

I-81 CORRIDOR IMPROVEMENT PROGRAM: MOVING FORWARD IN VIRGINIA

I-81 Corridor Coalition Meeting



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Virginia Department of Transportation

November 14, 2019

Virginia: A Leading State + DOT

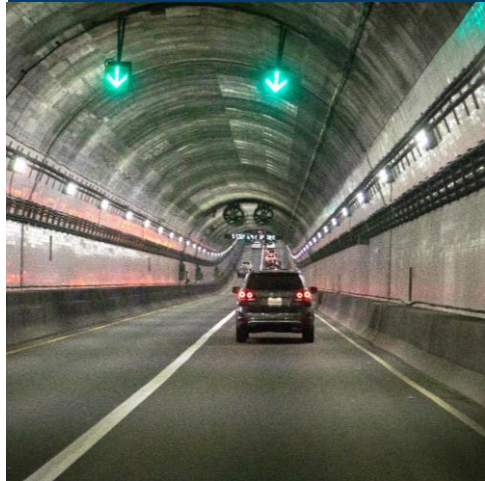
RANKED **#1** BY
CNBC AS THE
2019 TOP
STATE FOR
BUSINESS



7TH IN NATION
FOR THE # OF
FORTUNE
1000
COMPANIES



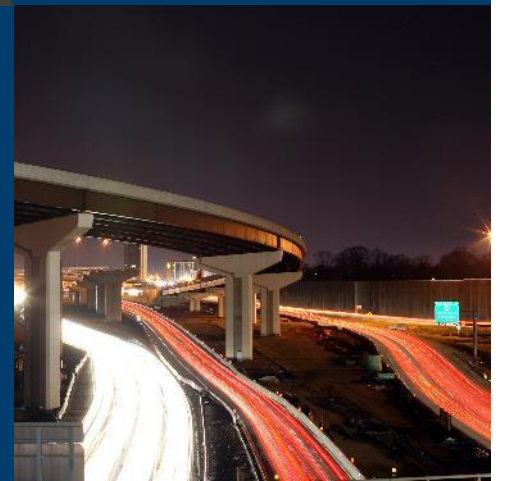
HOME TO
MORE THAN
60 COLLEGES
AND
UNIVERSITIES



8.5 MILLION
CITIZENS



VIRGINIA IS
THE **3RD**
LARGEST
STATE-
MAINTAINED
SYSTEM



VDOT - Fast Facts

- **Third-largest state-maintained highway system in the country**
 - 57,867 miles (3rd to Texas and North Carolina, South Carolina 4th)
 - More than 21,000 bridges and large culverts
 - Four underwater tunnels in Hampton Roads area
 - Three ferry services
 - Two mountain tunnels in southwest Virginia on I-77
 - Five Traffic Operations Centers
 - 41 Safety Rest Areas and Welcome Centers

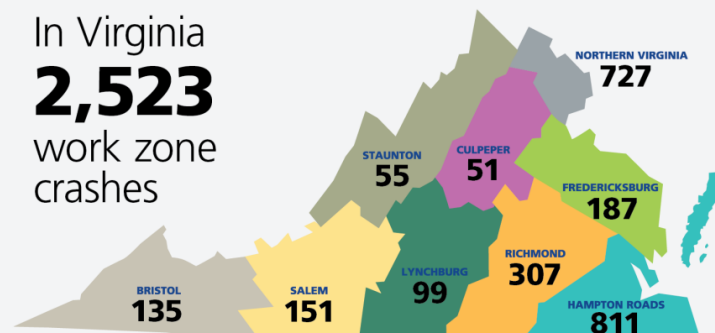


Safety is always VDOT's top priority



Work Zone Awareness Week by the Numbers

In Virginia
2,523
work zone
crashes



1,256 injured

9 killed

54%

work zone crashes
were rear-end
collisions

89%

occurred in
dry weather

68%

happened during
daylight hours

Statewide, the majority of work zone crashes involved drivers between the ages of 20 and 24.

Two of the leading causes of crashes in work zones are driving too fast for conditions or driving distracted.

