



COMMONWEALTH of VIRGINIA

DEPARTMENT OF TRANSPORTATION
1401 EAST BROAD STREET
RICHMOND, VIRGINIA 23219 2000

Charles A. Kilpatrick, P.E.
Commissioner

October 4, 2016

The Honorable S. Chris Jones
Chairman, House Appropriations Committee
P.O. Box 5059
Suffolk, Virginia 23435-0059

The Honorable Thomas K. Norment, Jr.
Co-Chairman, Senate Finance Committee
P.O. Box 6205
Williamsburg, VA 23188

The Honorable Emmett W. Hanger, Jr.
Co-Chairman, Senate Finance Committee
P.O. Box 2
Mount Solon, VA 22843-0002

The Honorable Ronald A. Villanueva
Chairman, House Transportation Committee
P.O. Box 61005
Virginia Beach, VA 23466

The Honorable Charles W. Carrico, Sr.
Chairman, Senate Transportation Committee
P.O. Box 1100
Galax, VA 24333

Dear Gentlemen:

I am forwarding to you the second report required by Item 445 E. of Chapter 2 of the 2014 Acts of the Assembly (Special Session I). In 2014, in accord with Item 445 E., the Virginia Department of Transportation (VDOT) prepared and submitted to the Chairmen of the House Appropriations, Senate Finance and House and Senate Transportation Committees a report on the conditions of secondary pavements by county, and the expenditure of funds for secondary pavement maintenance in the Richmond District by county in FY2013. Item 445 E. of Chapter 2

The Honorable S. Chris Jones
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of the 2014 Acts of the Assembly also required VDOT to submit an updated report concerning the condition of and expenditures for secondary pavements by county in the Richmond District that also provides an update on the availability of condition data on the secondary system and VDOT's progress at implementing the requirements of Chapter 290 of the 2013 Acts of Assembly. This report represents the updated report required by Item 445. E.

If you have any questions or need additional information, please contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'C. Kilpatrick', written over a light blue horizontal line.

Charles A. Kilpatrick, P.E.
Commissioner of Highway

Attachment

cc: The Honorable Aubrey L. Layne, Jr.



Richmond District Secondary Pavement Report—Updated Report

Pursuant to:

Item 445. E. of Chapter 2, 2014 Acts of the Assembly (Special Session I)
Chapter 665, 2015 Acts of the Assembly

Virginia Department of Transportation
1401 East Broad Street
Richmond, Virginia 23219
June 28, 2016

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Executive Summary

Item 445. E. of Chapter 2 of the 2014 Acts of the Assembly (Special Session I) and Chapter 665 of the 2015 Acts of the Assembly directed the Virginia Department of Transportation (VDOT) to report on the condition of, and expenditures for secondary pavement maintenance in the Richmond District by County in FY 2013. If the first report indicated that there were significant disparities in condition of secondary road pavements between counties within Richmond District, VDOT was directed to adjust the expenditure of funds for FY 2015 and FY 2016 to reduce the disparities to a minimum, provided that VDOT took steps to ensure the safety of the driving public in the event of unforeseen events¹. The legislation required that an updated report be provided in 2015, and required that report to also include an update on the availability of condition data on the secondary system and VDOT's progress at implementing the requirements of Chapter 290 of the 2013 Acts of Assembly. This report represents the updated report required by Item 445. E.

For the purpose of this report, VDOT gathered and analyzed the Richmond District data from the State of The Pavement Report by county within Richmond District. This updated report includes FY 2014 information relating to pavement conditions while the financial information contained herein includes information from planned paving projects for 2015. It was observed that there were some disparities in condition of secondary roads by county in terms of percent deficient pavements. It was also observed that Richmond District has been allocating funds for the secondary paving program to address the deficiencies and to ensure that each locality receives appropriate attention and the available limited resources are utilized efficiently.

¹ The 2014 Report published pursuant to Item 445. E. is set out at the following link:
[http://leg2.state.va.us/dls/h&sdocs.nsf/By+Year/RD3752014/\\$file/RD375.pdf](http://leg2.state.va.us/dls/h&sdocs.nsf/By+Year/RD3752014/$file/RD375.pdf)

It is therefore concluded that VDOT does not need to adjust funding allocations since the current methodology utilized by the District takes into account the relative deficiencies of secondary pavements by county within the District.

