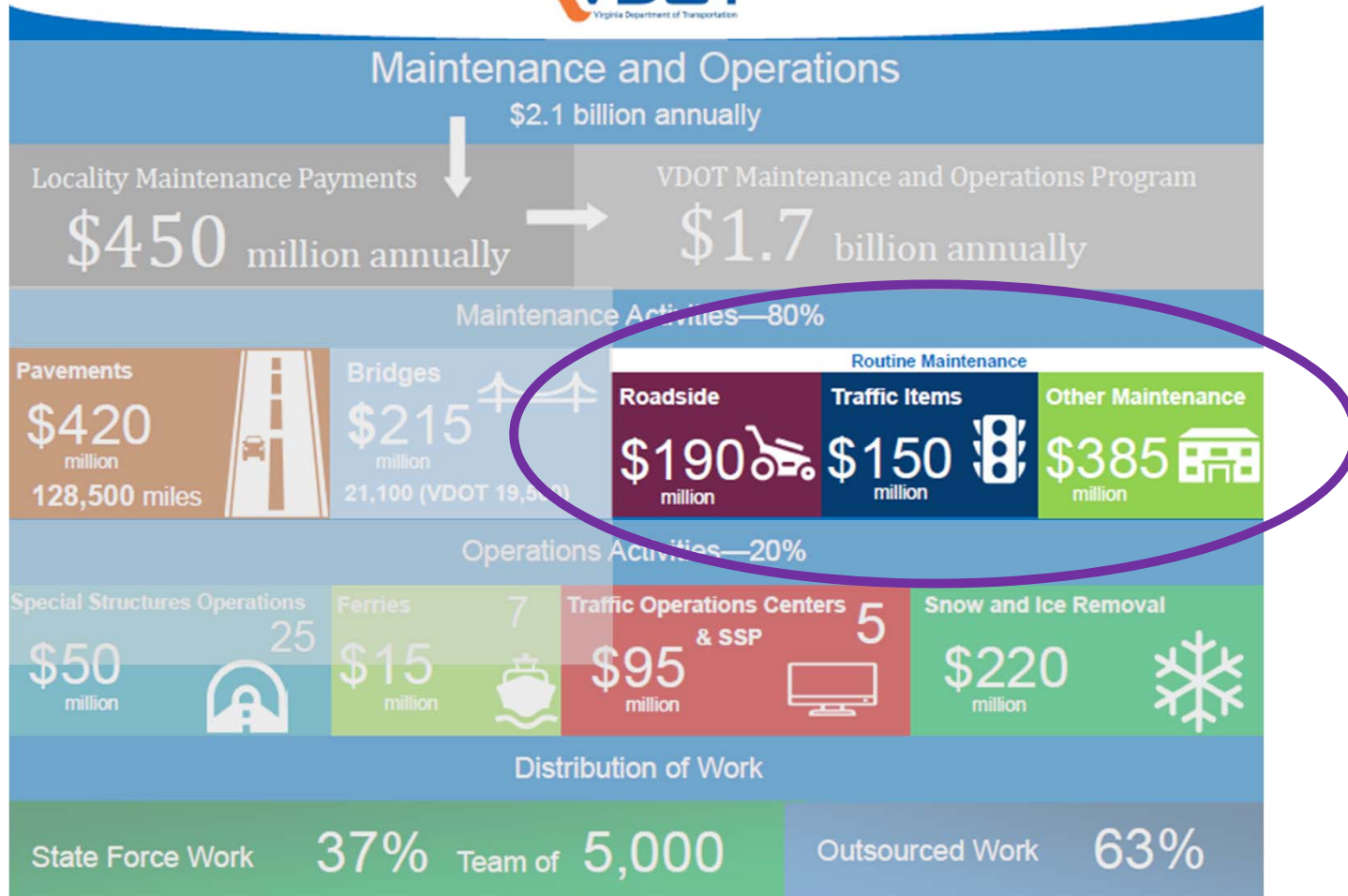




COMPREHENSIVE REVIEW ROUTINE MAINTENANCE

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

October 16, 2019



Note: Funding and Activities based on previous three fiscal year averages (FY 2016 – FY 2018); numbers are rounded to the nearest \$5 million