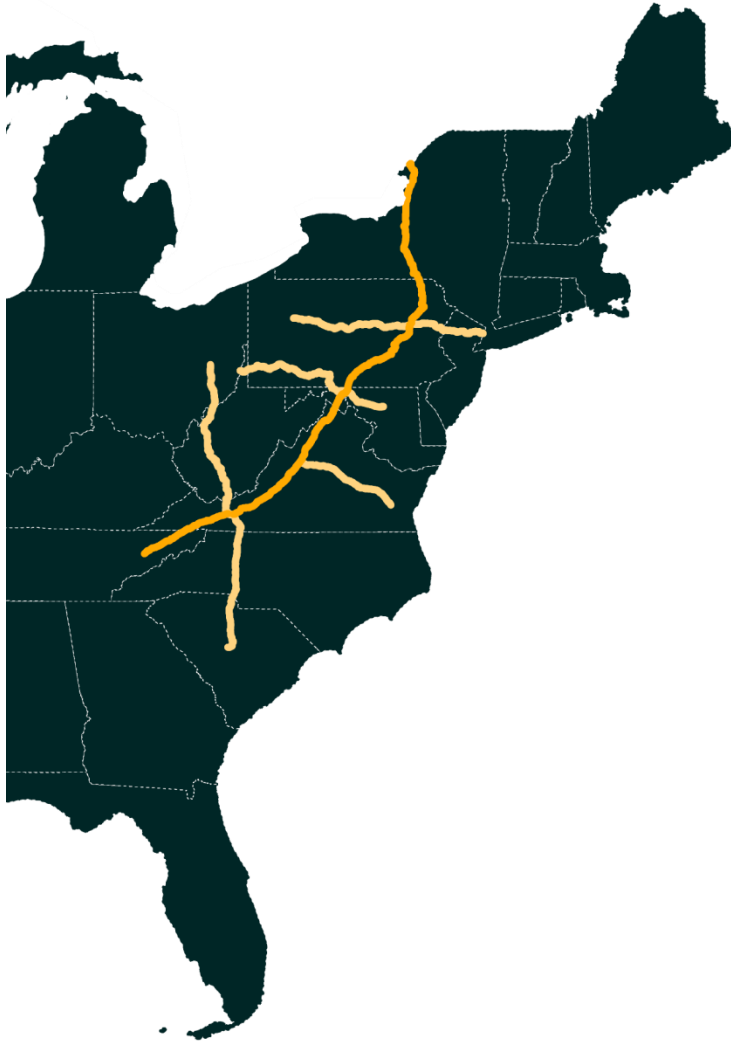


482

distracted driving
crashes reported in
work zones



I-81 Corridor Significance



11.7
MILLION TRUCKS PER YEAR



\$312
BILLION IN GOODS PER YEAR



42%
OF STATEWIDE INTERSTATE
TRUCK VMT



≈11,000
CRASHES OVER 5 YEARS



APPROX.
30
CRASHES PER YEAR
(WITH CLEARANCE TIMES
GREATER THAN 6 HOURS)

* Data sources include TRANSEARCH INSIGHT
and VDOT data between 2012 and 2016

Legislation & Study Processes

Legislation passed
requiring corridor study;
corridor study
conducted May-
November



Reconvened session:
Governor Northam's
amendments provided
for dedicated funding
mechanisms

2018

Early 2019

April 2019



2019 General Assembly
Study Review &
Supportive Legislation
(no funding sources
identified in regular
session)



History of Studies and Funding

Governor Northam's amendments included funding mechanisms:

Increased truck registration fees

Increased diesel and road taxes

2.1% increase in motor fuels tax along 81



Truck Registration Fees (58.1-697.2)



Increases maintain Virginia's progressive fee structure



Captures both in-state and interstate trucks through International Registration Plan



Increases bring Virginia more in line with other I-81 corridor states



Fees for farm vehicles remain $\frac{1}{2}$ of the fee for heavy trucks as of January 1, 2019

2.1% Regional Fuels Tax (58.1-2295.1)

Applies in Planning District Commissions in which Interstate 81 is located (PDCs 3, 4, 5, 6, and 7)

Functions the same as the regional fuels tax in Hampton Roads and Northern Virginia

100% of revenues are deposited in Interstate 81 Corridor Improvement Fund



Road Tax (58.1-2701)

Road tax is a surcharge on diesel fuel paid by trucks through International Fuels Tax Agreement that

- Have two axles and weigh greater than 26,000 lbs.
- Have three or more axles
- Are combination vehicles with a weight greater than 26,000 lbs.

