
VDOT
Virginia Department of Transportation

OVERVIEW OF 2019 MAINTENANCE AND OPERATIONS COMPREHENSIVE REVIEW CONTINUED

Stephen C. Brich, P.E., Commissioner of Highways

May 19, 2026

Why are we here today - Part 2?

2019 Maintenance and Operations Comprehensive Review

Business focus

Shift from short term improvements to long-term performance – impact on future generations

Need to get back to basics

Investment Strategy – Long-Term Sustainable Performance of Assets

Routine Maintenance and Emergencies

- Historical Overview

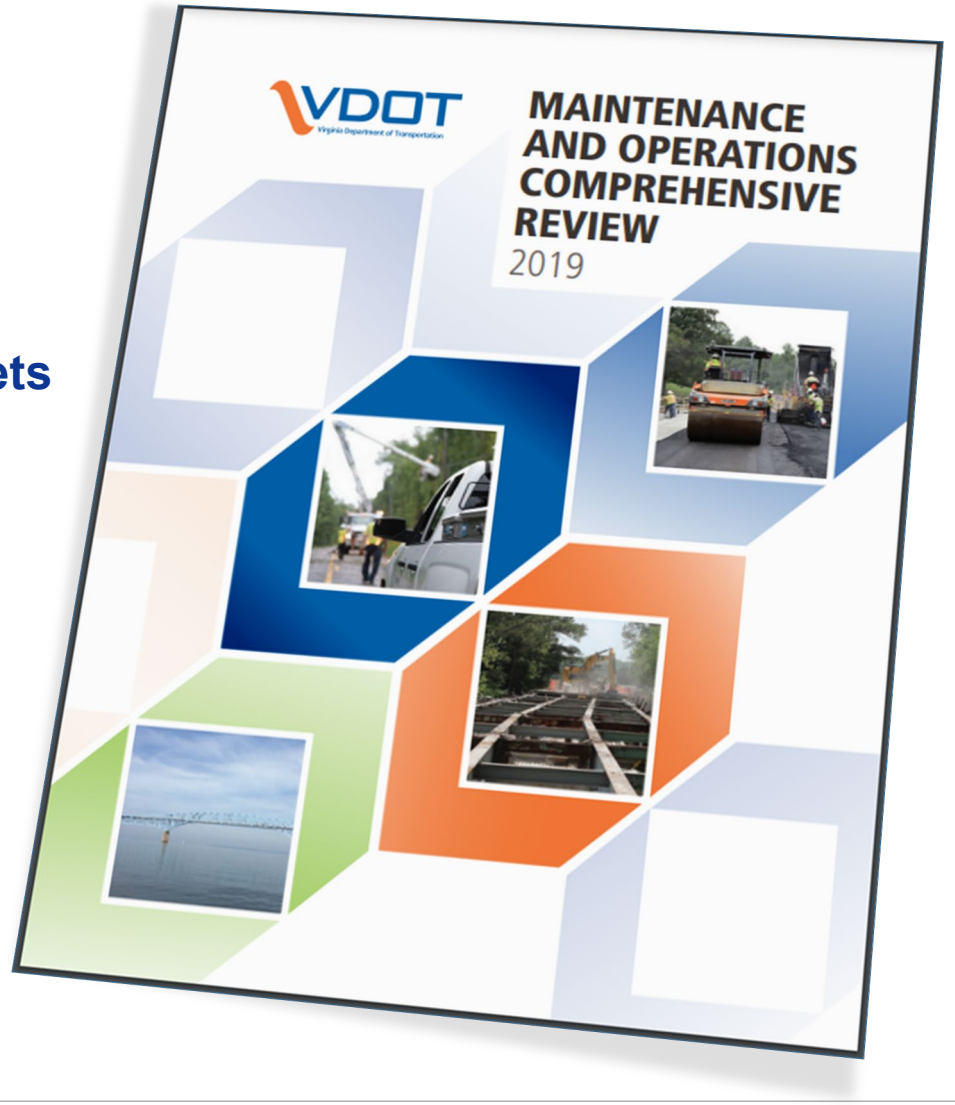
Investments

Maintenance and Operations Program

- Tensions in the program
- Impacts to the program

Six Years of Operational Experience

Reevaluate and Baseline



Comprehensive Review

- Routine Maintenance
- Emergencies
- Maintenance and Operations Program Impacts
- Assets Funded – As Needed Basis

Routine Maintenance

Routine Maintenance – Historical Overview

Virginia Department of Transportation

- 3rd largest state-maintained system in the nation
- Over 100 diverse assets and/or services provided

The Great Recession (2007 Housing Crisis) – Virginia Transportation Impacts

- June 2007 - $1B revenue estimate reduction
- October 2008 - predicted additional revenues reduction by $2.1B to $2.6B over six years
  - FY 2008 SYIP - $8.7B
  - FY 2009 SYIP - $7.9B / FY 2009 Revised SYIP - $6.5B
  - FY 2010 SYIP - $6.1B / FY 2010 Revised SYIP - $6.2B

Workforce Reduction

- 2002 - 10,200
- 2007 - 8,500 – the downsizing plan began
- 2010 - 7,500
- 2026 - 7,900

Statewide maintenance facilities reduced

- 2007 - 335 to 248 or 26% of facilities
- 2008 – reductions - permanent
  - Residencies from 44 to 29
  - Equipment shops from 73 to 37
  - Materials labs from 8 to 5
  - Focus residencies on managing maintenance function
- 2009 – Rest Area closures – 18 facilities - temporary
  - Facilities reopened in 2010

