140 and Exit 141 (both directions)
- Staunton District
 - Construct auxiliary lane between Exit 221 and Exit 220 (southbound only)
 - Construct auxiliary lane between Exit 221 and Exit 225 (both directions)

APPENDICES



Appendix A: Preliminary Capital Improvement Project Schedule

Appendix B: Improvements Summary Table

Appendix C: Crash Frequency and Severity Per Mile for Truck-Related Crashes

Appendix D: October 2023 I-81 Advisory Committee Meeting PowerPoint Presentation

APPENDICES



Appendix A: Preliminary Capital Improvement Project Schedule

Appendix B: Improvements Summary Table

Appendix C: Crash Frequency and Severity Per Mile for Truck-Related Crashes

Appendix D: October 2023 I-81 Advisory Committee Meeting PowerPoint Presentation

Appendix A:

Preliminary Capital Improvement Project Schedule

Appendix B:

Improvements Summary Table

RECOMMENDED IMPROVEMENTS

Study Project ID	UPC	District	Jurisdiction(s)	Direction	Mile Marker			Improvement Description
					From	to	To	
27	116170	Bristol	Washington County / Bristol	SB only	8	to	9.9	Widen to three lanes between Exit 10 and Exit 7
26	116171	Bristol	Abingdon	SB only	16.5	to	16.8	Extend acceleration lane at Exit 17
25	115394	Bristol	Abingdon	SB only	17.6	to	17.6	Curve improvements (flashing chevrons)
1	115393	Bristol	Abingdon	NB only	17.9	to	17.9	Curve improvements (flashing chevrons)
2	116155	Bristol	Washington County / Abingdon	NB only	19.05	to	19.36	Extend deceleration lane at Exit 19
24	115395	Bristol	Washington County	SB only	21.5	to	21.5	Curve improvements (flashing chevrons)
23	115346	Bristol	Washington County	SB only	26.1	to	25.9	Extend acceleration lane at Exit 26
22	115345	Bristol	Washington County	SB only	26.8	to	26.7	Extend deceleration lane at Exit 26
3	116156	Bristol	Washington County	NB only	32.5	to	33.5	Add truck climbing lane
21	116172	Bristol	Washington County	SB only	32.8	to	34.3	Add truck climbing lane
20	116173	Bristol	Smyth County	SB only	38.1	to	39.2	High Friction Overlay and Animal Control Fence
5	116159	Bristol	Smyth County	NB only	38.6	to	38.9	Extend deceleration lane at Exit 39
19	116174	Bristol	Smyth County	SB only	39.4	to	39.7	Extend deceleration lane at Exit 39
4	116157	Bristol	Smyth County	NB only	39.5	to	40.8	Add truck climbing lane
17	116167	Bristol	Smyth County / Marion	SB only	42.8	to	43.1	Extend acceleration lane at Exit 44
6	116160	Bristol	Smyth County / Marion	NB only	45.1	to	45.7	Extend deceleration lane at Exit 45
16	116158	Bristol	Smyth County / Marion	SB only	47.3	to	47.7	Extend acceleration lane at Exit 47
7	116161	Bristol	Smyth County / Marion	NB only	48.1	to	48.9	Extend acceleration lane at Exit 47
15	116169	Bristol	Smyth County	SB only	54.1	to	54.5	Add auxiliary lane between Exit 54 and Smyth Safety Rest Area
8	116162	Bristol	Wytheville	NB only	67.1	to	67.4	Extend deceleration lane at Exit 67
9	115600	Bristol	Wytheville	NB only	67.6	to	67.6	Curve improvements (flashing chevrons)
10	116163	Bristol	Wytheville	NB only	72.5	to	73.3	Extend deceleration lane at Exit 72
18	116175	Bristol	Wythe County	SB only	72.7	to	73.4	Add auxiliary lane between I-77 Exit 40 and I-81 Exit 72 and extend acceleration lane
11	116164	Bristol	Wytheville	NB only	73 (I-81)	to	42.9 (I-77)	Extend I-77 deceleration lane and reconfigure off-ramp
14	116168	Bristol	Wytheville	SB only	73.2	to	73.8	Add auxiliary lane between Exit 73 and Exit 72
13	116166	Bristol	Wythe County	SB only	81.7	to	81.9	Extend deceleration lane at Exit 81
12	116165	Bristol	Wythe County	SB only	84.3	to	84.6	Extend deceleration lane at Exit 84
28	115794	Salem	Pulaski County	NB only	88	to	88	Curve improvements (flashing chevrons)
29	115795	Salem	Pulaski County	NB only	90.2	to	90.7	Extend acceleration lane at Exit 89
38	116200	Salem	Pulaski County / Pulaski	SB only	94.2	to	93.7	Extend acceleration lane at Exit 94
30	116198	Salem	Montgomery County / Radford	NB only	105.5	to	106	Extend acceleration lane at Exit 105
31	116197	Salem	Montgomery County / Christianburg	NB only	116.2	to	128.4	Widen to three lanes between MM116 and Exit 128
32	116197	Salem	Montgomery County / Roanoke County / Salem	NB only	128.4	to	137.1	Widen to three lanes between Exit 128 and Exit 137
39A	116203	Salem	Roanoke County / Salem	Both Directions	136	to	139	Widen to three lanes between Exit 137 and Exit 140
39B		Salem	Roanoke County / Salem	Both Directions	139	to	142	Widen to three lanes between Exit 140 and Exit 141
40	116201	Salem	Roanoke County / Botetourt County	Both Directions	144.2	to	151.3	Widen to three lanes between Exit 143 and Exit 150
37	116202	Salem	Botetourt County	SB only	158	to	157.2	Extend acceleration lane at Troutville Safety Rest Area
36		Salem	Botetourt County	SB only	158.4	to	158.2	Extend deceleration lane at Troutville Safety Rest Area
33	116199	Salem	Botetourt County / Buchanan	NB only	162.4	to	162.9	Extend acceleration lane at Exit 162
34	--	Salem	Botetourt County	NB only	171.7	to	175.6	Curve improvements (flashing chevrons)
35	--	Salem	Botetourt County	SB only	175.3	to	171.4	Curve improvements (flashing chevrons)
41	116246	Staunton	Rockbridge County	NB only	189	to	189.4	Acceleration Lane Extension at Exit 188
60	116269	Staunton	Rockbridge County	Both Directions	202.0 (NB) 204.5 (SB)	to	204.0 (NB) 195.1 (SB)	Shoulder Improvements
59	116245	Staunton	Rockbridge County	SB only	204.9	to	204.6	Acceleration Lane Extension at Exit 205
42	115801	Staunton	Rockbridge County	NB only	205.3	to	205.7	Acceleration Lane Extension at Exit 205
58	116279	Staunton	Augusta County	SB only	221.2	to	221	Add Auxiliary Lane between Exit 221 and Exit 220
61	116269	Staunton	Augusta County / Staunton	Both Directions	221.4	to	225.6	Widen to three lanes between Exit 221 and Exit 225
43	116271	Staunton	Augusta County	NB only	232.4	to	232.8	Acceleration Lane Extension at Northbound Mt Sidney Rest Area
57	116276	Staunton	Augusta County	SB only	232.5	to	231.9	Acceleration Lane Extension at Southbound Mt Sidney Rest Area
56	116275	Staunton	Augusta County	SB only	232.9	to	232.7	Deceleration Lane Extension at Southbound Mt Sidney Rest Area
44	116277	Staunton	Augusta County / Rockingham County	NB only	234.1	to	237.7	Truck Climbing Lane at Weyers Cave (Northbound)
55	116278	Staunton	Augusta County	SB only	237.9	to	234.2	Truck Climbing Lane at Weyers Cave (Southbound)
62	116280	Staunton	Rockingham County / Harrisonburg	Both Directions	242	to	248.8	Widen to three lanes between Exit 243 and Exit 247
45	115802	Staunton	Shenandoah County	NB only	268.8	to	268.9	Deceleration Lane Extension at Exit 269
54	115848	Staunton	Shenandoah County	SB only	272.7	to	271.8	Curve Improvements (Flashing Chevrons)
53	116243	Staunton	Shenandoah County	SB only	278.6	to	278.4	Acceleration Lane Extension at Exit 279
52	115804	Staunton	Shenandoah County	SB only	282.8	to	282.6	Acceleration Lane Extension at Exit 283
46	116270	Staunton	Shenandoah County	NB only	291.8	to	292.1	Acceleration Lane Extension at Exit 291
51	116244	Staunton	Shenandoah County	SB only	296.1	to	296	Acceleration Lane Extension at Exit 296
50	116268	Staunton	Shenandoah County / Warren County / Frederick County	SB only	299.6	to	295.4	Widen to three lanes between MM299 and MM296
48	115870	Staunton	Frederick County	NB only	302	to	302.2	Deceleration Lane Extension at Exit 302
47	116236	Staunton	Frederick County	NB only	302.6	to	302.9	Acceleration Lane Extension at Exit 302
49	115803	Staunton	Frederick County	NB only	303.5	to	303.8	Deceleration Lane Extension at Truck Scales (MM 304)
63	116281	Staunton	Frederick County / Winchester	Both Directions	313.8	to	317.5	Widen to three lanes between Exit 313 and Exit 317