Routine Maintenance

VDOT – Work Areas








Central Office: 1

Districts: 9

Residencies: 31

Area Headquarters: 194

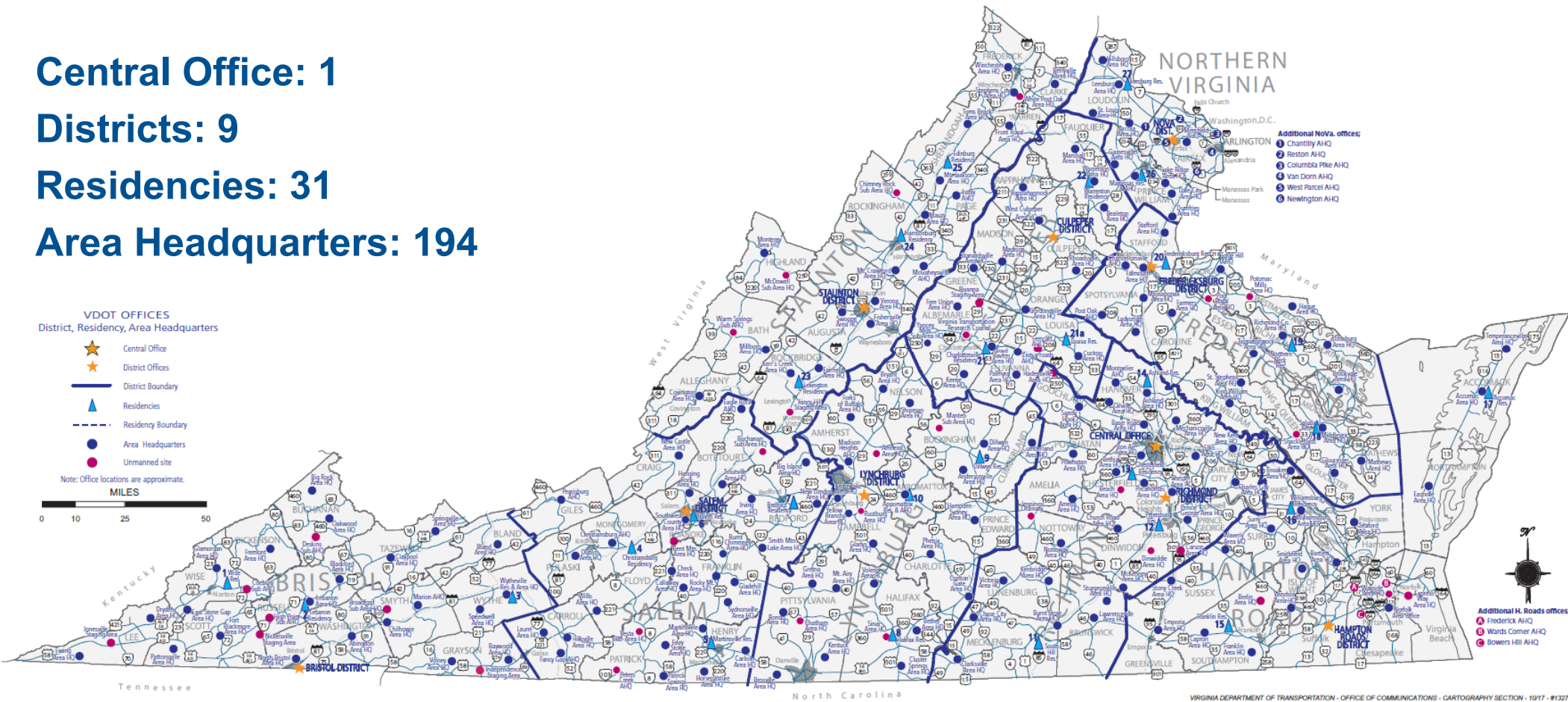
VDOT OFFICES
District, Residency, Area Headquarters

-  Central Office
-  District Offices
-  District Boundary
-  Residencies
-  Residency Boundary
-  Area Headquarters
-  Unmanned site




Note: Office locations are approximate.

MILES

0 10 25 50



- Additional NoVa. offices:
-  Chantilly AHQ
 -  Reston AHQ
 -  Columbia Pike AHQ
 -  Van Dorn AHQ
 -  West Parcel AHQ
 -  Newington AHQ

- Additional H. Roads offices:
-  Frederick AHQ
 -  Wards Corner AHQ
 -  Bowers Hill AHQ