Routine Maintenance – Historical Overview

Virginia Population

- 2007 – 7.7M
- 2025 – 8.7M

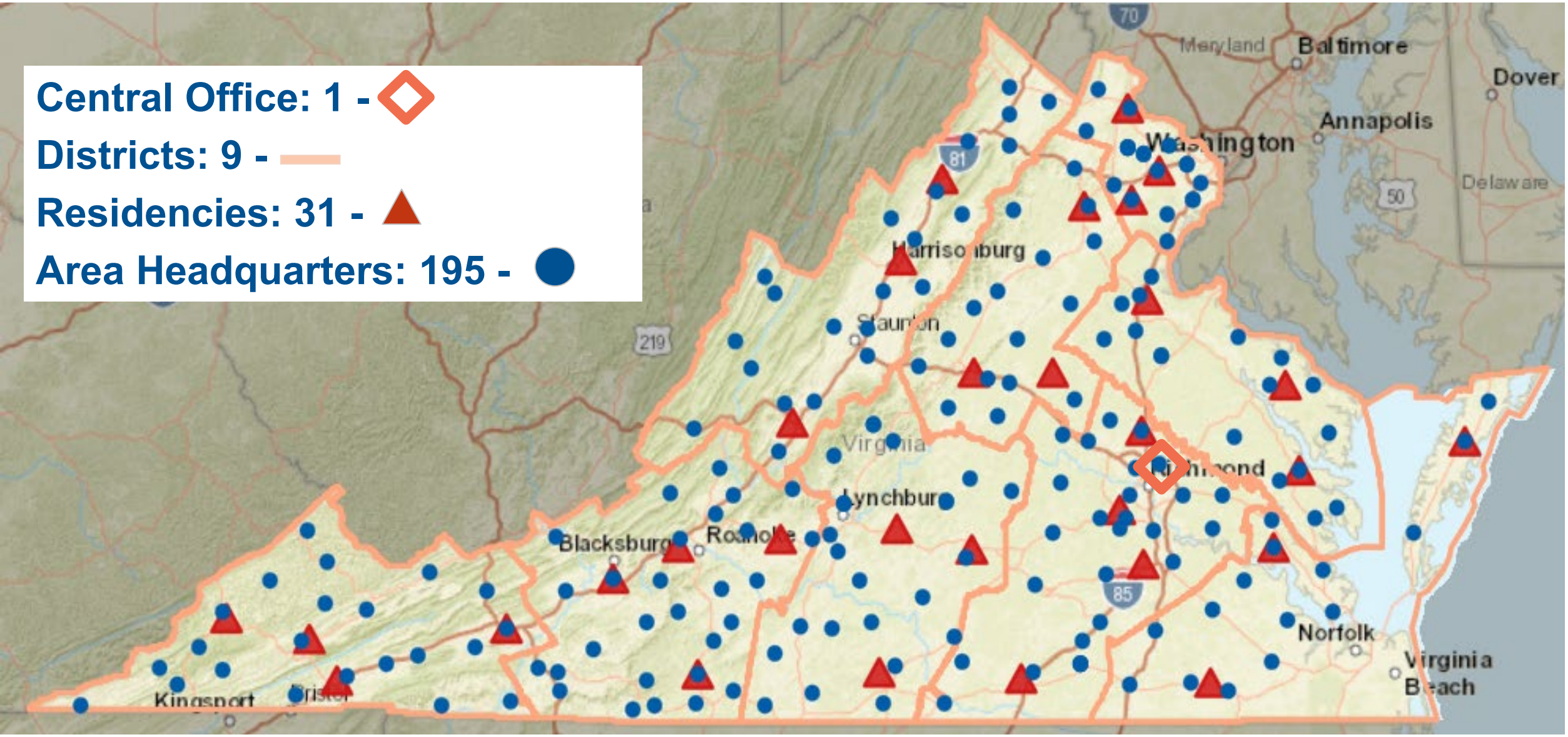
Network Growth – Pavements and Bridges

Asset Growth	2007	2025
Pavements	Miles – 57,700 Lane Miles – 125,400	Miles – 59,700 Lane Miles – 130,400
Bridges	20,800	21,200

