



COMMONWEALTH of VIRGINIA

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

Charles A. Kilpatrick, P.E.
Commissioner

October 27, 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 report required by Item 445.F. of Chapter 665 of the 2015 Acts of the Assembly. The Virginia Department of Transportation (VDOT) was directed to provide a report to the Chairmen of the House Committees of Transportation and Appropriations and the Senate Committees on Transportation and Finance that includes (i) for each construction district the amount of money expended on system maintenance for the preceding year; (ii) the amount of money expended for secondary system improvements by jurisdiction for the preceding year; (iii) a calculation for each district of the amount that would have been spent if the funds were

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distributed on the basis of population estimates by locality as provided by the July 1, 2014 Weldon Cooper Center for Public Service estimates published in 2015; (iv) an assessment of whether VDOT has met its secondary road pavement targets by district and on a statewide basis; and (v) an update on the availability of condition data on the secondary system and detail on the Department's proposed condition indices for the measurement of bridge and pavement condition. The attached document represents the report required by Item 445.F.

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

Sincerely,

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

Attachment

cc: The Honorable Aubrey L. Layne, Jr.



Statewide System Maintenance and Secondary System Improvements Report

Pursuant to:
Item 445.F. of Chapter 665, 2015 Acts of the Assembly

Virginia Department of Transportation
1401 East Broad Street
Richmond, Virginia 23219
October 27, 2016

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Executive Summary

Pursuant to Item 445.F. of Chapter 665 of the 2015 Acts of the Assembly, the Virginia Department of Transportation (VDOT) was directed to provide a report to the Chairmen of the House Committees of Transportation and Appropriations and the Senate Committees on Transportation and Finance that includes (i) for each construction district the amount of money expended on system maintenance for the preceding year; (ii) the amount of money expended for secondary system improvements by jurisdiction for the preceding year; (iii) a calculation for each district of the amount that would have been spent if the funds were distributed on the basis of population estimates by locality as provided by the July 1, 2014 Weldon Cooper Center for Public Service estimates published in 2015; (iv) an assessment of whether VDOT has met its secondary road pavement targets by district and on a statewide basis; and (v) an update on the availability of condition data on the secondary system and detail on the Department's proposed condition indices for the measurement of bridge and pavement condition.

For the purpose of this study, VDOT used the secondary pavement condition data from the 2014 [State of the Pavement](#)¹ Report. The expenditures for system maintenance and for secondary system improvements are provided as reported in VDOT's and the Commonwealth's financial system (Cardinal).

In response to the dictates of Item 445. F.:

- (i) The previous fiscal year expenditures for system maintenance and secondary system improvements totaled more than \$1.4 Billion; the distribution by construction district of the system maintenance expenditures is shown in Table 1 and the distribution of secondary system improvement expenditures by jurisdiction is shown in Table 2.
- (ii) The distribution calculation of these expenditures, had they been based on population, is shown in Table 3.
- (iii) Based on the most recent published State of the Pavement Report, VDOT is meeting its pavement performance goals statewide for Interstate and primary pavements, while falling short of the performance target for the secondary system. The data can be found in the following link on VDOT's website:
http://www.virginiadot.org/info/state_of_the_pavement.asp
- (iv) Condition data on the secondary system and detail on the Department's proposed condition indices for the measurement of bridge and pavement condition are available in the [State of the Pavement](#) and the [State of the Structures](#)² Reports posted on VDOT's website.

¹ The 2014 State of the Pavement Report is located at the following link:
http://www.virginiadot.org/info/resources/State_of_the_Pavement_2014.pdf

² The FY2014 State of the Structures Report is located at the following link:http://www.virginiadot.org/business/resources/bridge/2014-07-FY2014-State_of_the_Structures_and_Bridge_Report-Generated_2015-01-08.pdf

Introduction

The Virginia Department of Transportation 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.

There are over 21,000 structures (bridges and culverts) that are *inventoried* and *inspected* by VDOT. VDOT is responsible for the *maintenance* of over 19,500 of these structures while the remaining structures are maintained by localities or private owners.

VDOT has established a statewide performance target that 65% of the secondary pavement network will have "sufficient" pavement rating. The annual pavement assessment currently evaluates the entire Interstate and primary systems, while utilizing a sampling approach of approximately 20% of the inventory for evaluating the condition of the secondary system³. VDOT utilized the most recent results of these assessments as presented in the [State of the Pavement Report](#) and [State of the Structures Report](#) and expenditures from the most recently completed fiscal year as reported in Cardinal in order to respond to the requirements of Item 445.F. of Chapter 665 of the 2015 Acts of the Assembly shown below.