VIRGINIA DEPARTMENT OF TRANSPORTATION - OFFICE OF COMMUNICATIONS - CARTOGRAPHY SECTION - 10/17 - #1327.2



Virginia Department of Transportation

Routine Maintenance – Current Practice

Currently balancing planned versus unplanned work

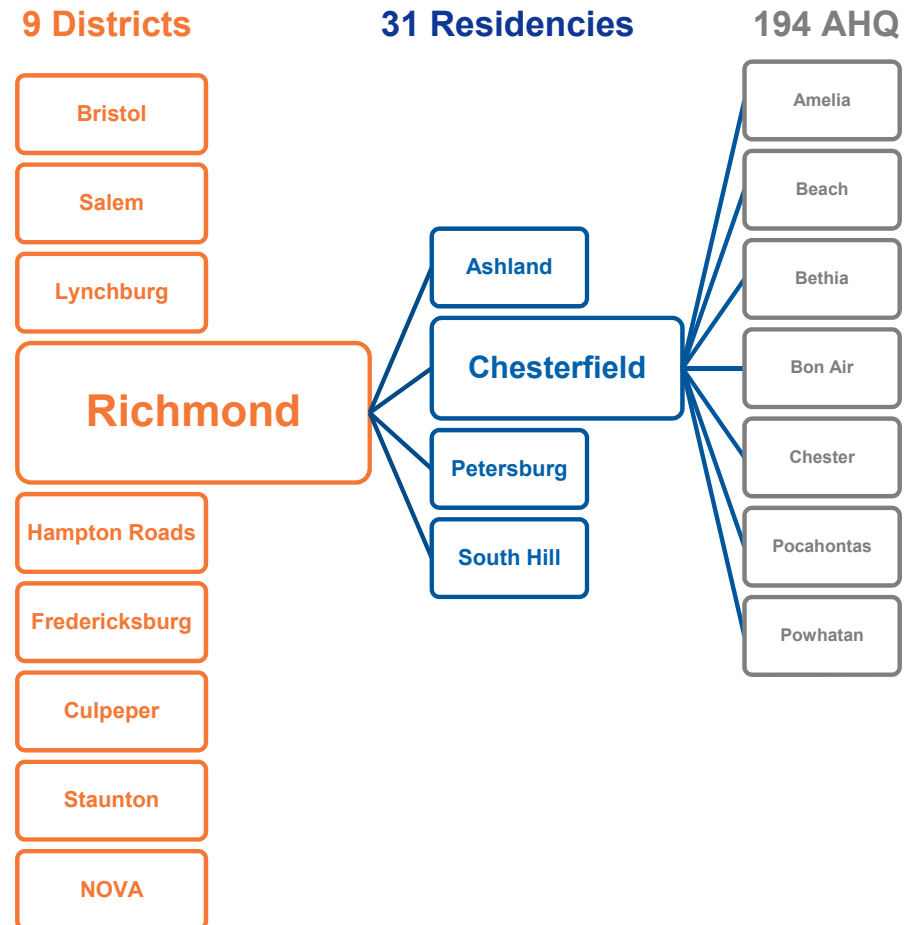
Deferred work

- Sound walls/fences
- Night sign inspection for replacements
- Daylighting of signs
- Ditching
- Maintenance of closed drainage facilities

Area Headquarters

- Salaries
- Equipment
- Average materials cost: ~ \$20,000 per month

Budget Distribution



Routine Maintenance – Back to Basics

Need to move to a proactive approach to provide:

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

Performance Metrics in coordination with the best practices have been developed

Asset	Service Request Calls 2015	Service Request Calls 2019	Service Request Increase since 2015	Activity Example
Vegetation	17,300	30,400	76%	Removing vegetation impeding visibility, mowing, trees
Drainage	20,000	29,500	48%	Clearing standing water or blocked pipes, cleaning
Unpaved Roads	10,700	12,800	20%	Address rutting or water damage
Signs	3,500	7,500	114%	Replace damaged sign
Signals	4,900	7,000	43%	Attend to outages, malfunctions

Routine Maintenance – Long Term Sustainability

Analysis undertaken to define Performance Metrics and targets

- A number of activities selected based on:
 - Safety items
 - Highest expenditures
 - Most publicly visible
 - Extend the life of other assets
 - Service requests
- Targets are benchmarks and some not immediately achievable



Routine Maintenance – 2019 Performance Metrics

Asset	Best Practice Frequency	Current Frequency 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

Maintenance and Operations – Labor and Benefits

Maintenance and Operations Program

- **Employees: over 7,700**
 - **Maintenance ~ 4,800**
 - **62% work force**
- **Labor and benefits: 23% average of annual budget**
- **Budget 17% change over 6 years**

Labor and Benefits

- **20% increase over 6 Years (FY 2014 – 2019)**
 - **Salaries 14% increase over 6 years**
 - **Health Insurance Premium 39% increase over 6 Years**
 - **Retirement Contribution Defined Benefit 60% change over 6 Years**

Maintenance and Operations Program - Flexibility

Dynamic Maintenance Needs

- Annual inventory additions
 - Lane miles
 - Trails

Emergencies

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



Need to Retain Flexibility

Routine Maintenance Summary

What is Funding Needed Today? \$0

Back to Basics

- **Proactive approach**
 - Reduce number of service requests
 - Extend life of assets
 - Continue to create efficiencies in processes
 - Equipment (e.g., lease vs own)
 - Materials (e.g., concrete vs. plastic pipes)
 - Repair process choices (e.g., soil nails vs rip rap slope protection)
 - Transparency
- **Annual reporting**



Comprehensive Review Timeline

Description	Date
Special Structures/Comprehensive Review and Approval Request	November 2019
Submission of Comprehensive Review Report to General Assembly	December 2019
Periodic Reporting and Reassessment	Begin in 2020