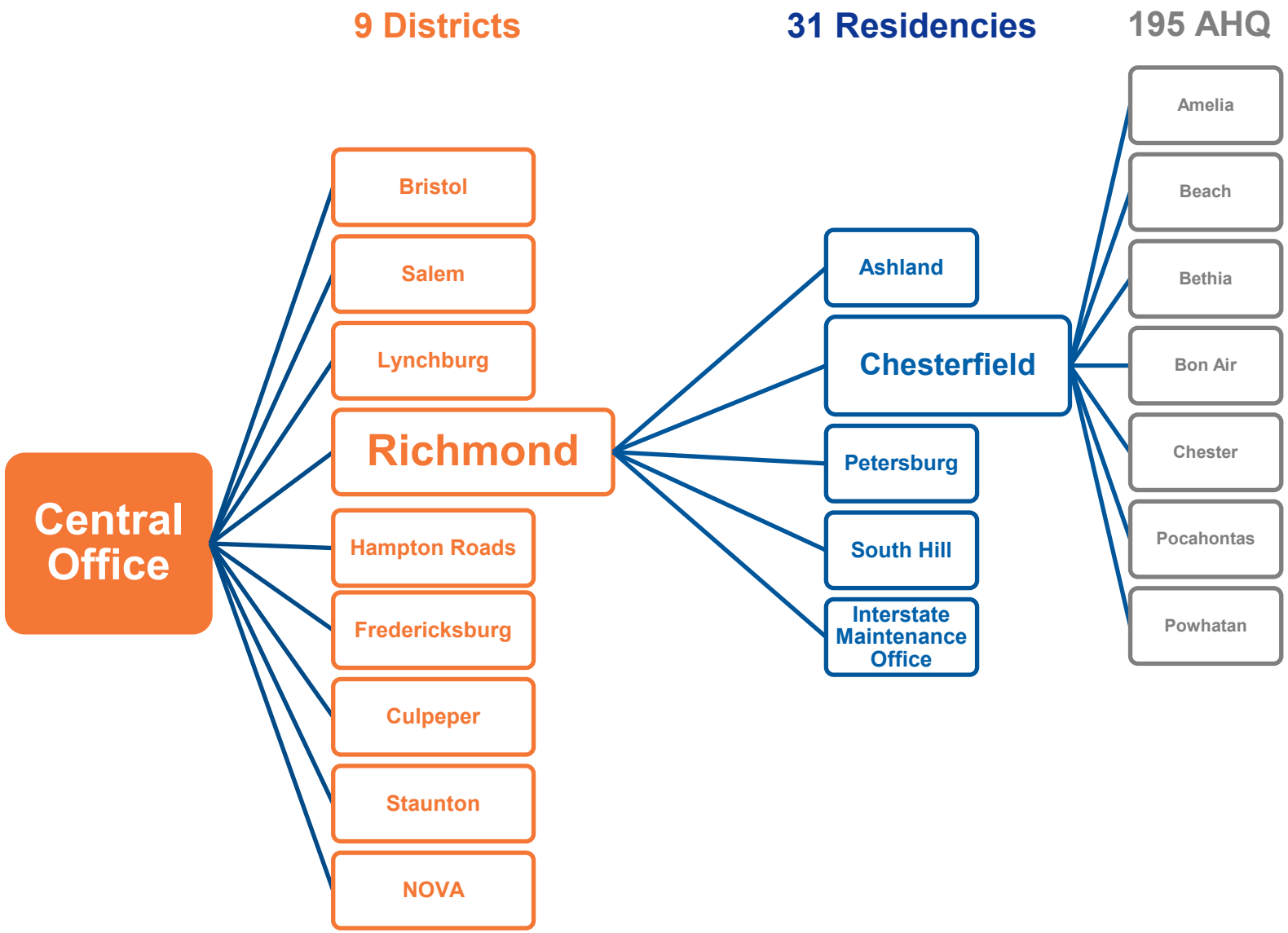
Asset Tracking and Accomplishments

- 2007 – VDOT work reactive
  - Deferred Work – soundwalls/fences, commuter lots, signs – night inspection replacements and daylighting, ditching
- 2012 – New Commonwealth financial system
  - Financial system, prior to 2012, FMSII, was a VDOT specific financial system
  - New financial system doesn't allow tracking to a granular level to assets/services work
- 2019 – VDOT focused on proactive approach
  - Following work plans
  - Additional tasks set up to track expenses
  - More inventory collected

VDOT – Work Locations



2019 Routine Maintenance – Organization Structure



2019 Routine Maintenance – Long Term Sustainability

Moving to a proactive approach (back to basics) to provide:

- Efficiencies through a planned and systematic approach
- Extend life of assets and limit the unavailability
  - Most assets are interdependent

Review undertaken to define target frequency

- Activities selected based on:
  - Safety items
  - Highest expenditures
  - Most publicly visible
  - Extend the life of other assets
  - Service requests

2019 Routine Maintenance – Performance Targets

Asset	Best Practice Frequency	Actual 2019 Accomplishments Average / Year	2019 Target Frequency
Turf (Mowing)	3 times / year	IS: 3.1 times / year PR: 3.1 times / year SC: 2.3 times/ year	IS: 3 times / year PR: 3 times / year SC: 2 times/ year
Trees	10% of inventory	5% of inventory	6% of inventory
Pipes	20% of inventory	8% of inventory	10% of inventory
SWM Facilities	2 times / year	1.67 times / year	2 times / year
Ditches	20% of inventory	3% of inventory	5% of inventory
Unpaved Roads	4 times / year	5 times / year	4 times / year
Unpaved Shoulders	20% of inventory	16% of inventory	20% of inventory
Signs	7% of inventory	4% of inventory	5% of inventory
Signals	5 year cycle	4% of inventory	5 year cycle
Pavement Marking	Material dependent	64% of inventory	70% of inventory

Routine Maintenance – Performance Targets – October 14, 2025

Asset	2019 Interim Target			FY 2024 Frequency Avg. / yr	FY 2024 Additional Funding (One Time Infusion - $50M)	FY 2025 Frequency Avg. / yr
	Frequency	Estimated Quantity				
Turf (Mowing and PGR)	IS: 3 times / yr PR: 3 times / yr SC: 2 times/ yr	340,600	acres	IS: 2 times / yr PR: 3 times / yr SC: 2 times/ yr	$0	IS: 2 times / yr PR: 3 times / yr SC: 2 times/ yr
Trees	6% of inventory	8,200	shoulder miles	19%	$10M	15%
Pipes (includes inspection)	10% of inventory	33,900	each	25%*	$20M	16%*
SWM Facilities	2 times / yr	4,400	each	3 times / yr	$4M	2 times / yr
Ditches (includes inspection)	5% of inventory	4,400	ditch miles	8%*	$10M	4%*
Unpaved Roads	4 times / yr	25,500	center line miles	5 times / yr	$0	5 times / yr
Unpaved Shoulders	20% of inventory	14,800	shoulder miles	24%	$6M	17%
Signs	5% of inventory	47,300	each	5%	$0	4%
Signals	20% of inventory	630	each	14%	$0	Developing New Performance Measures and New System
Pavement Marking	70% of inventory	50,800	miles	57%	$0	51%