LEGEND

■ SYIP Projects Complete

■ SYIP Projects Programmed

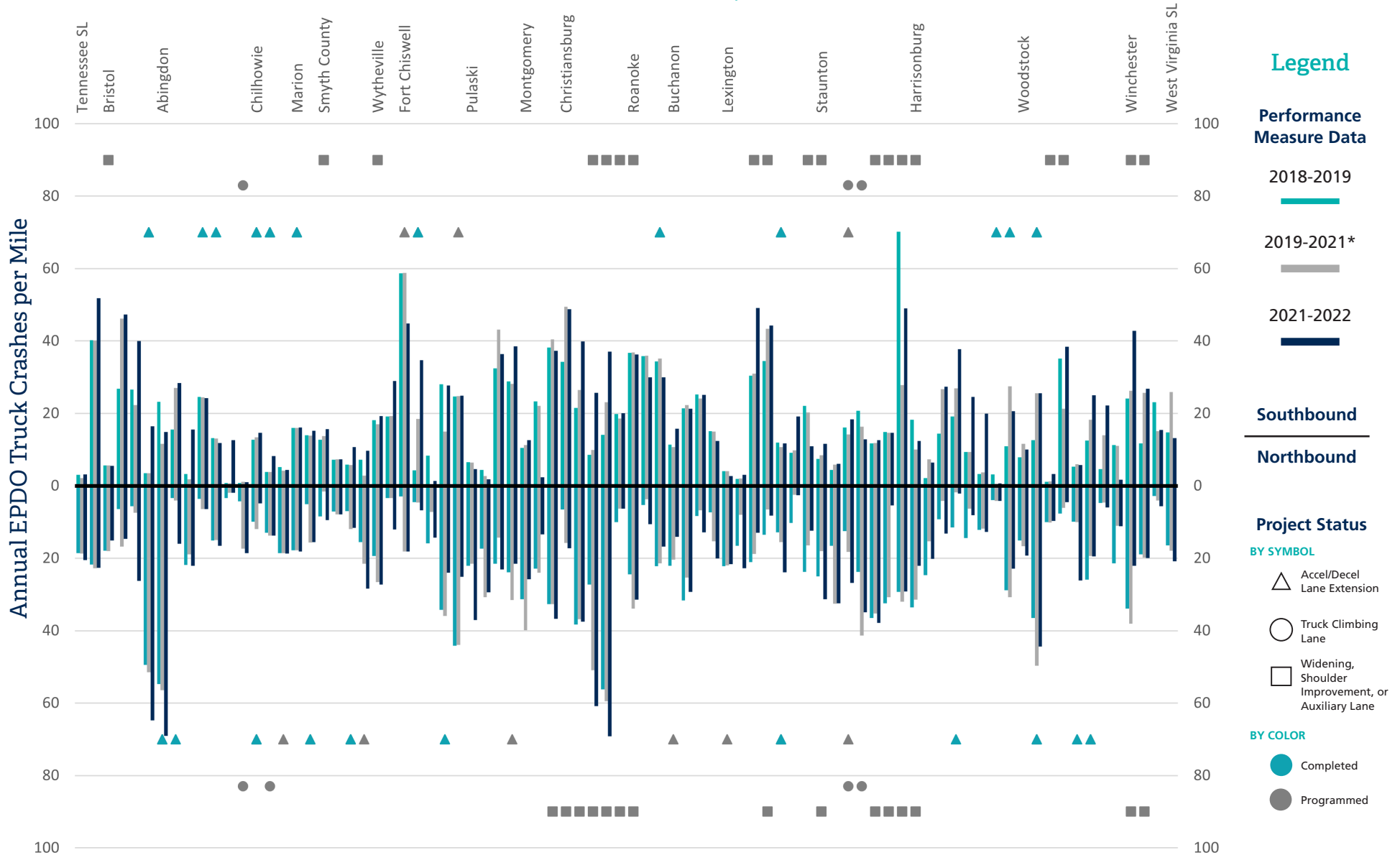


Appendix C:

Crash Frequency and Severity Per Mile for Truck-Related Crashes

I-81 PROGRAM PROGRESS REPORT

Annual EPDO Truck Crashes per Mile



Appendix D:

October 2023 I-81 Advisory Committee Meeting
PowerPoint Presentation

IMPROVE **81**

I-81 CORRIDOR IMPROVEMENT PROGRAM

I-81 Committee Meeting

Dave Covington, PE – VDOT I-81 Program Delivery Director

October 2, 2023

Program Benefits



Enhanced Safety

This program will implement a series of improvements such as lane and shoulder widening to reduce the rate and frequency of crashes along the corridor.



Reduced Congestion

The program will reduce congestion and improve reliability by adding capacity in targeted areas of the corridor and improve speed of incident clearance to help limit travel delays.



Economic Development

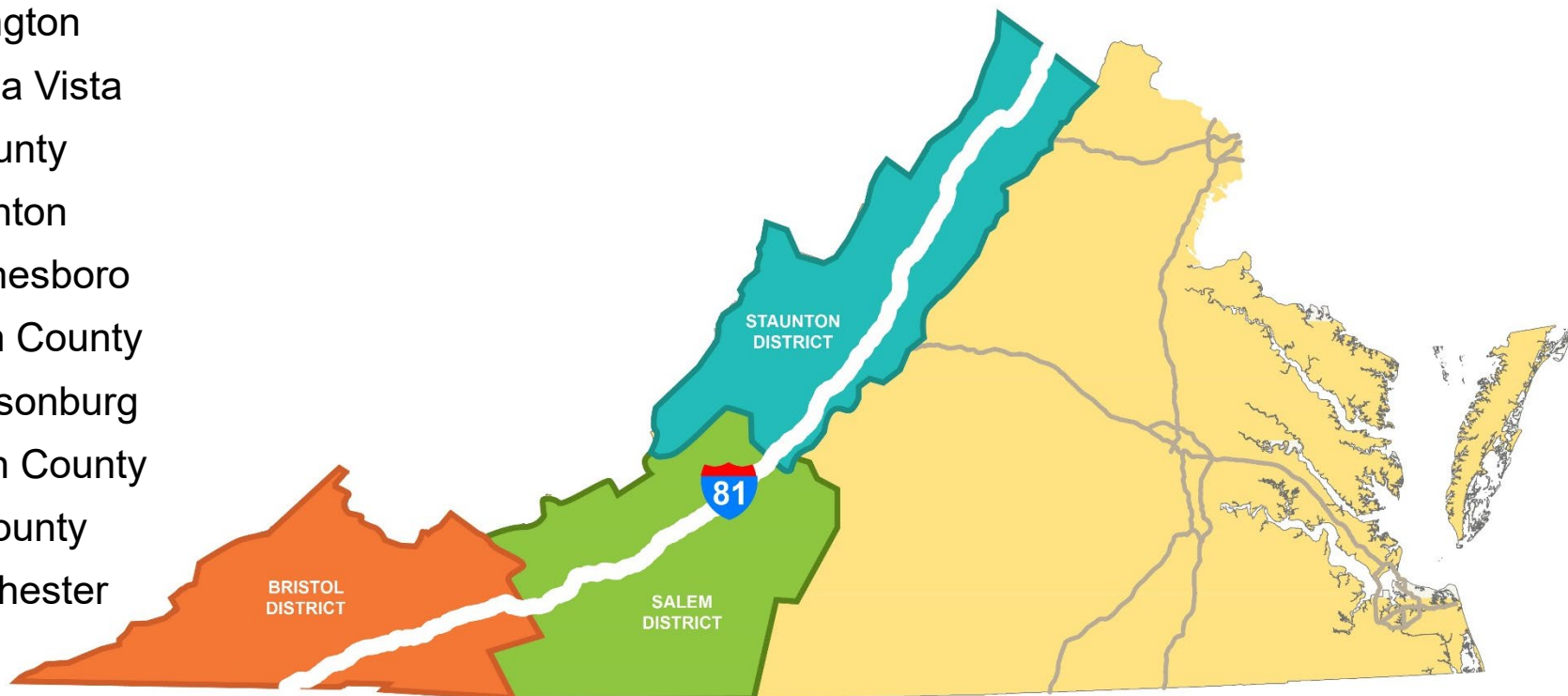
I-81 is the main corridor and key economic artery of western Virginia. These improvements will ensure that goods and services critical to our economy move safely and efficiently through and within the region.

Planned Improvements

The **325-mile long corridor** spans three VDOT districts: **Bristol, Salem, and Staunton.**

Localities along the corridor include:









- | | |
|-------------------|----------------------|
| City of Bristol | City of Lexington |
| Washington County | City of Buena Vista |
| Smyth County | Augusta County |
| Wythe County | City of Staunton |
| Pulaski County | City of Waynesboro |
| City of Radford | Rockingham County |
| Montgomery County | City of Harrisonburg |
| City of Salem | Shenandoah County |
| Roanoke County | Frederick County |
| City of Roanoke | City of Winchester |
| Botetourt County | |
| Rockbridge County | |



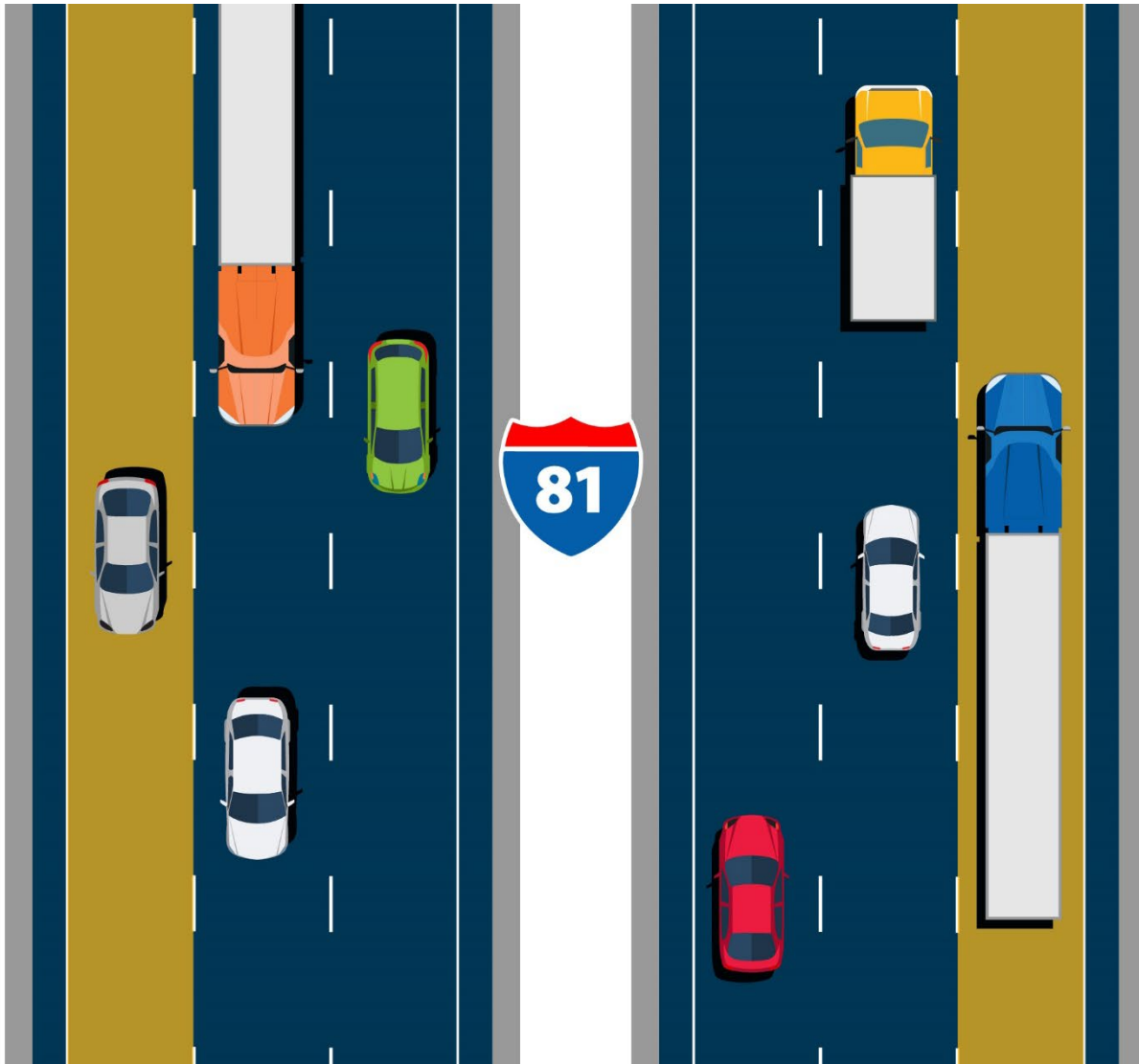
Takeaway Scorecard

Operational Projects

Capital Projects

Projects	Status	Anticipated Completion
Improved Incident Clearance 	Complete	N/A
Safety Service Patrol Expansion 	Complete	N/A
Additional Cameras (51) 	Complete	N/A
Additional Digital Message Signs (30) 	Complete	N/A
Arterial and Signal Upgrades 	Underway	43 VDOT signals complete, 39 under construction, 111 Locality signals complete in 2025
Completed Projects (34) 	Complete	N/A
Active Construction Projects (6) 	Underway	1 in 2024, 2 in 2025, 2 in 2026, 1 in 2027
Remaining capital projects (24) 	Upcoming Projects	All complete by 2033