Introduction

The Virginia Department of Transportation (VDOT) is responsible for more than 127,000 lane miles of roadway. Virginia's current highway network is the result of more than 100 years of investment in infrastructure that provides safe, easy movement of people and goods and enhances the economy of the Commonwealth. Preserving this investment is a core function of VDOT. VDOT has established a performance target that 65% of the secondary pavement network statewide will have pavement condition rating of "sufficient".

Richmond District is one of nine (9) districts in the Commonwealth that provides services to localities and coordinates the construction and maintenance operations within its jurisdiction. It consists of four (4) Residency Offices that provide services to a total of fourteen (14) counties. The counties served by Richmond District are Brunswick, Lunenburg, Mecklenburg, Dinwiddie, Nottoway, Prince George, Amelia, Chesterfield, Powhatan, Charles City, Henrico, New Kent, Goochland and Hanover.

Item 445, E of Chapter 2 of the 2014 Acts of the Assembly (Special Session I)/Chapter 665 of the 2015 Acts of the Assembly directed VDOT (the Department):

to utilize the data collected for its State of the Pavement Report to review the conditions of secondary pavements by county within the VDOT Richmond District. By October 15, 2014 the Department shall report to the Chairmen of the House Appropriations, Senate Finance, and House and Senate Transportation Committees on the conditions of secondary pavements by county, and the expenditure of funds for secondary pavement maintenance in the Richmond District by county in fiscal year 2013. If the report indicates that there are significant disparities in the condition of secondary pavements between counties in the Richmond District then the Department is hereby directed to ensure that the expenditure of funds for secondary pavements maintenance within the Richmond District in fiscal year 2015 and fiscal year 2016 shall be adjusted to achieve a minimal level of disparity between the pavement conditions in each county, provided that the Department take all

steps necessary to ensure the safety of the driving public in the event of unforeseen events that may require the expenditure of funds to deviate from this directive. An update to the report, which shall include an update on the availability of condition data on the secondary system and the Department's progress at implementing the requirements of Chapter 290 of the 2013 Acts of Assembly shall be presented to the Chairmen of the House Appropriations, Senate Finance, and House and Senate Transportation Committees by October 15, 2015.

This report represents the updates required by item 445.E. and utilizes information collected and analyzed by the Virginia Department of Transportation over the last few years to include data on secondary road inventory, deficient pavements and planned paving within the Richmond District.

Methodology

The data utilized in this study comes from the VDOT State of the Pavement Report. The pavement condition data presented in this report were collected and processed by VDOT's contractor using continuous digital imaging and automated crack detection technology. The process and the software utilized for the condition rating is a proven technology and well established within the pavement management community nationwide.

Data are collected by the above-mentioned method on the entire Interstate and primary highway systems, and approximately 20% of secondary system of highways, each year. For this report a 5 year average (2010-2014) was utilized to obtain a network-wide coverage of the secondary road system within Richmond District. The distresses, such as cracking and other surface deformations, are interpreted according to the methodology detailed in the VDOT Distress Identification Manual, processed, and summarized in a pre-defined format. Quality

Control (QC) of the data is provided by the contractor and Quality Assurance (QA) and Independent Validation and Verification (IV&V) are performed by a third party consultant. VDOT then accepts the data based on predefined acceptance criteria.

Pursuant to the requirements of Chapter 290 of the 2013 Acts of Assembly, secondary pavement condition data and ratings are updated quarterly and are made available on the Department's website. This information is available as tabulated data at the following location:

State of the Pavement Report- www.virginiadot.org/info/state_of_the_pavement.asp

Furthermore, all pavement condition data and planned paving information is shown in GIS maps on the Department's website:

Virginia Roads- <http://varoads/Mapping/#PavementConditions>

The data presented in this report uses the State of Pavement Report and the planned paving projects by county, within the Richmond District. Not all maintenance funding affects the pavement condition and therefore the expenditure information in this report is from the planned secondary road paving projects that would have had a direct impact on improving the road condition or preventing deficiencies.