F. Consistent with the provisions of § 33.2-232 and § 33.2-371, Code of Virginia, as amended by the 2015 General Assembly, the Commissioner of the Department of Transportation is hereby directed to publish for each construction district the amount of money expended for system maintenance and for secondary system improvements by jurisdiction for the preceding year. The report shall also include a calculation for each district of the amount that would be spent if such funds were distributed annually on the basis of population estimates by locality as updated by the Weldon Cooper Center for Public Service. Finally, the report shall include an assessment of whether the department has met its secondary road pavement targets, by district and on a statewide basis. An update to the report, which shall include an update on the availability of condition data on the secondary system and detail on the Department's proposed condition indices for the measurement of bridge and pavement condition, shall be provided to the Chairmen of the House Committees of Transportation and Appropriations and the Senate Committees on Transportation and Finance no later than November 15, 2015.

³ It is noted that for the Calendar Year 2016 pavement assessment, 100% of the Secondary system will be evaluated.

Methodology

The data utilized in this study comes from the 2014 VDOT State of the Pavement Report, the 2014 VDOT State of the Structures Report as well as Cardinal (VDOT's financial system) for fiscal year 2015 (FY 2015) annual expenditures.

Expenditures

The expenditure details were obtained from Cardinal for FY 2015. System maintenance expenditures are summarized for each construction district in Table 1 while secondary system improvement expenditures are summarized by jurisdiction or locality in Table 2.

For this report, the expenditures set out in Table 1 and Table 2 were redistributed by construction district based on the locality population estimates provided by the July 1, 2014 Weldon Cooper Center for Public Service estimates published in 2015 and are shown in Table 3.

Condition Data

The 2014 State of the Pavement report link is provided as the source of the condition and performance reporting of the secondary system pavements. The 2014 State of the Pavement Report and 2014 State of the Structures Report links are provided as the source of the planned condition performance indices for pavements and structures.

Table 1: FY 2015 Construction District System Maintenance Expenditures

District	Interstate	Primary	Secondary	Total
Bristol	\$20,180,226	\$42,639,489	\$75,304,201	\$138,123,916
Salem	19,187,276	35,846,609	81,707,229	136,741,115
Lynchburg	20,173	30,173,985	46,168,488	76,362,646
Richmond	39,619,184	62,414,352	65,936,554	167,970,091
Hampton Roads	69,281,637	25,694,685	28,758,960	123,735,281
Fredericksburg	5,096,590	39,474,796	45,698,365	90,269,751
Culpeper	9,091,722	23,597,003	39,467,551	72,156,275
Staunton	28,025,513	37,622,387	55,269,601	120,917,501
Northern Virginia	53,673,450	79,419,453	143,423,570	276,516,474
Central Office	33,341,912	899,496	4,214,002	38,455,410
Total	\$277,517,684	\$377,782,254	\$585,948,521	\$1,241,248,459

Table 2: FY 2015 Secondary Improvements Expenditures by Locality

District	Jurisdiction	Secondary Improvements
Bristol	Bland	\$1,134,795
	Buchanan County	208,981
	Dickenson	539,791
	Grayson	46,057
	Lee	927,658
	Russell	230,488
	Scott	1,959,062
	Smyth	3,269,415
	Tazewell County	2,274,786
	Washington County	10,768,550
	Wise County	1,056,975
	Wythe	1,978,411
Bristol Total		\$24,394,970
Salem	Bedford County	\$969,074
	Botetourt	3,097,175
	Carroll	1,723,870
	Craig	2,668
	Floyd County	634,365
	Franklin County	632,427
	Giles	378,974
	Henry	1,474,584
	Montgomery	3,549,363
	Patrick	175,757
	Pulaski County	878,644
Roanoke County	1,049,351	
Salem Total		\$14,566,252

District	Jurisdiction	Secondary Improvements
Lynchburg	Amherst County	\$878,024
	Appomattox County	2,525
	Buckingham	325,366
	Campbell	203,540
	Charlotte	1,453,121
	Cumberland	53,766
	Halifax County	1,879,543
	Nelson	9,675
	Pittsylvania	2,944,261
	Prince Edward	4,444,095
Lynchburg Total		\$12,193,916
Richmond	Amelia	\$4,986,840
	Brunswick	1,829,011
	Charles City	354,475
	Chesterfield	4,837,701
	Dinwiddie	1,347,545
	Goochland	139,762
	Hanover	5,839,699
	Henrico	108,070
	Lunenburg	1,074,005
	Mecklenburg	694,723
	New Kent	72,595
	Nottoway	117,513
	Powhatan	3,463,482
Prince George	92,885	
Richmond Total		\$24,958,306
Hampton Roads	Accomack	\$1,790,005
	Greensville	137,174
	Isle Of Wight	1,332,735
	James City County	295,753
	Northampton	572,237
	Southampton	2,599,470
	Surry County	1,295,899
	Sussex	475,627
York	3,593,509	
Hampton Roads Total		\$12,092,408
Fredericksburg	Caroline	\$1,699,907
	Essex	701,926
	Gloucester	2,520,117
	King And Queen	368,334
	King George	322,578
King William	193,477	