Current rate is \$0.035 per gallon

Road Tax (58.1-2701)

Starting July 1, 2019,
the rate is \$0.01125
times the average
fuel economy for
heavy trucks

- Average mpg was 6
- $6 \times \$0.01125 = \0.0675 per gallon
- An increase of \$0.0325 per gallon

Starting July 1, 2020,
the rate will be
\$0.0225 times the
average mpg

- Average mpg was 6
- $6 \times \$0.0225 = \0.135 per gallon
- An increase from previous rates of \$0.10 per gallon

Diesel Tax (58.1-2217.1)

Amendment
impose an
additional diesel
tax at the wholesale
value of 2.03%



Results in an
\$0.068 increase in
diesel tax rate

Starts July 1, 2021

Includes the floor
from HB2313 (2013)



Revenue Estimates for Chapters 837/846

HB 2718/SB 1716

<i>(in millions)</i>	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	TOTAL
Truck Registration Fees	\$76.0	\$76.0	\$76.0	\$76.0	\$76.0	\$76.0	\$456.0
Road Tax and Diesel Tax	35.8	88.3	156.2	159.4	156.0	158.2	753.9
Regional Fuel Tax	55.0	60.7	61.3	61.3	61.2	61.8	361.3
TOTAL	\$166.8	\$225.0	\$293.5	\$296.7	\$293.2	\$296.0	\$1,571.2

Allocation of Revenue for Chapters 837/846

HB 2718/SB 1716

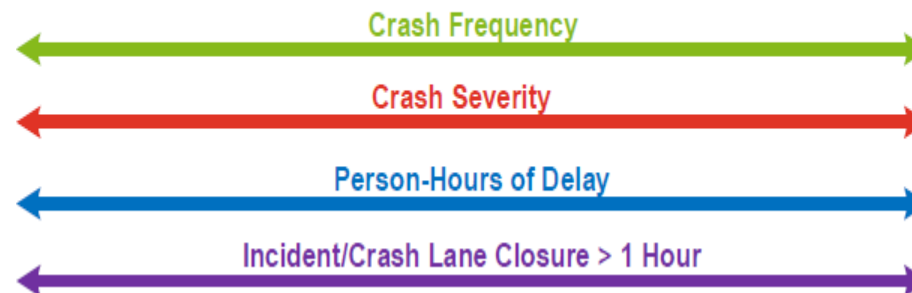
<i>(in millions)</i>	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	TOTAL
Interstate 81 (Regional Fuel Tax)	\$55.0	\$60.7	\$61.3	\$61.3	\$61.2	\$61.8	\$361.3
Interstate 81 (43.4%)	48.5	71.3	100.8	102.1	100.7	101.6	525.0
Northern Virginia Transportation Authority (8.4%)	9.4	13.8	19.5	19.7	19.4	19.6	101.4
Interstate 95 (17.3%)	19.3	28.4	40.1	40.7	40.1	40.4	209.0
Interstate 64 (11.7%)	13.1	19.2	27.1	27.5	27.1	27.4	141.4
Interstate Improvements (19.2%)	21.5	31.7	44.8	45.4	44.7	45.1	233.2
TOTAL	\$166.8	\$225.0	\$293.5	\$296.7	\$293.2	\$296.0	\$1,571.2

The I-81 Corridor Improvement Study

Law required Commonwealth Transportation Board to:

- **Identify segments of I-81 for improvement**
 - Identify targeted set of improvements, for each segment that can be financed by evaluated financing options
 - Include corridor-wide incident management strategies
- **Evaluate**
 - **Safety** – crash rates and frequencies
 - **Congestion** – person hours of delay
 - **Resiliency** – incident-related delay and multi-hour lane closures