Types of Projects



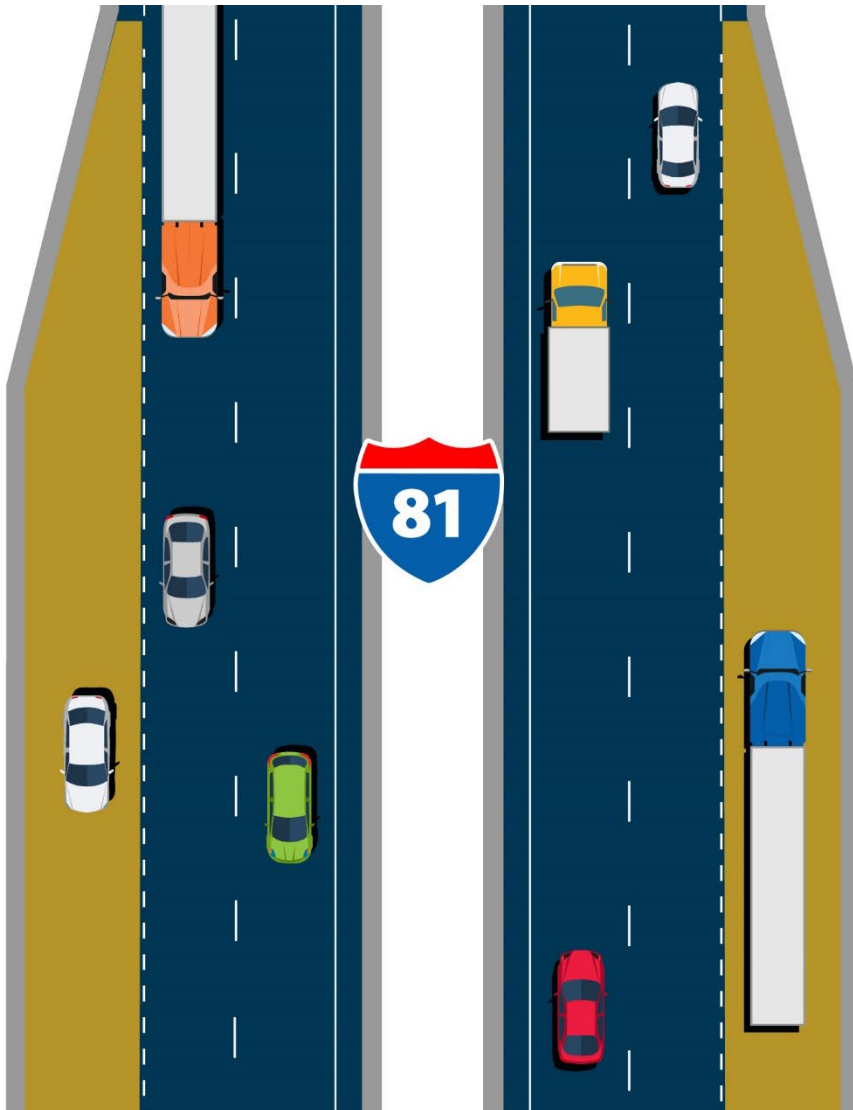
Capital Improvement Projects

Widening +1

10 Improvements

- 3 Projects Under Construction – Completion in 2026 and 2027.
- 7 Future Projects – Completion by 2033 or earlier

Types of Projects



Capital Improvement Projects

Acceleration & Deceleration Extension

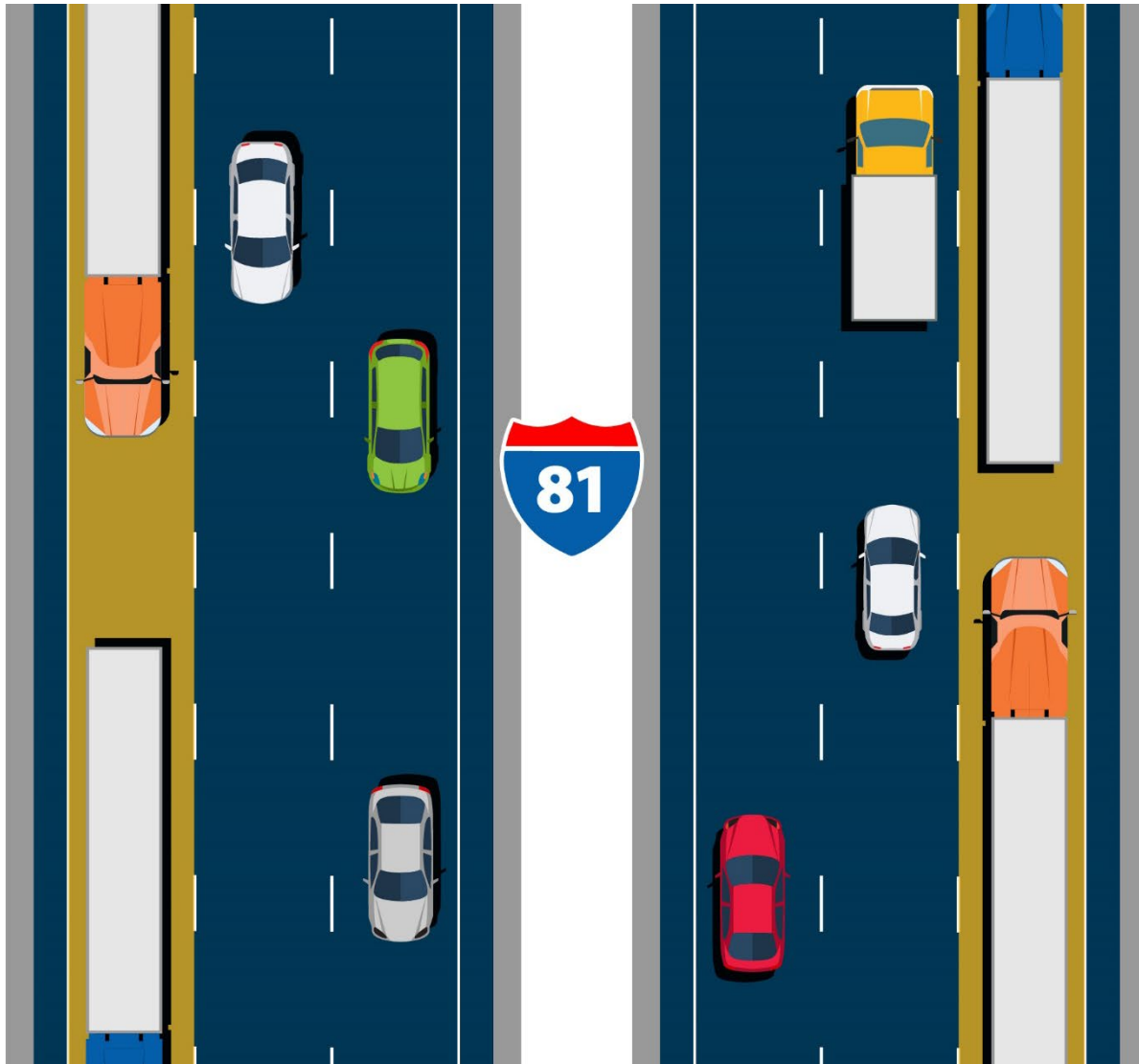


36 Improvements

- 25 Projects Complete
- 0 Projects in Construction
- 11 Future Projects –
Completion by 2033
- *Results – 2020-2021 a 45%
reduction in total crashes.