*Inspection task added in 2024

PIPES - replacement: Salem District







After



PIPES – storm damage: Lynchburg District



Before



After

PIPES: Fredericksburg District



Before



After

PIPES: Staunton District



Before



After

STORM WATER BASIN: Bristol District



Before



After

STORM WATER BASIN: Salem District



Before



After

STORM WATER BASIN: Salem District



Before



After

STORM WATER BASIN: Richmond District



Before



After

STORM WATER BASIN: Richmond District



Before



After

STORM WATER BASIN: Northern Virginia District – view 1



Before



After

STORM WATER BASIN: Northern Virginia District – view 2



Before



After

DITCHES: Bristol District



Before



After



Before



After

DITCHES: Bristol District



Before



After

DITCHES: Hampton Roads District



Before



After

DITCHES: Fredericksburg District







Before

After

UNPAVED SHOULDERS: Bristol District



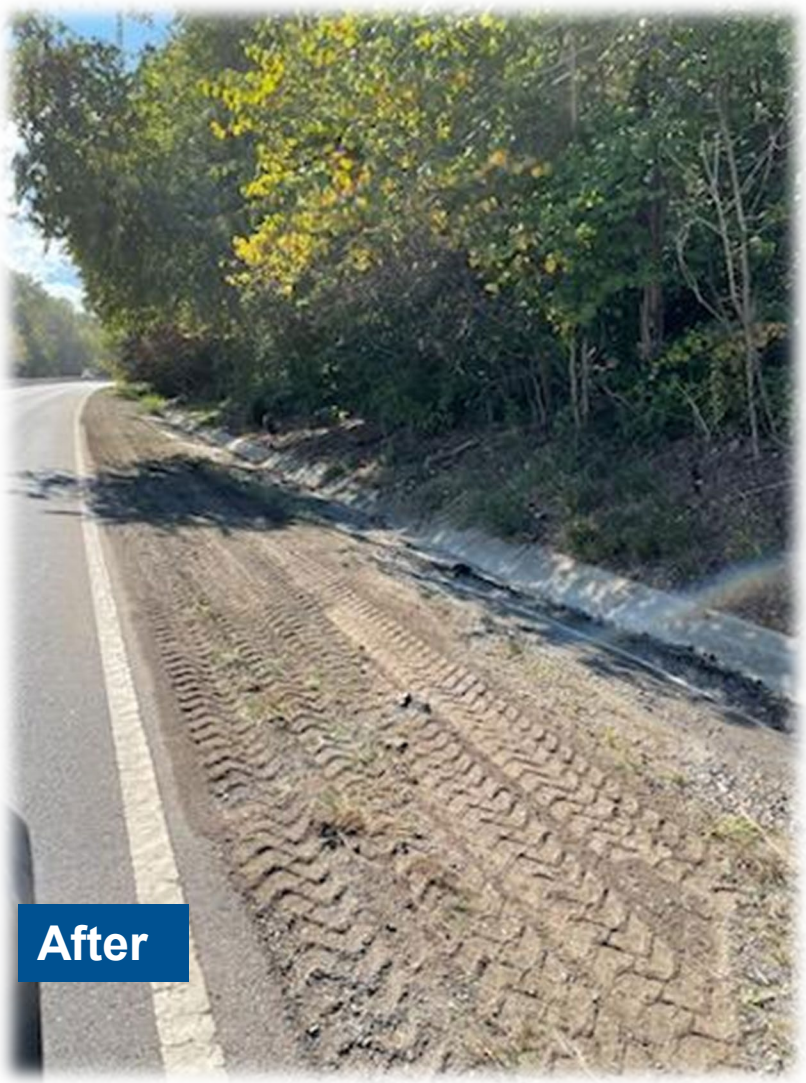
Before



After

UNPAVED SHOULDERS: Salem District





UNPAVED ROADS: Staunton District



Before



After

VEGETATION REMOVAL: Northern Virginia District



Before



After

UNPAVED ROADS: Northern Virginia District





PATCHING: Fredericksburg District



Before





After

DRAINAGE: Hampton Roads District



Before



After

Emergencies

Maintenance and Operations Program - Flexibility

Dynamic Maintenance Needs

- Extreme weather events
  - Snow and ice
  - Hurricanes
  - Floods
- Unexpected events
  - Bridge hits
  - Sinkhole
  - Traffic impeding objects
  - Unfunded mandates