Performance Measures



The I-81 Corridor Improvement Study



Public Involvement

Importance of community input

12 public meetings held along corridor;
five additional public briefings

950 attendees at public meetings

Over 2,000 public comments received



Study Findings

Capital and Operational Improvements

\$2 billion in capital improvements

\$200 million in operational and incident management improvements



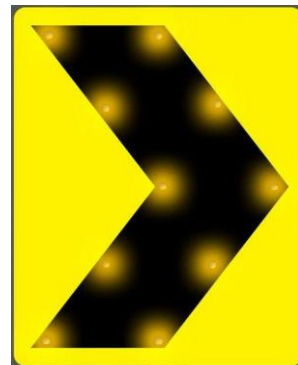
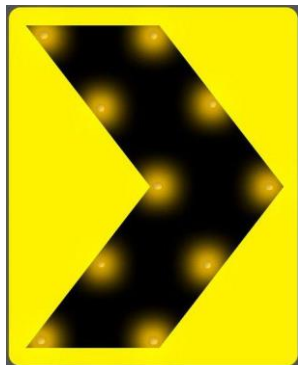
\$2 billion in I-81 Plan Capital Improvements

District	Number of Projects by Type							Total Number of Projects	Total Cost (millions \$) 2018 \$
	Widening	Auxiliary Lane	Truck Climbing Lane	Acceleration Lane Extension	Deceleration Lane Extension	Curve Improvement	Shoulder Widening		
Bristol District	1	3	3	6	10	4	0	27	\$285.3
Salem District	4	0	0	4	2	3	0	13	\$875.4
Staunton District	4	1	2	10	4	1	1	23	\$838.1
Total I-81 Corridor Number of Improvements	9	4	5	20	16	8	1	63	\$1,998.8

Mainline Safety Capital Improvements Underway

Curve Improvements (Static and/or Flashing Chevrons)

District	Number of Locations	Planned Installation Date
Bristol District	4	Fall 2019
Salem District	3	Fall 2019
Staunton District	1	Fall 2019
Total	8	



Mainline Capital Improvements Under Design

Acceleration/Deceleration Lane Extensions

District	Number of Locations	Project Status
Bristol District	2	Underway
Salem District	1	Underway
Staunton District	5	Underway
Total	8	

- All of these projects are included in the FY20-25 Six-Year Improvement Program
- Of the 16 initial programmed projects, 8 will be complete, and 5 will be under construction in 2020

Draft Schedule: Prioritization

Hybrid Prioritization

- **“SMART SCALE-like” scoring (25%)**
- **Project Risk and Readiness (15%)**
- **Operations and Delivery (60%)**

Are Project Risk and Readiness and Operations and Delivery quantitative?

- **Scores are based on cumulative knowledge of VDOT staff**
- **Process enabled VDOT to assign quantitative weights to value judgements**

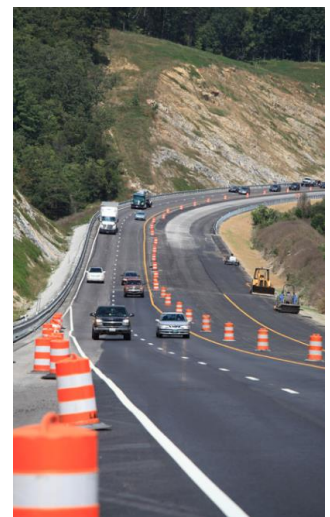


HYBRID
PRIORITIZATION

Draft Schedule: Project Readiness/ Constructability/ Risk

Identify and evaluate schedule risk

- Constructability
- Right-of-way
- Utilities
- Maintenance of traffic
- Soil/rock conditions
- Interchange impacts
- Structures (bridges, walls, etc.)
- Environmental clearances



Project Delivery Options

- **VDOT is collaborating with industry on the I-81 project listing and draft schedule**
- **Industry feedback on delivery timeframes is being incorporated**
- **Options for project delivery**
 - **Design-Bid-Build: projects are largely defined**
 - **Design-Build: opportunities identified for innovation and risk transfer**

Takeaway Scorecard

Activity	Status	Anticipated Completion
Safety Service Patrol Expansion	Complete	July 2019
Curve improvements (8)	Underway	Fall 2019
Initial accel/decel lane extensions (8)	Underway	Spring 2021
Additional Cameras (51)	Underway	Spring 2020
Additional Changeable Message Signs (31)	Underway	Spring 2020
Remaining capital projects (48)	TBD	Under bonding scenario, 100% under construction or complete by 2028

Keys to Success on 81

- Dedicated team of experts
- Multimodal considerations
- Collaboration from every level of government, affected industry stakeholders, business communities, commuters and residents
- Committed to improvements – on and off the roadway
 - Focus: improved overall quality of life
- Keeping safety in mind



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