* Less than 3 years data available

Types of Projects



Capital Improvement Projects

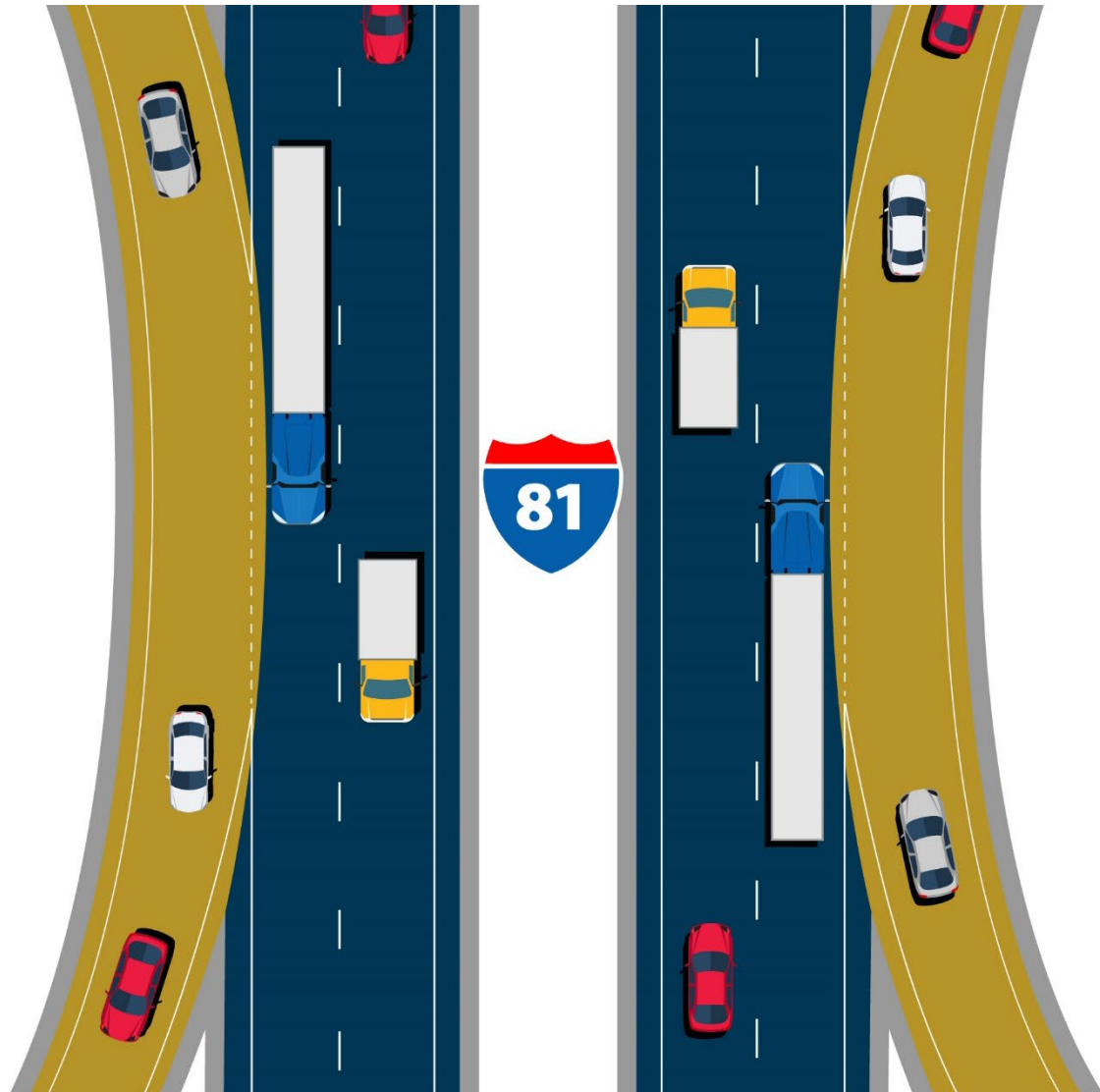
Truck Climbing Lanes



5 Improvements

- 3 Projects Under Construction – 1 Complete in 2024, 2 Complete in 2025
- 2 Future Projects – Completion by 2033

Types of Projects



Capital Improvement Projects

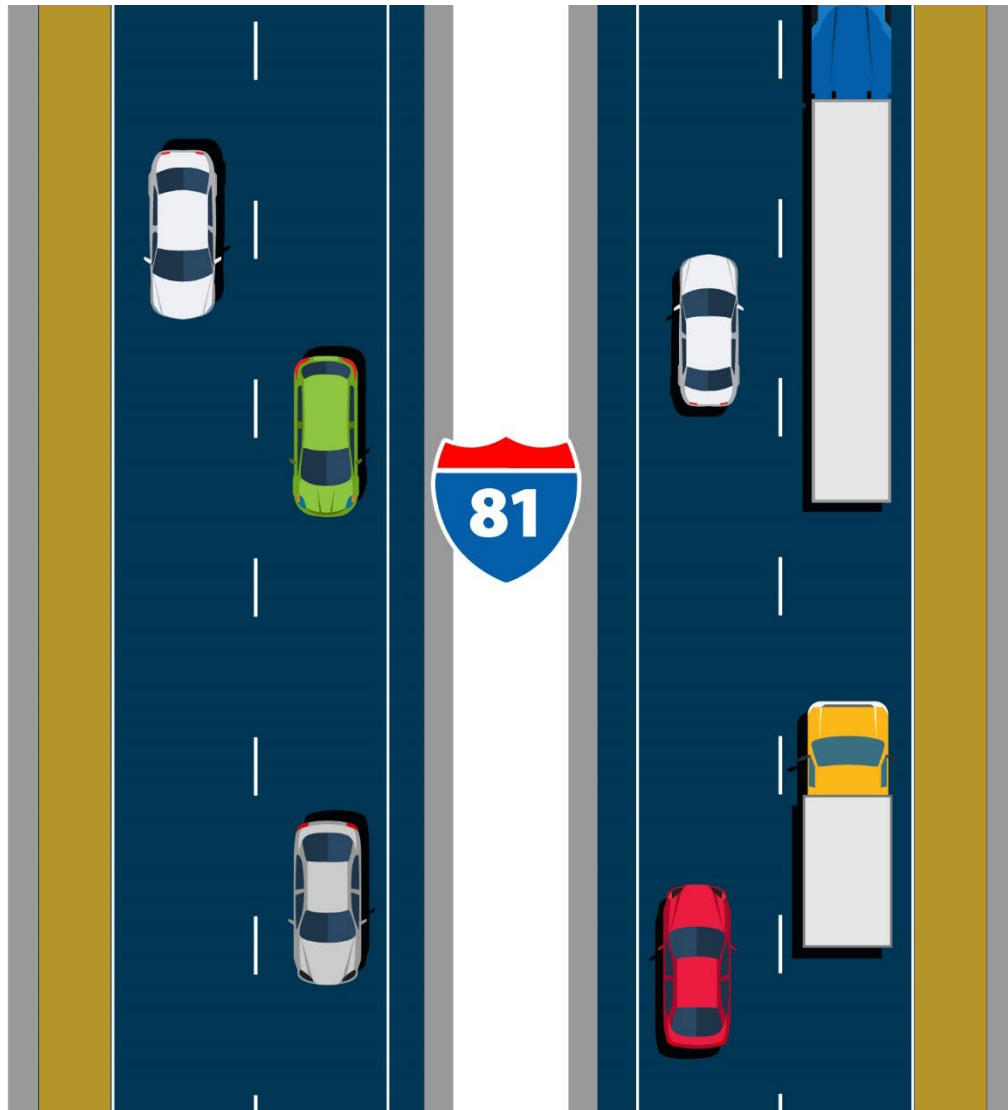
Auxiliary Lane



4 Improvements

- 1 Project Complete
- 3 Future Projects – Completion by 2033

Types of Projects



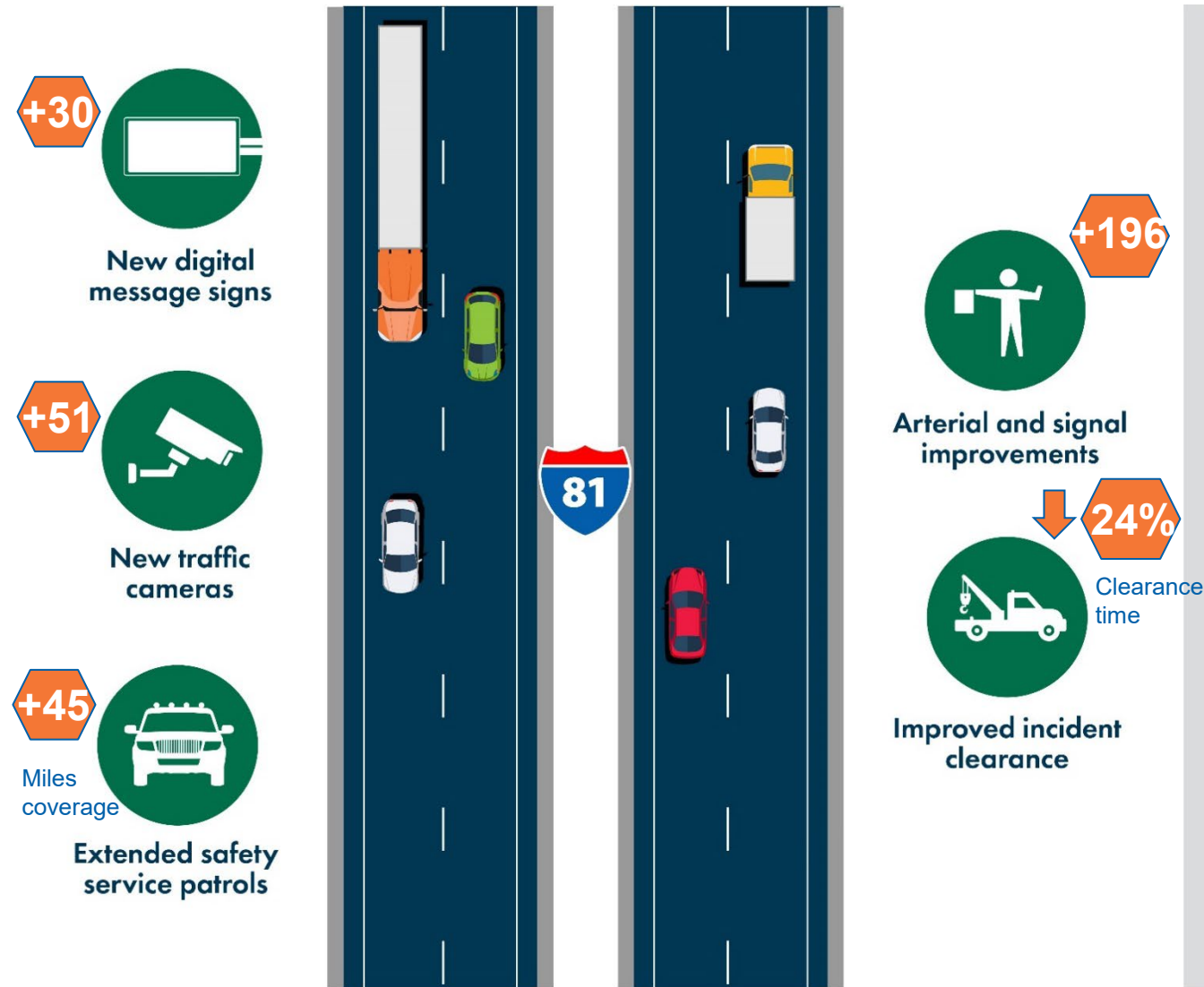
Capital Improvement Projects

+S Shoulder Widening
Curve Improvements 

9 Total Improvements

- **1 Shoulder Improvement**
 - Construction to begin in 2026
- **8 Curve Improvements**
 - All complete