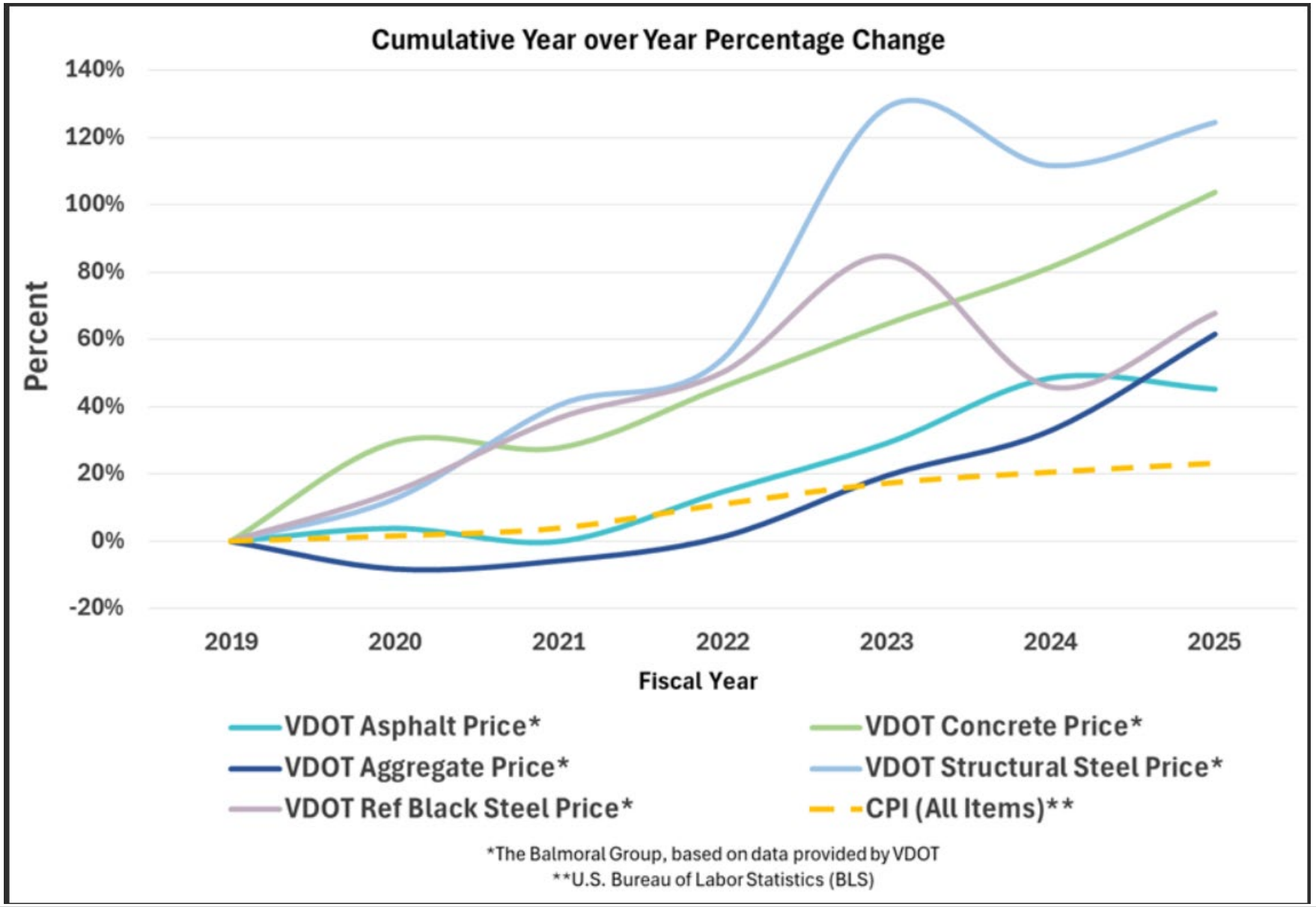




Need to Retain Flexibility

Maintenance and Operations Program Impacts - Examples

Commodities Price Change vs CPI



CTB January 2025 - Increased Maintenance Cost Impacts

(in millions)	2026	2027	2028	2029	2030	2031	Total
VDOT Maintenance & Operations							
HRBT Expansion Operations	$8.4	$29.8	$30.9	$32.2	$33.5	$34.4	**$169.2**
Additional funding for Paving/Routine Maintenance*	283.3	100.0	102.3	104.7	107.1	109.5	**806.8**
Financial Assistance to Localities							
Cities	57.7	20.4	20.8	21.3	21.8	22.3	**164.3**
Arlington and Henrico	10.2	3.6	3.7	3.8	3.9	4.0	**29.2**
Total	**$359.6**	**$153.7**	**$157.8**	**$161.9**	**$166.2**	**$170.2**	**$1,169.4**

The increased funding for maintenance directly reduces the funds available for construction

***$23.25M for routine maintenance and $260M for pavements**

Labor Cost Increases – 2019 - 2026

VDOT Labor



VDOT labor increases absorbed within existing budget

Fiscal Year	Compensation Increase (%)	Amount	Cumulative Cost Increase*
		$ in millions	
2020	2.75% + Merit Based 2.25%	$17.8	$17.8
2021	N/A	$0	$17.8
2022	5%	$13.9	$31.7
2023	5% + $1,000 bonus	$26.2	$58.0
2024	5% + 2.0% mid-year + HR Market Adj	$30.8	$83.2
2025	3% + 1.5% bonus + HR Market Adj	$20.2	$103.4
2026	3% + HR Market + $1,500 bonus	$23.2	$121.1

*One time bonus removed in the next fiscal year

Contract Labor (Example: Rest Areas)

Fiscal Year	Rest Area Contract Cost $ in millions	% Increase	Cumulative Cost Increase $ in millions
2018 - 2021	$15.6		
2022*	$19.1	22%	$3.5
2023	$19.1		$7.0
2024	$19.1		$10.5
2025	$29.3	35%	$10.2
2026	$29.3		$20.4

Long Term contract typically over 8 to 10 years with CPI increases available
*Emergency contracts – contractor default



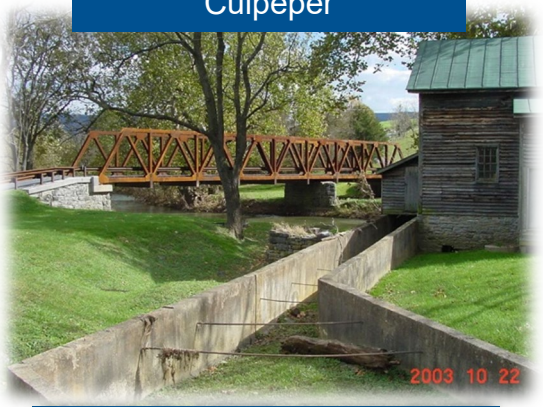
Bridge and Pavement Increases – 2019 - 2026



Staunton

Bridge	2019	2026	Unit	% Increase
Concrete Slab Contract	$129	$236	SF	83%
Type B Patching	$819	$2,039	SY	149%
Overlay (Latex) - Furnish	$1,191	$1,878	SY	58%
Overlay (Latex) - Place	$76	$117	SY	55%
Cr Reinf. Steel Cl. I Spr. Struct. Const.	$3	$5	LB	47%
Cr Reinf. Steel Cl. Iii Spr. Struct. Const.	$4	$6	LB	58%
Epoxy Overlay	$56	$195	SY	249%
Structural Steel	$73	$88	LB	20%
Concrete Class A3, Substructu. Const.	$1,159	$2,341	CY	102%
Expansion Joint Reconstruction High Early Strength Concrete	$385	$744	LF	93%
High Early Strength Concrete Patching Type B	$735	$1,825	SY	148%

Culpeper



Lynchburg



Route 460 Rubblization

Pavement	2019	2026	Unit	% Increase
Base Mixes	$81.46	$110.18	Ton	35%
Intermediate Mixes	$73.21	$100.90	Ton	38%
Latex Modified - B	$277.53	$371.49	Ton	34%
Latex Modified - C	$213.91	$303.14	Ton	42%
Modified Double Seal	$2.16	$3.18	SY	47%
Modified Single Seal	$1.30	$2.21	SY	70%
Planing 0-2"	$1.75	$2.17	SY	24%
Planing Above 2-4"	$2.94	$3.47	SY	18%
Shoulder Stones	$35.09	$54.21	Ton	54%
Slurry Seal - A	$2.27	$3.51	SY	55%
Slurry Seal - B	$2.14	$3.12	SY	46%
Slurry Seal - C	$2.25	$3.29	SY	46%
SMA	$115.19	$158.45	Ton	38%
SMA-19.0	$103.66	$205.00	Ton	98%
Surface Mixes	$74.93	$110.35	Ton	47%
Tack	$1.39	$3.01	Gal	117%
Pavement marking Thermoplastic	$0.90	$0.99	LF	10%
Pavement marking B-6 tape	$3.48	$5.08	LF	46%
Pavement marking Latex	$0.07	$0.11	LF	57%