District	Jurisdiction	Secondary Improvements
	Lancaster	91,204
	Mathews	15,666
	Middlesex	82,456
	Northumberland	228,146
	Richmond County	240,026
	Spotsylvania	6,333,944
	Stafford	6,648,597
	Westmoreland	1,087,131
Fredericksburg Total		\$20,533,509
Culpeper	Albemarle	\$4,737,662
	Culpeper	8,362
	Fauquier	2,480,657
	Fluvanna	174,270
	Greene	228,314
	Louisa County	334,533
	Madison County	156,350
	Orange	68,219
	Rappahannock	396,768
Culpeper Total		\$8,585,135
Staunton	Alleghany	\$250,756
	Augusta	2,433,544
	Bath	773,051
	Clarke	361,091
	Frederick	667,611
	Page	283,640
	Rockbridge	829,995
	Rockingham	1,536,670
	Shenandoah County	1,827,972
	Warren	1,423,818
Staunton Total		\$10,388,147
Northern Virginia	Arlington	\$320,813
	Fairfax County	36,718,609
	Loudoun	19,716,319
	Prince William	2,055,099
Northern Virginia Total		\$58,810,841
Total		\$186,523,483

Table 3: A calculation for each district of the amount that would be spent if such funds were distributed annually on the basis of population estimates by jurisdiction or locality

System Maintenance ¹			Difference		Secondary Improvements ²			Difference	
District	Total FY 2015 Expenditures	Population Distribution	Dollars	Percent	District	Total FY 2015 Expenditures	Population Distribution	Dollars	Percent
Bristol	\$ 138,123,916	\$ 81,035,893	\$ 57,088,023	41%	Bristol	\$ 24,394,970	\$ 11,023,726	\$ 13,371,244	55%
Salem	136,741,115	126,580,536	10,160,579	7%	Salem	14,566,252	17,219,396	(2,653,144)	-18%
Lynchburg	76,362,646	67,019,856	9,342,790	12%	Lynchburg	12,193,916	9,117,053	3,076,863	25%
Richmond	167,970,091	158,263,879	9,706,211	6%	Richmond	24,958,306	31,796,608	(6,838,302)	-27%
Hampton Roads	123,735,281	64,132,778	59,602,504	48%	Hampton Roads	12,092,408	8,724,309	3,368,099	28%
Fredericksburg	90,269,751	109,523,870	(19,254,119)	-21%	Fredericksburg	20,533,509	14,899,091	5,634,419	27%
Culpeper	72,156,275	84,239,802	(12,083,527)	-17%	Culpeper	8,585,135	11,459,570	(2,874,435)	-33%
Staunton	120,917,501	95,205,242	25,712,259	21%	Staunton	10,388,147	12,951,255	(2,563,108)	-25%
Northern Virginia	276,516,474	455,246,603	(178,730,129)	-65%	Northern Virginia	58,810,841	69,332,476	(10,521,636)	-18%
Central Office	38,455,410	-	38,455,410	100%	Central Office	-	-	-	-
TOTAL	\$ 1,241,248,459	\$ 1,241,248,459			TOTAL	\$ 186,523,483	\$ 186,523,483		

¹ For the calculation requested, cities within the Districts that maintain their own streets with Financial Assistance from VDOT were removed from the population data. Henrico County and Arlington County were also removed as counties that maintain their own streets. In FY 2015, Arlington County received \$17.3 million and Henrico County received \$77.7 million in maintenance payments. ² Secondary system improvement expenditures in FY 2015 are not directly correlated to an allocation that was provided in FY 2015. Some projects spend funding provided in a previous fiscal year.

Assessment/Achievement of Secondary Road Pavement Targets

The secondary pavement condition reported in the FY 2014 State of the Pavement report demonstrates that VDOT has not currently achieved pavement performance targets for the secondary system and may be found in the following link:

http://www.virginiadot.org/info/resources/State_of_the_Pavement_2014.pdf.

Additional information concerning pavement conditions is presented in the report submitted as required by 445.E.

Availability of Condition Data on the Secondary System/Detail on the Department's Proposed Condition Indices for Bridge and Pavement Condition

Condition data on the secondary system as well as proposed condition indices for pavement and bridge condition are available in the 2014 State of the Pavement and the 2014 State of the Structures reports published on VDOT's website. Pavement condition data is also available as overlays on maps published at: <http://virginiaroads.org/>.

Conclusion

This report has been prepared in accord with the dictates of Item 445.F of Chapter 665 of the 2015 Acts of Assembly.

The amount of money expended for system maintenance in each construction district and for secondary system improvements by jurisdiction for the preceding year has been set forth herein, as has a calculation for each construction district of the amount that would be spent if the funds were distributed on the basis of population estimates by locality as provided by the Weldon Cooper Center for Public Service. Although, as directed, this report provides a calculation of expenditures based on population estimates, VDOT believes that basing the distribution of funds solely on population is not necessarily the most effective way to approach asset management. VDOT uses multiple factors in distributing funds which includes asset conditions, traffic volumes and maintenance history.

An update on the availability of condition data on the secondary system and detail on the Department's proposed condition indices for the measurement of bridge and pavement condition has been provided by means of links to documents that are currently available on VDOT's website bearing the information.