Types of Projects



Operational Improvement Projects

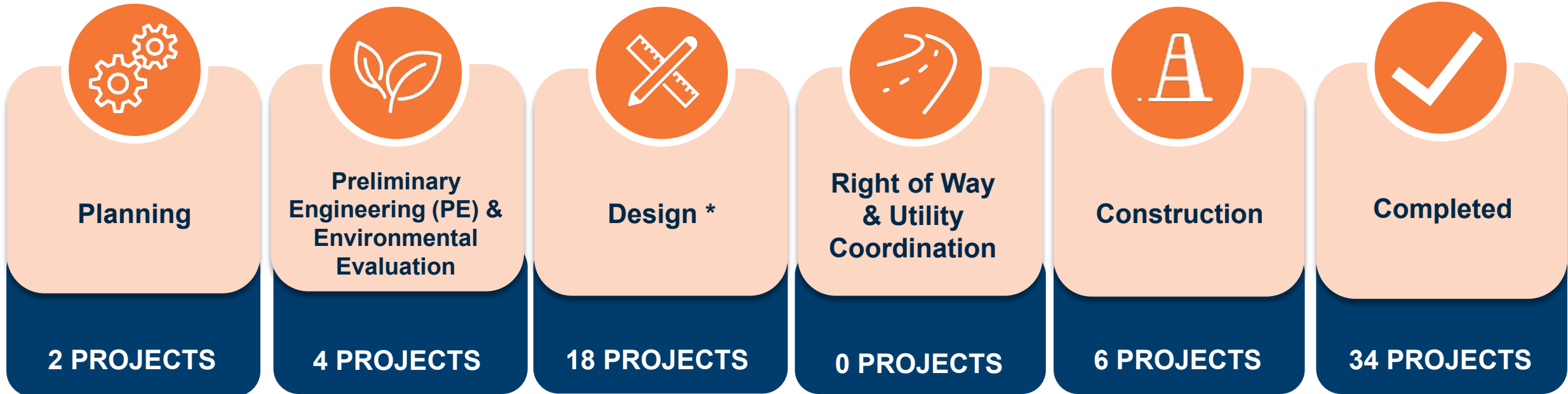
Operational Improvements

5 Improvement Types

- 43 VDOT signal improvements complete
- 39 VDOT signal improvements under construction
- 111 Locality signal improvements underway and will be complete by 2025
- 3 Geometric Improvements complete

Project Development Process (Capital Projects)

Project Status Today (64 Projects)



* 3 projects currently on ad schedule with awards in October and November

Project Status July 2022 (64 Projects)



Bristol District Project Status (Capital Projects)

Completed Projects:

- **Exit 26 SB Acceleration Lane Extension (Emory)**
- **Exit 26 SB Deceleration Lane Extension (Emory)**
- **Exit 67 Deceleration Lane Extension (South of Wytheville)**
- **Exit 19 Deceleration Lane Extension (Abingdon)**
- **Exit 84 SB Deceleration Lane Extension (North of Fort Chiswell)**
- **Bundle project (Exit 39 NB Decel, Exit 47 SB Accel, Exit 39 SB Decel, Exit 43 SB Accel)**
- **Exit 39 SB Acceleration Lane Extension (Seven Mile Ford)**
- **Exit 47 NB Acceleration Lane Extension, single phase DB (Marion)**
- **Exit 54 SB Auxiliary Lane - (South of Rural Retreat)**
- **Four curve improvements (chevron signs in Wytheville and Abingdon)**
- **Exit 17 SB Acceleration Lane Extension (Abingdon)**

Bristol District Project Status (Capital Projects)

Projects Under Construction:

- **Exit 39 NB Entrance Ramp to MM 40.6 NB Truck Climbing Lane – Completion June 2024**
- **MM 32.4 to MM 33.5 NB Truck Climbing Lane (Chilhowie) – Completion June 2025**
- **MM 34 to MM 33 SB Truck Climbing Lane (Washington County) – Completion June 2025**

Salem District Project Status (Capital Projects)

Completed Projects:

- Exit 89 NB Acceleration Lane Extension (Pulaski)
- Troutville Rest Area SB Entrance and Exit Extension (2 projects) - Troutville
- Three curve improvements (chevron signs south of Draper and south of Natural Bridge)

Projects Under Construction:

- Exit 137 to Exit 141 Widening NB and SB (Design Build, 2 projects bundled) – Salem
 - Approximately 50% complete. Completion date is January 2026

Staunton District Project Status (Capital Projects)

Completed Projects:

- Exit 302 NB Accel, Exit 302 SB Decel, Exit 283 SB Accel,
- Exit 269 NB Decel, Exit 279 SB Accel
- Exit 291 NB Accel, Exit 296 SB Accel, Exit 304 NB Accel
- Exit 205 SB Accel, Exit 205 NB Accel (Raphine)
- One curve improvement (chevron signs at Mount Jackson)

Projects Under Construction:

- Exit 221 to Exit 225 NB and SB Widening – Construction Spring/Summer 2023 (Staunton), Completion June 2027

Upcoming Capital Projects (Corridor-wide)

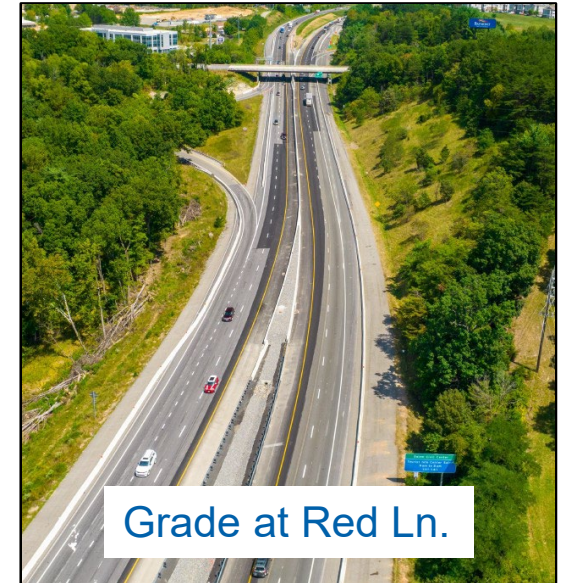
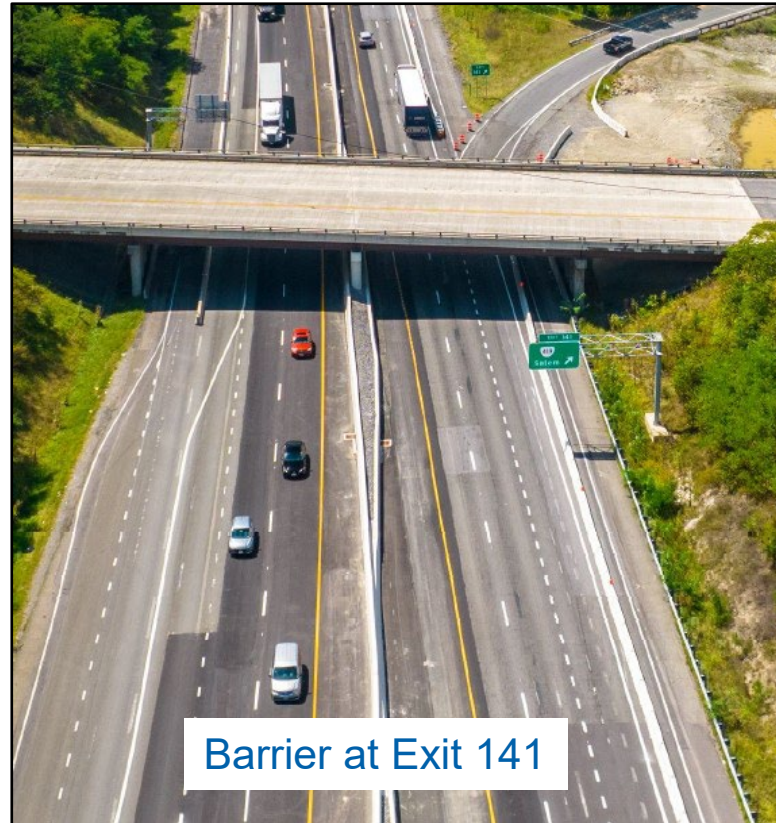
Bristol District	Project Description	Anticipated Construction Start
	Exit 72 NB Decel Extension and I-77 Exit 41 to I-81 SB Exit 72 Auxiliary Lane (Wytheville)	2024
	MM 8.1 to MM 9.7 SB Widening to three lanes (Bristol) – Letting Date Oct. 25	2024
	Exit 72 Deceleration Lane (Wytheville) – Letting Date Nov. 15	2024
	Exit 72 to Exit 73 Auxiliary Lane – Letting Date Nov. 15	2024

Salem District	Project Description	Anticipated Construction Start
	Exit 143 to Exit 150 Widening NB & SB (Roanoke to Troutville)	2024
	Exit 128 to Exit 137 Widening NB Only (Ironto to Salem)	2027
	MM 116 to Exit 128 Widening NB Only (Christiansburg to Ironto)	2028

Staunton District	Project Description	Anticipated Construction Start
	Exit 221 to Exit 220 SB Auxiliary Lane (South of Staunton)	2023
	Exit 299 to Exit 296 SB Widening – Construction Fall/Winter 2024 (Strasburg)	2024
	Weyers Cave NB and SB Truck Climbing Lanes (2 Projects)	2024
	Exit 242 to Exit 248 NB and SB Widening (Harrisonburg)	2025
	Exit 313 to Exit 317 NB and SB Widening – Construction 2028 (Winchester)	2028