In order to provide a comprehensive investigation into conditions of secondary pavements utilizing the State of the Pavement Report and associated funding distribution by county within the Richmond District, the following information was compiled:

- Percentage of Deficient Secondary Pavement vs. Percentage of Lane Miles (Chart 1)
- Annual Funds for Secondary Resurfacing (Table 1)

Chart 1 – Percentage of Deficient Secondary Pavement in Districts vs. Percentage of Lane Miles and % of FY 14 Planned Paving

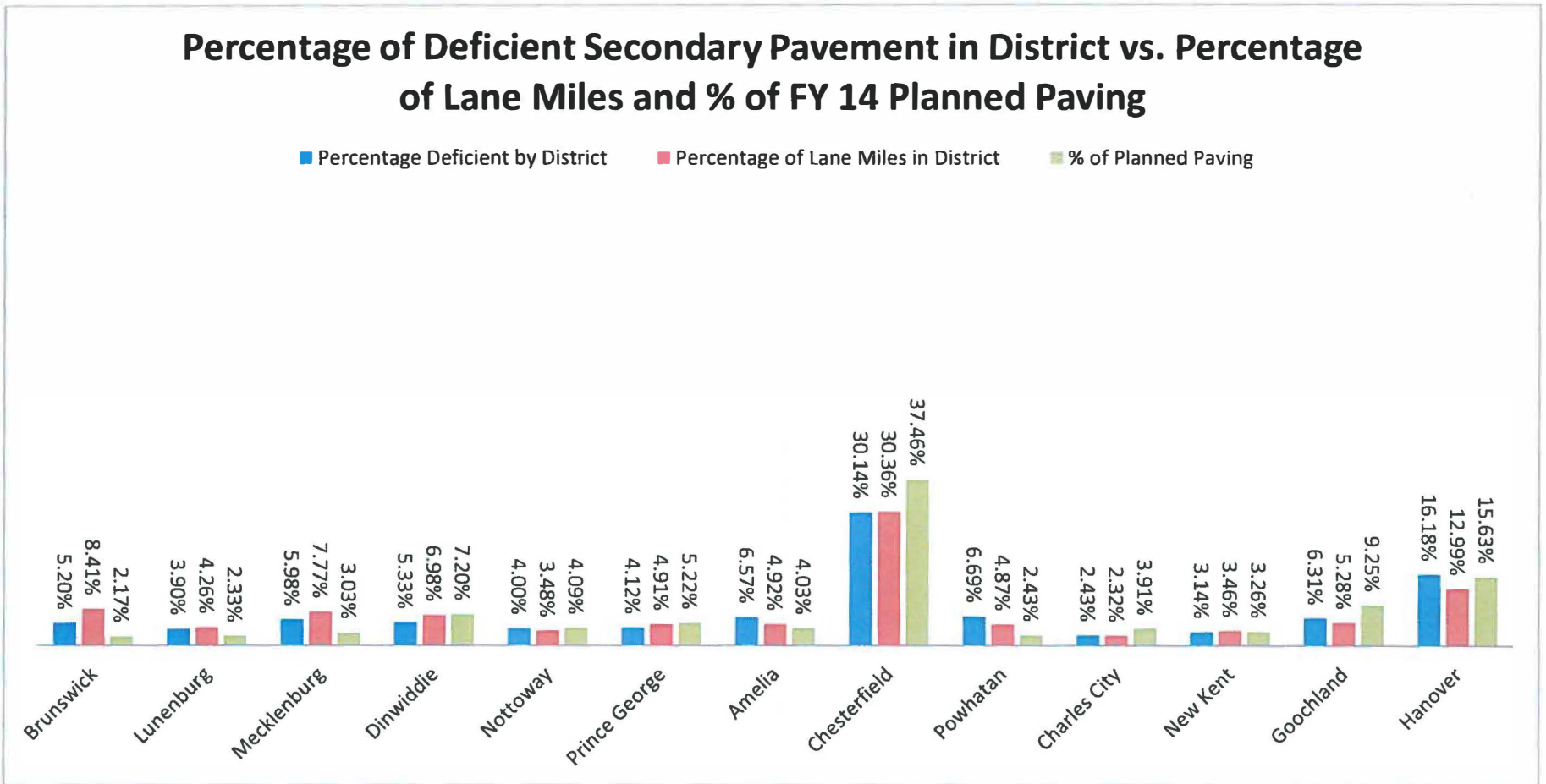


Table 1 - Annual Funds for Secondary Resurfacing

RESIDENCY	COUNTY	2010 - 2014 Totals/Averages				% of District Total Deficient	% of Planned Paving	2015 Funds Planned Paving Dollars per County
		Lane Miles Rated	% of District Total	Deficient Lane Miles	% of Locality Deficient			
South Hill	Brunswick	975	8.41%	255	26.10%	5.20%	2.17%	939,887
	Lunenburg	494	4.26%	191	38.70%	3.90%	2.33%	1,009,692
	Mecklenburg	901	7.77%	293	32.50%	5.98%	3.03%	1,314,340
Petersburg	Dinwiddie	810	6.98%	261	32.20%	5.33%	7.20%	3,125,145
	Nottoway	404	3.48%	196	48.60%	4.00%	4.09%	1,775,294
	Prince George	569	4.91%	202	35.40%	4.12%	5.22%	2,266,799
Chesterfield	Amelia	571	4.92%	322	56.40%	6.57%	4.03%	1,748,317
	Chesterfield	3521	30.36%	1477	42.00%	30.14%	37.46%	16,260,336
	Powhatan	565	4.87%	328	58.10%	6.69%	2.43%	1,052,949
Ashland S	Charles City	269	2.32%	119	44.30%	2.43%	3.91%	1,695,798
	New Kent	401	3.46%	154	38.40%	3.14%	3.26%	1,415,819
Ashland N	Goochland	613	5.28%	309	50.40%	6.31%	9.25%	4,014,819
	Hanover	1507	12.99%	793	52.60%	16.18%	15.63%	6,786,376
Total		11599	100%	4900		100.00%	100.00%	43,405,571

Conclusion

VDOT currently uses a needs based budgeting approach to ensure that all deficiencies are noted and adequate funding is requested to support a systematic approach to maintaining and preserving the highway systems throughout the Commonwealth. Although there are some disparities between counties as to the percentage of deficient pavements, Richmond District has been allocating funds for the secondary paving program, by county, based on the percentage of deficient pavements in order to alleviate these disparities. This ensures all localities receive appropriate attention and limited available resources are used effectively and efficiently. Pavement condition is assessed annually on 100 percent of the Interstate and primary systems while for the secondary system, a 20 percent sample is assessed.