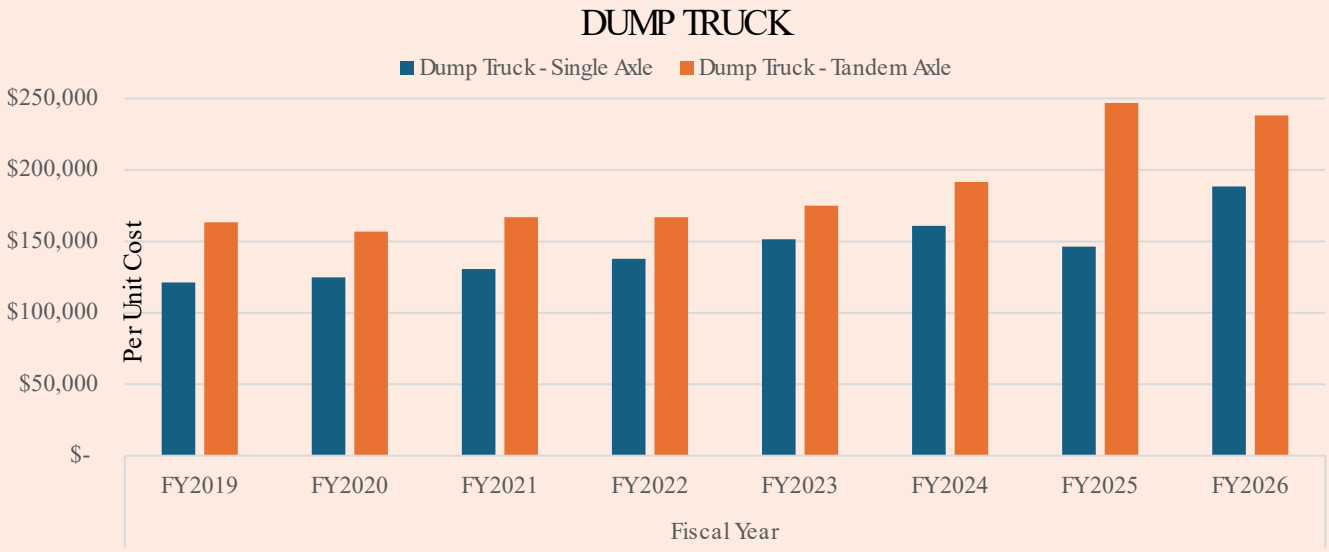
Equipment Cost Increases – 2019 - 2026



Dump Truck - Single



Dump Truck - Tandem



- Average cost increase – 34%
- Uses: Haul loads, emergencies (snow and ice removal, other weather events)

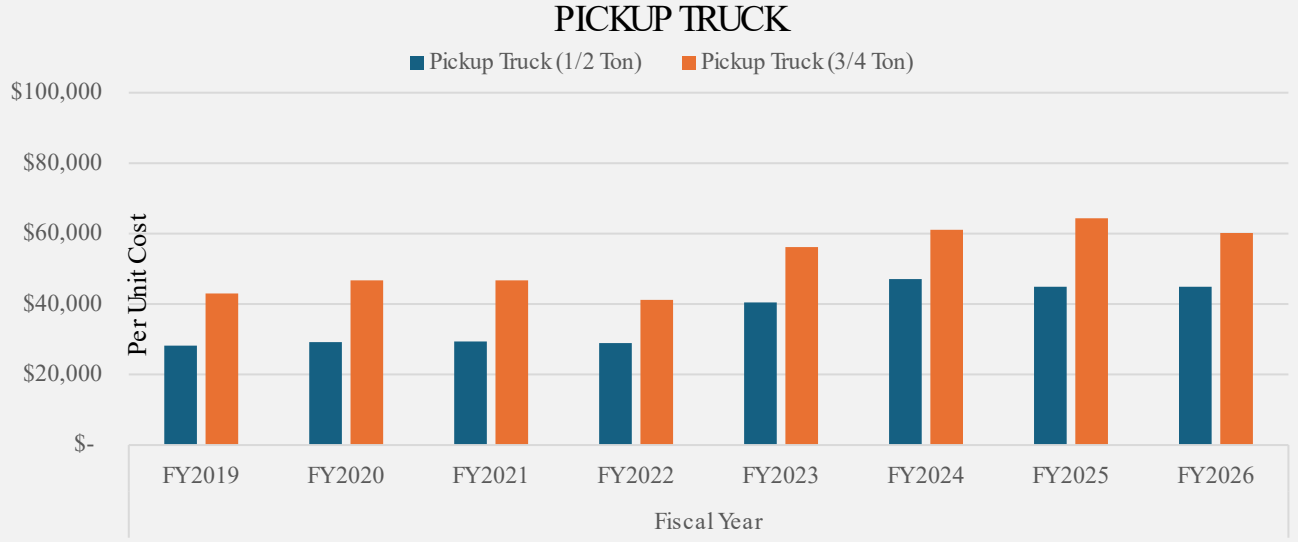
- Average cost increase – 33%
- Uses: Monitoring work, inspection, emergencies