Salem Exit 137 to Exit 141 Project Progress

Illustrative of major widening project



Stay up-to-date – Videos, Podcasts, Newsletters



Safety Service Patrol



Troutville Rest Area



Traffic Operations Center/
Customer Service Center



Exit 205



Exit 137 to Exit 141
Widening



Digital Message Signs



Wytheville Interchange
Improvements



Harrisonburg Widening



Staunton Area
Auxiliary Lane



Arterial Improvements



Picking the Projects



Bristol District Truck
Climbing Lanes



Strasburg Area Widening



Troutville Rest Area
Temporary Closure



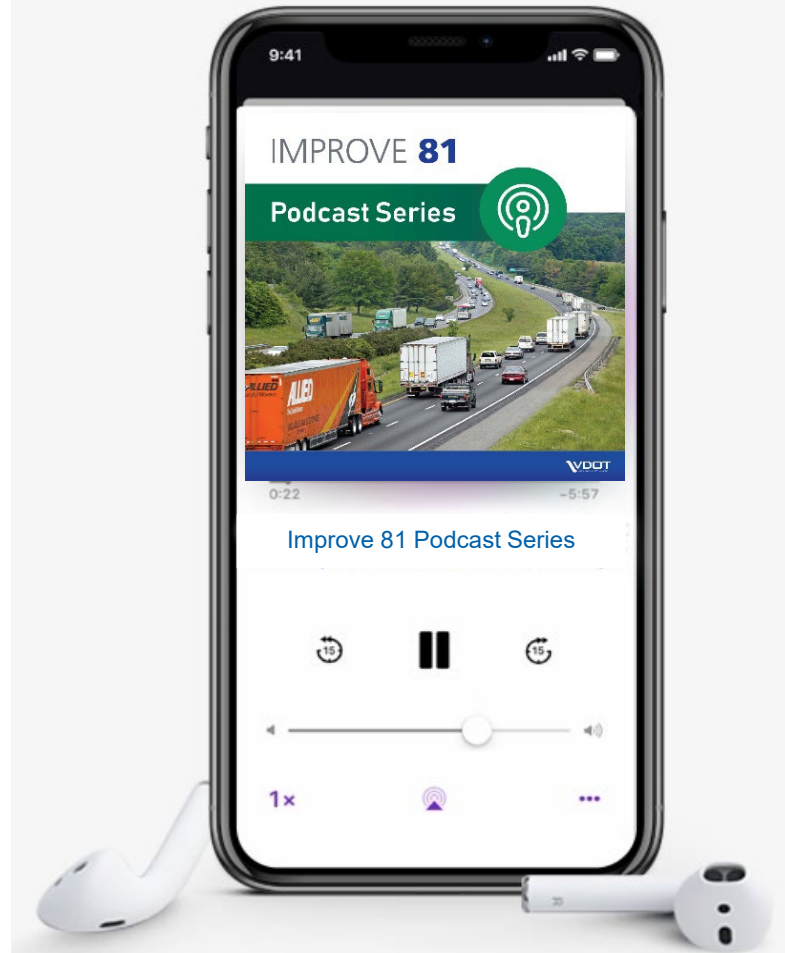
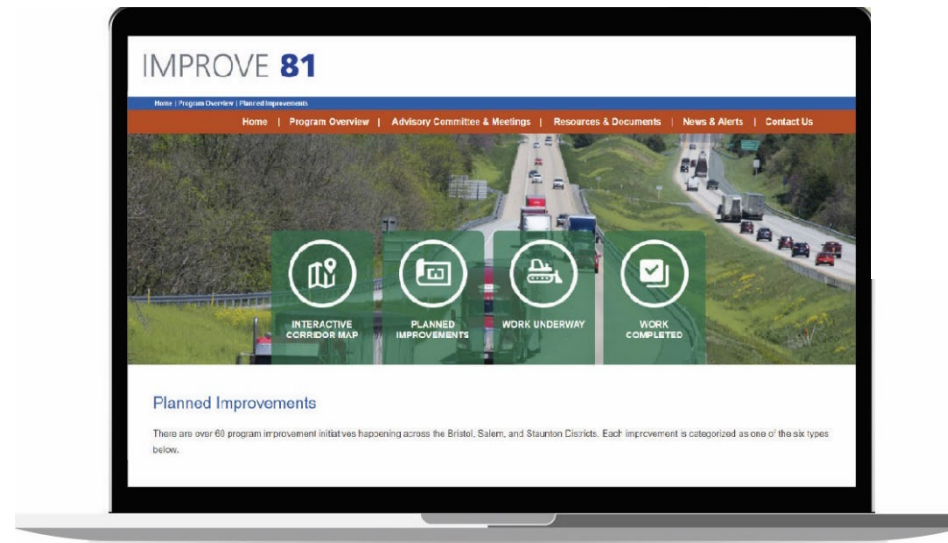
Staunton Area Widening

Published to date

- 22 videos
- 22 podcasts
- 11 newsletters

Program Specific Website – Learn More!

Improve81.org





Virginia Breeze

Connecting the Commonwealth with Virginia's intercity bus service

Zach Trogdon, Chief of Public Transportation



Overview



Launched in 2017 to connect underserved rural communities to national bus network and other transportation modes



Operates 365 days a year on four routes connecting cities through Western and Central Virginia to Washington, D.C.



Funded through Federal Transit Administration's Intercity Bus Program, I-81 funds, and ticket sales



Dillon's Bus Service operates it, providing vehicles, drivers, and maintenance, and DRPT manages

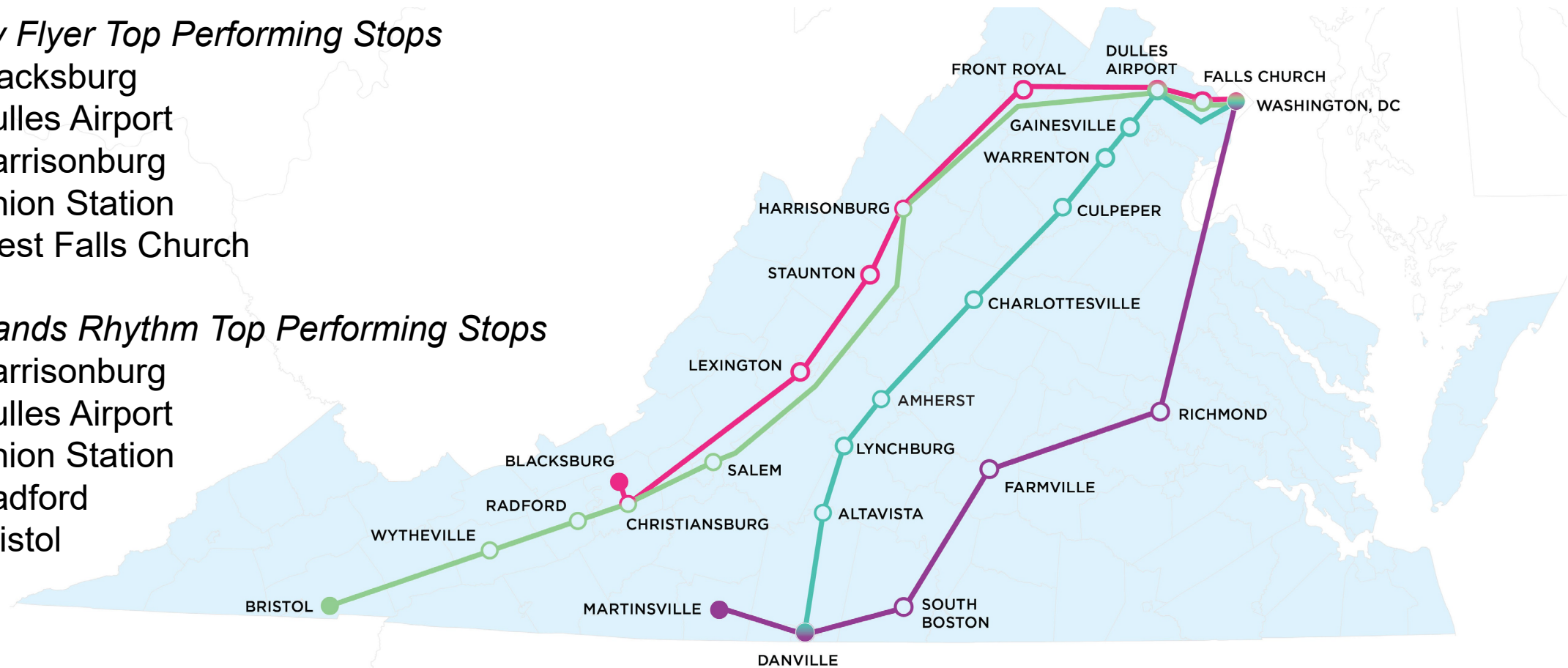
Virginia Breeze Routes

Valley Flyer Top Performing Stops

- 1) Blacksburg
- 2) Dulles Airport
- 3) Harrisonburg
- 4) Union Station
- 5) West Falls Church

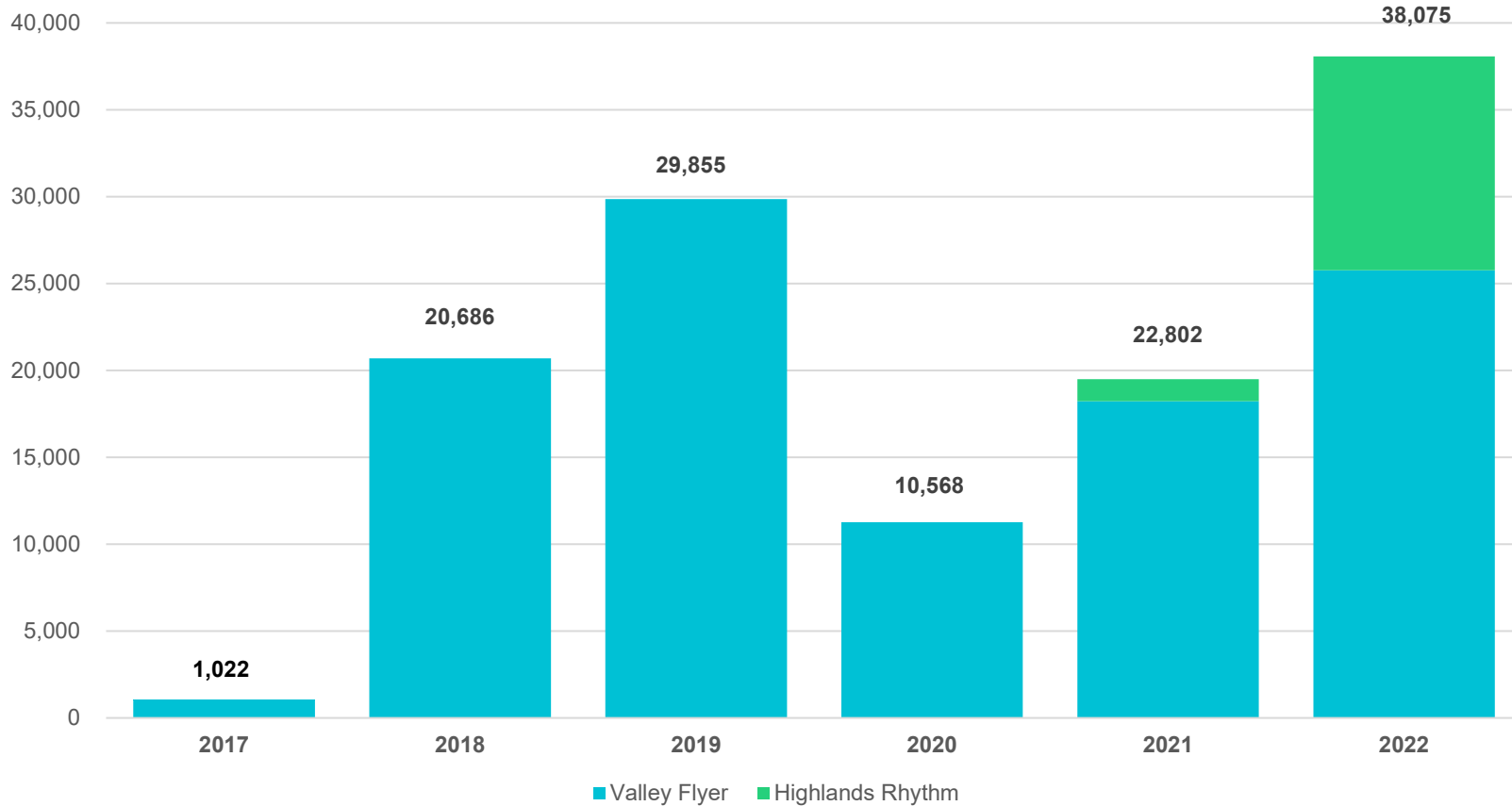
Highlands Rhythm Top Performing Stops

- 1) Harrisonburg
- 2) Dulles Airport
- 3) Union Station
- 4) Radford
- 5) Bristol