The reader should further note that at the time the information for this report was collected (Fall of 2015) the higher percentage of paving work was planned and to be performed and funding to be spent where the highest percentage of deficiencies were being realized such as in (i) Chesterfield County (the county with the highest deficiency percentage) where the planned work represented approximately 37.5% of the Richmond District's planned paving for the season and (ii) Hanover County (the county with the second highest deficiency percentage) where planned paving projects represented approximately 15.6% of the District's planned paving for the season. See Chart 1 and Table 1 for additional data.

It is also noted, for instance, that, for the 2015 paving season, Richmond district planned to pave and resurface approximately 200 lane miles of secondary pavements in Chesterfield County. This represented approximately 6% of the entire secondary pavement network in Chesterfield. This work was expected to be completed in late 2015 or early 2016. The latest

sample data used for this report was collected in late 2014 through early 2015 and therefore does not reflect this work. Although the condition of the secondary pavement network in Chesterfield County stayed approximately the same in the last two years, it is expected to show improvement when all the planned work is completed. Richmond District has further planned to resurface another 133 lane miles of secondary pavements in Chesterfield County in calendar year 2016 with the potential for adding more resurfacing work depending on the availability of funds. The Department is currently collecting 100% of the secondary pavement data statewide to establish a baseline for the condition of the secondary pavement network.

It is therefore concluded that VDOT does not need to adjust funding allocations for secondary pavement in the counties in Richmond District since the current methodology utilized by the District takes into account the deficiencies of secondary pavements by county within the District. VDOT has complied and will continue to comply with the requirements of Chapter 290 of the 2013 Acts of Assembly. All pavement condition data are available on the Department's website both in tabular form and as information overlaid on GIS maps and are being updated on a quarterly basis.