Pickup Truck – ½ Ton





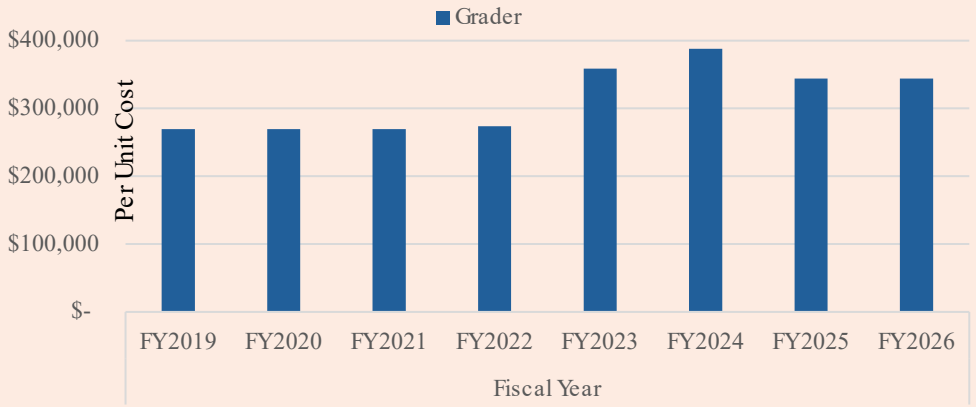
Pickup Truck – ¾ Ton



Equipment Cost Increases – 2019 - 2026



Motor Grader

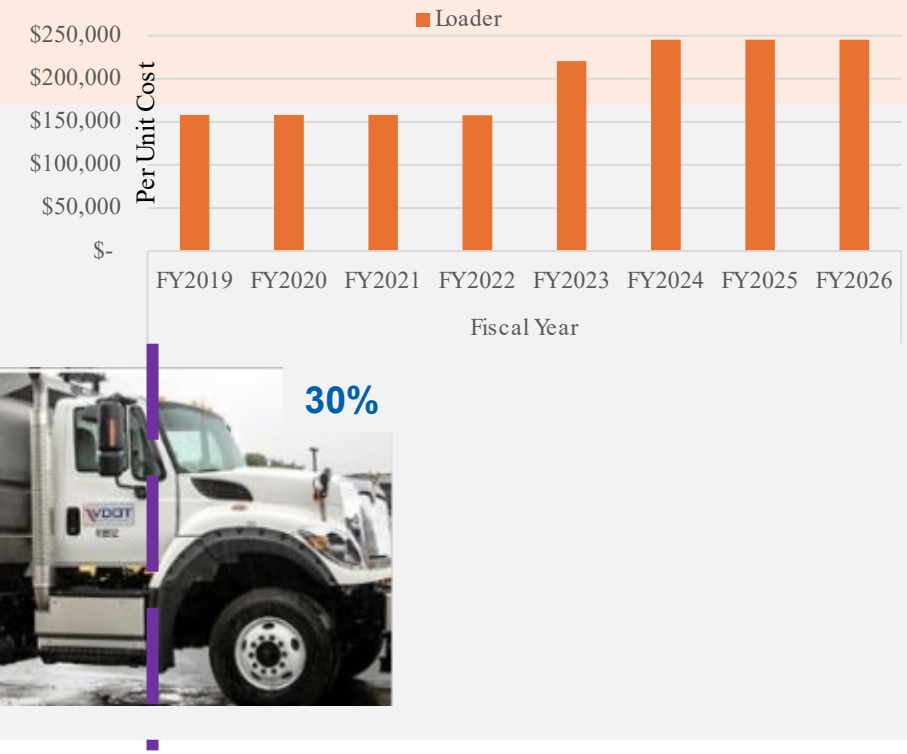


- Average Increase: 22%
- Uses: Unpaved roads, drainage work, emergencies



Wheel Loader

- Average Increase: 36%
- Uses: debris removal, material transport, excavation, emergencies



- Core equipment prices have increased on average over 30%
- Experienced supply chain disruptions until recently
  - 2023/2024 – purchasing focused on lower priority equipment due to supply chain issues
- Aging Fleet
  - Maintenance costs increase
  - Mileage increases – impact resale

Traffic Operations - Assets and Services

Richmond



Traffic Operation Centers (TOC)

TOC and SSP

- Long Term Contract (over 9 years)
- Contract will be reprocured in 2026 – Estimated $65M to $75M

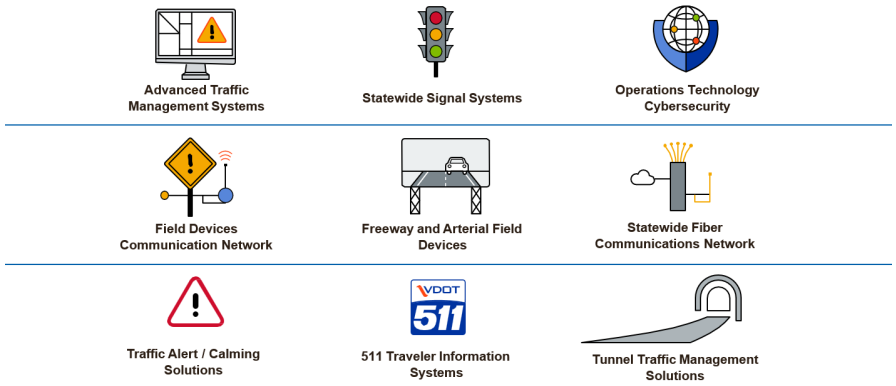
Contract Year	2018	2026	Amount	% Increase
	$ in millions			
Statewide Total	$33.9	$57.4	$23.5	69%
TOC	$11.4	$21.1	$9.7	85%
SSP	$21.9	$35.9	$14.0	64%
Training	$0.7	$0.4	($0.3)	(4.3%)



Safety Service Patrol (SSP)

Virginia Integrated Solution for Traffic Operations Applications (VISTA)

- Update Intelligent Transportation Systems (ITS)
- Update Advanced Traffic Management Systems (ATMS)
- Long Term Contract (over 9 years)
- Contract will be reprocured starting in mid-2026



Assets Funded - As Needed Basis

Assets Funded - As Needed Basis
Sound Walls and Commuter Lots

Hampton Roads



Before



After

Sound Walls

- 2023 - compiled inventory and condition
- CTB approved funding to assist in replacements – 2024/2026
- Still have over 1 million square feet to address (or 5%)