Virginia Breeze Ridership

I-81 Routes



- **Future Year Projections:**
- **2023: 42,176**
 - Valley Flyer: 28,411
 - Highlands Rhythm: 13,725
- **2024: 49,575**
 - Valley Flyer: 33,506
 - Highlands Rhythm: 16,069
- **2025: 57,003**
 - Valley Flyer: 37,806
 - Highlands Rhythm: 19,197

- Valley Flyer started in December 2017
- Highlands Rhythm started in November 2021
- Service shut down for several months in 2020 due to COVID-19 pandemic

I-81 Multimodal Financial Plan

I-81 Multimodal Financial Plan (Transit)

Description	Capital	O&M
Virginia Breeze Service Extension to Bristol	---	\$243,000
Virginia Breeze Extension Stops	\$60,000	
Improvements to Existing Stops	\$40,000	



FY23 Budgeted Operating Revenues

FY23 Budgeted Operating Revenues (I-81 VA Breeze Service)

<i>Source</i>	<i>Amount</i>	<i>Percent</i>
I-81 Multimodal Transit Funding- Bristol Extension	\$243,000	12%
FTA Funding (5311(f) & CARES Act)	\$681,320	34%
Farebox Revenues	\$1,065,139	54%
Total Operating Costs	\$1,989,459	100%



Questions?

Zach Trogdon

Chief of Public Transportation

Zach.trogdon@drpt.virginia.gov

I-81 Corridor Finance Update

 Laura Farmer
Chief Financial Officer

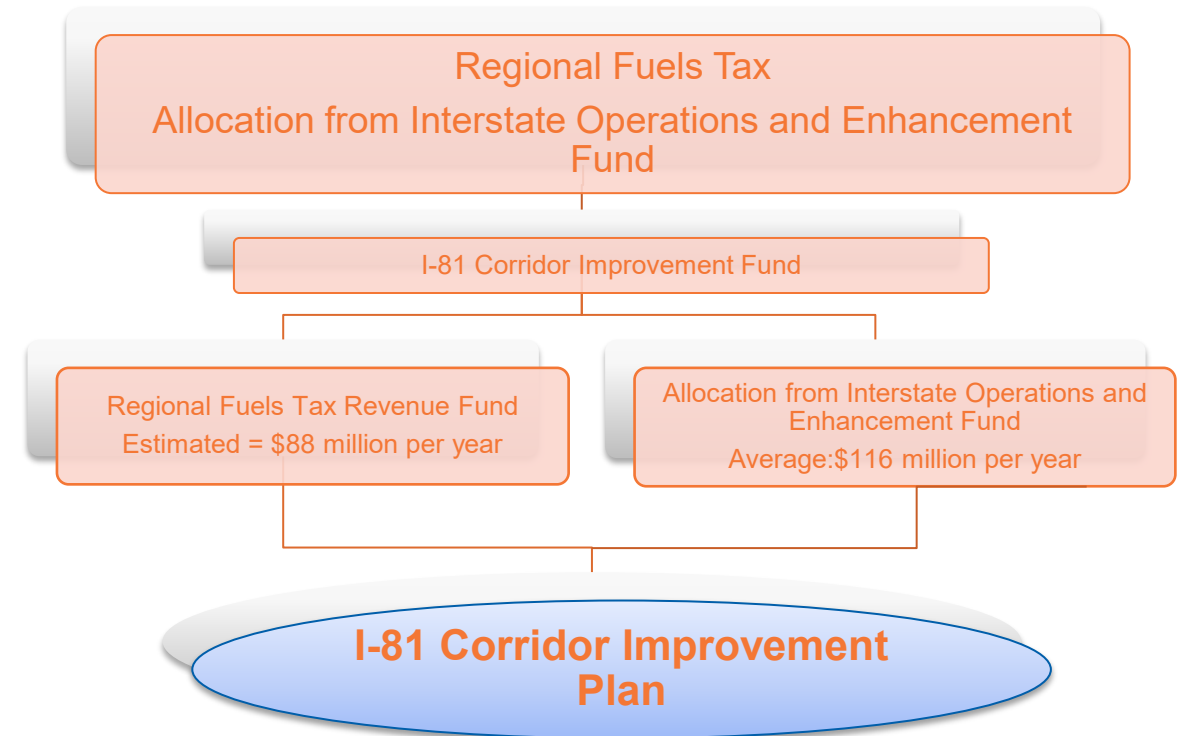
October 2, 2023

Legislative Background

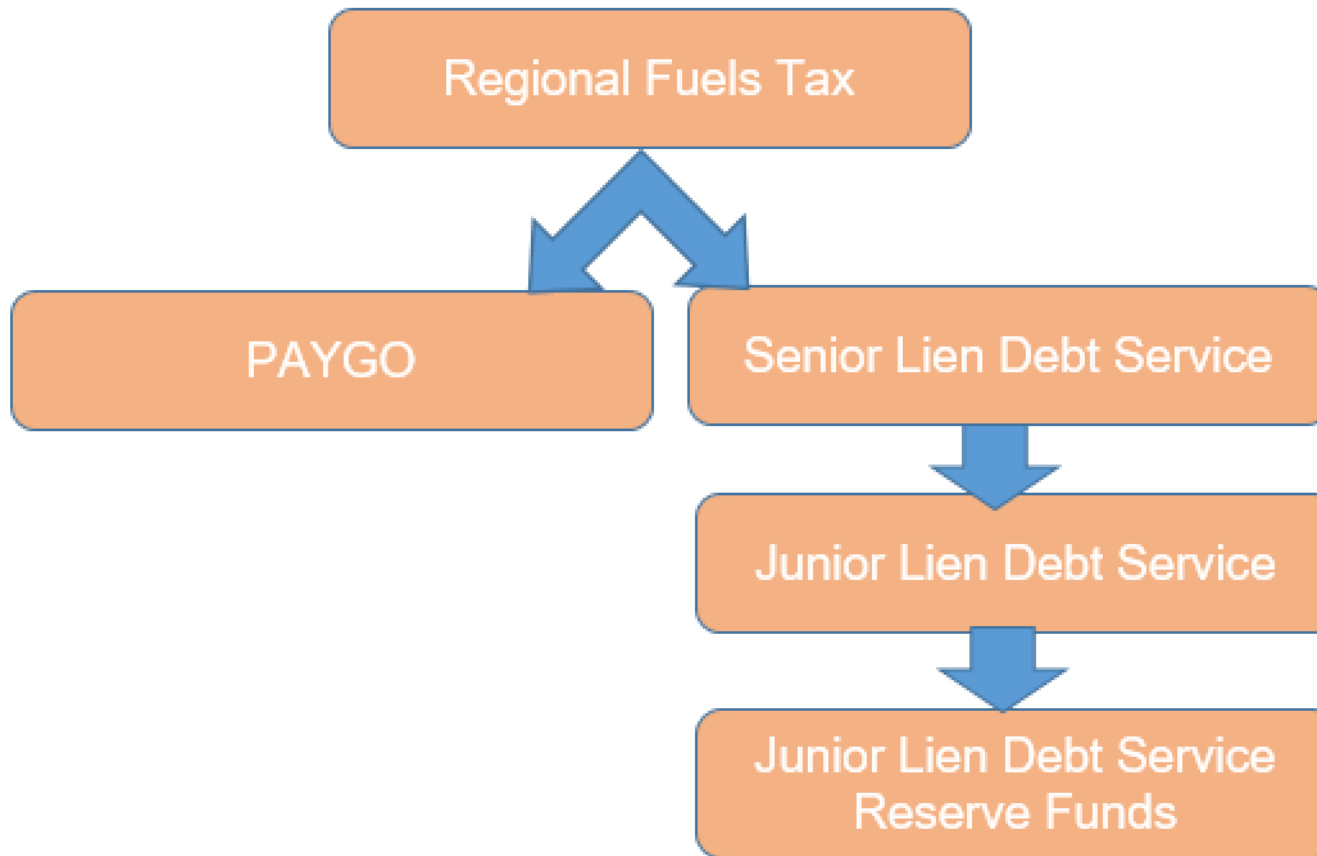
- **Chapters 837 and 846 (HB 2718 and SB 1716, 2019 Session)**
 - Created the Interstate 81 Corridor Improvement Program and Fund
 - Provided new transportation revenues to support the interstate highways and specifically I-81
- **Chapters 1230 and 1275 (HB 1414 and SB 890, 2020 Session)**
 - Authorized the sale and issuance of bonds with an aggregate principal amount not to exceed \$1 billion
 - Changed the localities contributing to fuel tax revenue for I-81 Fund to those through which I-81 passes or cities wholly encompassed by a county through which I-81 passes
 - Provided allocated funding through the Interstate Operations and Enhancement Program (IOEP)

Funding Sources and Structure

- **Dedicated funding for the I-81 Program is deposited in the I-81 Corridor Improvement Fund and includes:**
 - Regional Fuels Tax along the I-81 Corridor
 - Share of statewide revenues from allocation of the IOEP
- **Regional Fuels Tax**
 - July 1, 2019 through June 30, 2020, additional 2.1% tax on gasoline and diesel sold by a distributor to a retail dealer
 - Effective July 1, 2020, changed to a per gallon rate subject to annual CPI-U adjustment
 - Current tax rate as of 7/1/2023: 8.8 cents/gallon gasoline; 8.9 cents/gallon diesel
 - May be leveraged for debt service and paygo
- **Allocation from IOEP**
 - I-81 receives allocation equal to ratio of Vehicle Miles Traveled (VMT) on I-81 by vehicles Class 6 or higher to total VMT on all Interstate highways
 - May provide funding only for paygo



Planned Use of Regional Fuels Tax



Debt service for the program can only be supported by the regional fuels tax collections

Revenue and Expenditures to Date

Interstate 81 Improvement Fund (in millions) Activity to Date

Sources	Actuals Through FY 2023
Regional Fuels Tax	\$296.5
Interstate Operations and Enhancement Program Allocation (State and Federal)	266.0
Other Sources Prior to FY 2021/Other	24.6
Interest Income	8.6
Total	\$595.7
Bonds/TIFIA Loan	203.1
Total	\$798.8

Activity	Total
Expenditures	
Pay-Go Project Expenditures	\$139.7
Bond Fund Project Expenditures	61.1
Debt Service	7.6
Financing Costs	1.1
Total	\$209.5
Balance Remaining	
Fund Balance	\$443.2
Bond Balance	40.2
Federal IOEP Balance	4.1
TIFIA Balance	101.7
Total Available	\$589.3
Expenditures and Balance Remaining Total	\$798.8

Sources – Revenue Performance and Projections

Sources	Actuals Through FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	Total
Regional Fuels Tax	\$296.5	\$88.1	\$91.5	\$94.4	\$96.5	\$98.7	\$100.9	\$866.6
Interstate Operations and Enhancement Program Allocation	266.0	85.8	112.5	120.0	122.4	125.6	134.0	966.3
Other Sources Prior to FY 2021/Other	24.6							24.6
Prior Year Revenue Adjustment		(1.3)						(1.3)
Interest Income	8.6							8.6
Total	\$591.6	\$172.6	\$204.0	\$214.4	\$218.9	\$224.3	\$234.9	\$1,864.8
Planned Debt for Construction	203.1	237.9		272.9	251.4			965.3
Total	\$798.8	\$410.4	\$204.0	\$487.3	\$470.3	\$224.3	\$234.9	\$2,830.1

Estimate Sources:

Regional Fuels Tax estimate provided by the Virginia Department of Taxation, December 2022

Interstate Operations and Enhancement Program, Commonwealth Transportation Fund Six-Year Financial Plan, June 2023

Uses - Support I-81 Corridor Improvement Program

Uses (in millions)	Through FY 2023*	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	TOTAL
Debt Service	\$7.6	\$5.2	\$5.3	\$14.0	\$9.7	\$33.9	\$23.6	\$99.3
Remaining Fuel Tax Revenue	288.9	80.3	85.7	79.9	85.4	64.8	77.3	762.3
Interstate / IOEP Allocation	297.4	85.8	112.5	120.0	122.4	125.6	134.0	997.7
Administration and Financing Costs	1.8	1.3	0.5	0.5	1.5	-	-	5.6
Total	\$595.7	\$172.6	\$204.0	\$214.4	\$218.9	\$224.3	\$234.9	\$1,864.9
Planned Debt to support Construction	203.1	237.9	-	272.9	251.4	-	-	965.3
Total with Planned Debt	\$798.8	\$410.4	\$204.0	\$487.3	\$470.3	\$224.3	\$234.9	\$2,830.1

I-81 Corridor Program – Project Costs

- **The estimated cost of all improvements totals \$3.1 billion, with projects implemented through 2033 (based on the current revenue assumptions and debt model)**
 - **Current Six-Year Improvement Program (SYIP) runs through FY 2029**
 - **§ 33.2-214 of the *Code of Virginia* requires projects funded by Construction Programs (including Interstate Operations and Enhancement Program) to be fully funded to the estimated cost within the SYIP period**
 - **Undistributed balances remain for projects to be fully funded by FY 2033**
- **The program remains:**
 - **Comprised of operational and capital improvements**
 - **No single project exceeds 15.5% of the Program**
 - **Projects are independent of each other**

Transportation Infrastructure Finance and Innovation Act (TIFIA) Loan

- Remaining debt planned for the program is assumed to be additional TIFIA loans
- Proposed structure allows for maximized TIFIA program benefits
 - Rural loan – allows for financing of up to 49% of project costs at one-half 30-year U.S. Treasury rate (For projects less than \$100 million in total costs)
 - Regular/non-rural loan – allows for financing of up to 33% of project costs at 30-year U.S. Treasury rate (no project size limitation)
- Repayment term – 35 years after substantial completion
- Flexible payment structure and draw period of up to one-year after substantial completion

TIFIA Program allows VDOT to advance projects with the use of debt financing

Debt Issuance Plan

- The I-81 Regional Fuels Tax revenues will support all debt issued
- Will not impact debt capacity of the Commonwealth
- Mixture of municipal bonds and Transportation Infrastructure Financing Innovation Act (TIFIA) loans over the life of the program

	2021 Bonds	2022 TIFIA Loans	Future Financings	Total
Funded Costs (in millions)				
Senior Lien Bonds	\$101.9	\$ -	\$ -	\$101.9
Senior Lien Rural TIFIA Loan	-	14.9	133.6	148.6
Junior Lien Regular TIFIA Loan	-	82.6	629.4	712.0
Total	\$101.9	\$101.5	\$762.0	\$962.5

Preliminary, Subject to change, based on latest model

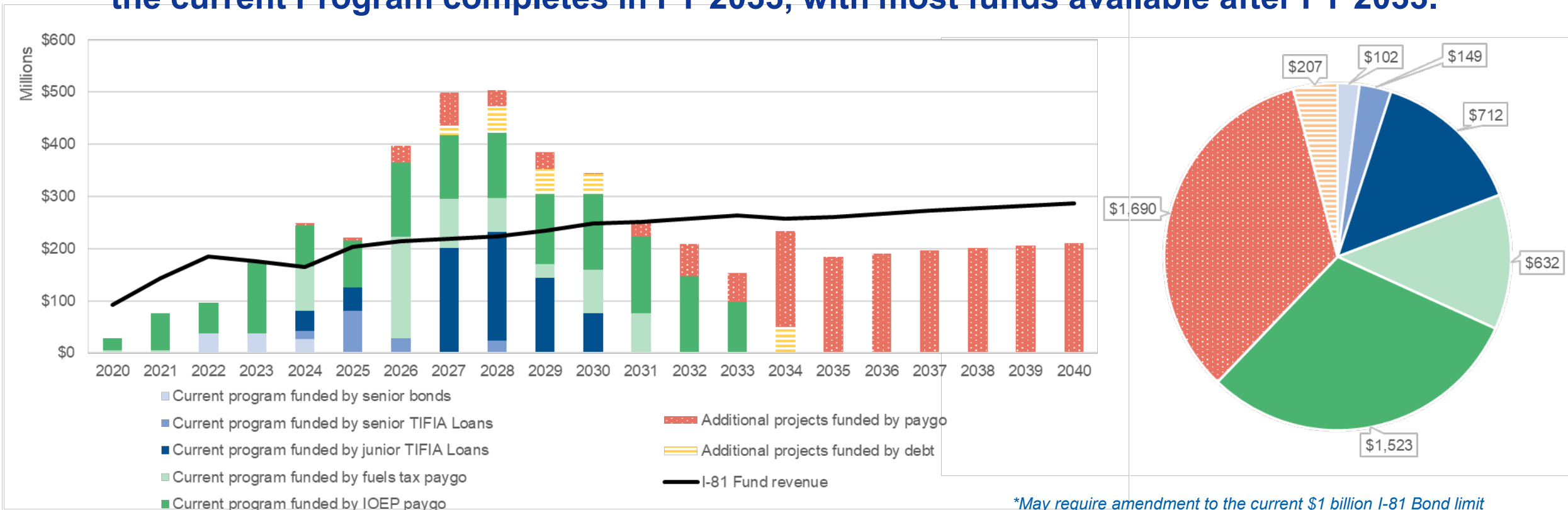
Project Status in SYIP – I-81 Corridor Plan

- **Two of the originally prioritized projects remain to be added to future SYIPs, pending sufficient allocations to fully fund them within the six-year window:**
 - **UPC 116196 Add northbound lane from MM 116 to MM 128 (2023 estimate: \$360 million)**
 - **UPC 116281 Widen to 3 lanes northbound and southbound from MM 313 to MM 317 (2023 estimate: \$333 million)**
- **Current revenue projections support completing the original I-81 program by 2033**

Extended Financial Outlook for I-81 Program

Preliminary Funding by Year and Source

- The current I-81 Program of \$3.1 billion is fully funded by a mix of IOEP and fuels tax pay-go as well as multi-lien fuels tax debt.
- Nearly \$1.9 billion* in additional project costs can be supported through FY 2040, after the current Program completes in FY 2033, with most funds available after FY 2033.



*May require amendment to the current \$1 billion I-81 Bond limit

Potential for Additional Projects in the Plan

- **The Corridor Plan initially identified 106 projects for consideration and prioritized 64 projects for funding**
- **Additional projects from the original list could be amended to the Corridor Plan so that the Department is positioned to add projects to the SYIP as revenues support them**
- **Current revenue projections support the completion of additional projects estimated at \$1.9 billion by 2040 (preliminary, may require additional debt capacity)**
- **Five additional projects were identified beyond the original 64 capital projects**
- **These projects represent the most complex, highest risk segments of the remaining capital projects from the Corridor Plan**

Additional Projects

VDOT has continued concept refinement for the next five major capital improvement projects that were identified in the I-81 CIP, but not included in the funding program that address delay, crashes and accessibility to jobs

District	Location	VDOT Preliminary Cost Estimates	
		Low Range*	High Range*
Salem	Southbound widening between Exits 137 and 128	\$246	\$308
Staunton	Northbound widening MM 190 – Exit 195	111	141
Staunton	Southbound widening Exit 195 – MM 190	103	130
Staunton	Northbound widening between Exits 298 and 300	53	66
Salem	Northbound/southbound realignment of S-curves in Botetourt (MM 167- Exit 168)	159	243
Total Cost		\$672	\$888

**Estimates are in millions and are provided as uninflated in 2022 dollars.*

Preliminary analysis indicates these projects could be delivered by FY 2038 at an estimated inflated cost of \$1.5 billion (using the high range of the estimates provided).

Summary

- **Updates to project estimates (to reflect market conditions), refined project scoping, and debt assumptions extended delivery of the original program of projects by one year.**
- **Revenue and allocations that support Interstate 81 Improvements continue to remain strong to support project delivery.**
- **Capacity for additional projects will begin to be available from the program's current funding sources in the 2030s.**