Fredericksburg

Before



Northern Virginia



Before



After

Commuter Lots

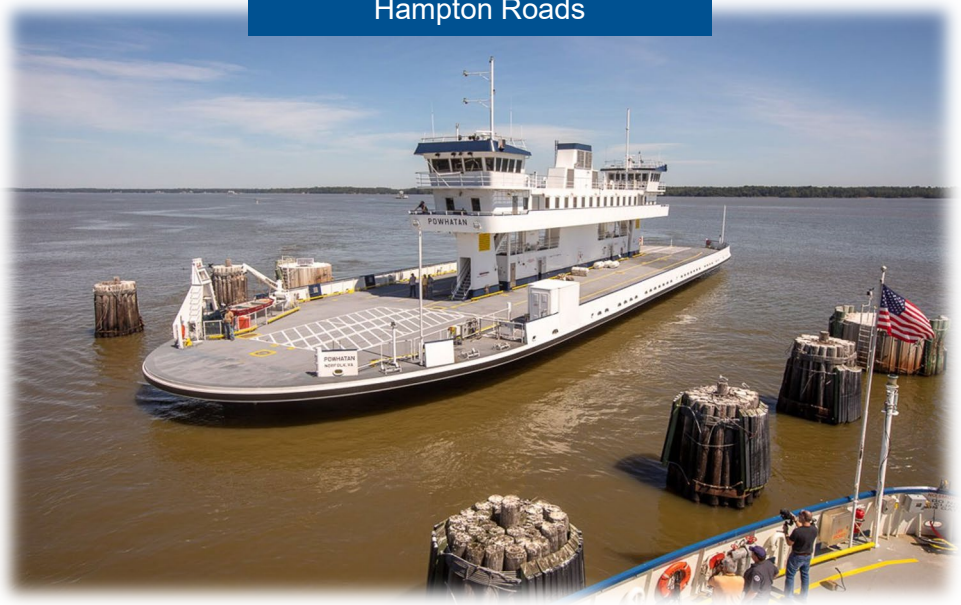
- 2023 - compiled inventory and condition
- CTB approved funding to assist in Parking Lot overlays – 2024/2026
- Still have 64 lots to address

After



Assets Funded - As Needed Basis
Differing and Diverse Assets

Hampton Roads



Ferries

Description	Powhatan	Pocahontas	Williamsburg	Surry	Virginia
Vessel Age	2019 (7) Years	1995 (31) Years	1983 (43) Years	1979 (47) Years	1936 (83) Years
Engine Build Date	2017	1994	1983	1979	1936
Vessel Re-Power	N/A	2021	N/A	N/A	1973
Fuel Consumption	70 Gallons/Hour	70 Gallons/Hour	36 Gallons/Hour	36 Gallons/Hour	30 Gallons/Hour
Vehicle Capacity	70	70	50	50	25

VDOT operates and funds ferry services

- 2019 Replacement Cost - $22M
- Estimated Replacement Cost in 2026 - $75M to $85M
- Pier/dolphins/fenders – currently use grants
- Rehabilitation – currently use grants

Virginia Ferry - 1936

- Hover Dam was completed
- The Hindenburg completed its maiden voyage
- Gone with the Wind novel released (the film in 1939)
- Jesse Owens won four Olympic gold medals
- Franklin D. Roosevelt reelected to 2nd term
- San Francisco-Oakland Bay Bridge opens
- Girl Scout cookies began sales nationally
- 1st Social Security numbers were issued



Assets Funded - As Needed Basis
Differing and Diverse Assets



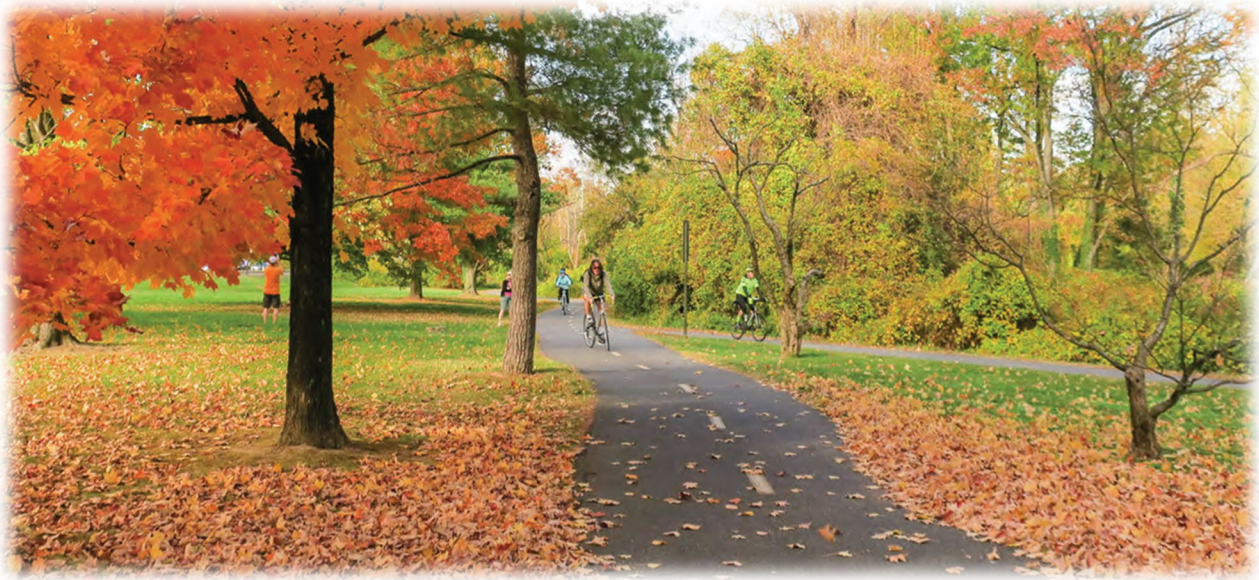






Trails

- Over 1,500 miles of existing trails
- More than 2,900 miles planned
- Specialized equipment is required



Conclusion - Maintenance and Operations Program

VDOT must work within a fiscally constrained budget

VDOT's budget is not keeping pace with costs

Presentation provides just some examples of deferred work

Keep in mind - assets are interdependent

- **Work such as drainage activities (ditching, pipe replacement) must be completed in advance of long-term investments (pavements and bridges), to ensure long term sustainability of the asset**

In December, the CTB must consider approval of a long-term sustainable approach for current and future assets and services

NEXT STEPS

Upcoming CTB Meetings

Description	CTB Meeting Date
Bridge and Pavement Re-baseline	July 21,2026
Routine Maintenance Set Targets	September 15, 2026
Special Structures	October 14, 2026
CTB approval	December 9, 2026