

# PUBLIC WORKS

## Description

The Henrico County Department of Public Works maintains the third largest road network in the State of Virginia after the State of Virginia and the City of Virginia Beach. The Department is responsible for the construction and maintenance of all secondary roads in the County, storm water drainage, administration of Public Transit services, and enforcement of erosion and sedimentation laws and ordinances. The Department is organized into the following divisions: Administration, Design, Maintenance, Construction, Transportation Development, Traffic Engineering, Environmental Control, and Standing Water Initiative.

The majority of departmental services are funded by an allocation of gasoline tax revenues from the State of Virginia and license fee revenue collected in the County's General Fund. In addition, the General Fund provides funding for certain services in accordance with the Board of Supervisors' directives for various programs. These include the Environmental Control Program, Vacuum Leaf services, the JOBS transit service, the Standing Water Initiative, and supplemental funding for the Mass Transit Division.

## Objectives

- To develop and maintain a safe and efficient road system.

- To develop and maintain an efficient and economical storm drainage system.
- To ensure that the construction of road and drainage facilities is accomplished in accordance with appropriate standards and in an environmentally correct manner.
- To review and provide for the most cost-effective system of Public Transit for the residents of the County.
- To provide prompt responses to citizen inquiries or requests for service.
- To enforce Chesapeake Bay Act regulations along with current erosion and sedimentation control ordinances and policies.

## Budget Highlights

The Department's approved budget for FY2018-19 is \$52,701,159, representing an increase of \$2,145,232 or 4.2 percent from the FY2017-18 approved budget. Within this overall approved budget, which combines both Gas Tax and General Fund supported programs, the personnel component is budgeted to increase by a net difference of \$730,977 or 4.4 percent. The

## Annual Fiscal Plan

Description	FY17 Actual	FY18 Original	FY19 Approved	Change 18 to 19
Personnel	\$ 16,995,975	\$ 16,747,328	\$ 17,478,305	4.4%
Operation	32,090,665	32,128,489	33,407,244	4.0%
Capital	1,951,891	1,680,110	1,815,610	8.1%
Total	<u>\$ 51,038,531</u>	<u>\$ 50,555,927</u>	<u>\$ 52,701,159</u>	<u>4.2%</u>
Personnel Complement	259	262 *	263 **	1

\*Two Capital Project Managers added to the Mass Transit & Transportation Division in FY2017-18 in order to assist with locally administered capital projects. A Management Specialist I added to the Environmental Division in FY2017-18 for the inspection of BMPs.

\*\*Construction Inspector added to the Construction Division to help manage the Annual Road and Drainage Contract.

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<b>Performance Measures</b>				
	<b>FY17</b>	<b>FY18</b>	<b>FY19</b>	<b>Change 18 to 19</b>
<b>Workload Measures</b>				
Lane Miles of Road Maintained	3,516	3,521	3,531	10
Traffic Signals Maintained	154	154	155	1
Development Plans Reviewed	1,922	1,975	2,000	25

increase in the personnel component is due to the budgeting of a salary increase in FY2018-19, the addition of a Construction Inspector position, as well as rising health care costs. The operating component is forecasted to increase by \$1,278,755 or 4.0 percent. This increase is primarily attributable to the addition of \$1,200,000 to the Mass Transit division for the expansion of the hours of service on three routes – the Seven Pines route (Route 7), the Laburnum Connector (Route 91), and the Pemberton Route (Route 19) – to 7:00 am to 11:00 pm Monday through Saturday and 10:00 am through 10:00 pm Sunday. This additional service will extend these routes into later evening hours as well as provide weekend service. In addition, the Pemberton Route will be extended from Pemberton Road to West Broad Marketplace in Short Pump. It is important to note that the future funding of this Mass Transit expansion will be contingent on whether there is adequate usage of these expanded services.

Capital outlay expenditures are projected to increase by \$135,500 or 8.1 percent compared to the FY2017-18 approved budget. This increase is due to several large equipment purchases planned for FY2018-19.

The FY2018-19 approved budget is to be funded by \$42,331,218 from the State’s Gas Tax maintenance allocation, \$9,783,430 from the County’s General Fund subsidy, and \$586,511 from miscellaneous departmental revenue. The total projected Gas Tax for FY2018-19 is based on the allocation for operations and maintenance and does not include a construction allocation. If gas tax were allocated for construction, it would be included in the capital budget section of this document. There has not been a construction allocation funded by gas tax since FY2008-09.

The State’s Gas Tax maintenance allocation is utilized for approximately 80.3 percent of the operating budget. In other words, the gas tax allocation will support the Department of Public Works’ divisions except for the Standing Water Initiative and Environmental Inspection. This revenue source is

restricted to roadway maintenance activities.

The functions supported by the General Fund subsidy total \$9,783,430. The General Fund supports 100 percent of expenses related to the Standing Water Initiative and Environmental Inspection divisions which combined total \$2,104,130. The Standing Water Initiative is budgeted at \$434,947 and the Environmental Inspection Division is budgeted at \$1,669,183 for the approved FY2018-19 budget.

General Fund support is also provided for Mass Transit services, feasibility studies for the new road construction funding application process tied to House Bill Two (HB2), and Leaf Collection services. Specifically, General Fund support of \$7,177,800 in FY2018-19 will subsidize the GRTC and JOBS services costs in the Mass Transit budget. The General Fund support for Mass Transit increased by \$1,200,000 or 20.1 percent when compared to last fiscal year. The Mass Transit budget includes additional General Fund support for the expansion of the Seven Pines route (Route 7), the Laburnum Connector (Route 91), and the Pemberton Route (Route 19) with services anticipated to start in September 2018. The expansion of services in FY2018-19 will be the largest local bus route expansion in the past 25 years.

General fund support will also be provided for feasibility studies in the amount of \$200,000. This funding will assist with the HB2 application process which determines eligibility for additional funding for transportation projects.

The Leaf Collection services budget totals \$488,700. Within this total budget, the General Fund will support \$301,500, Leaf Collection Fees will total \$185,000, and the remaining \$2,200 will be provided by miscellaneous revenues. It is important to note that this budget includes free leaf vacuum service for all County residents that currently participate in the Real Estate Tax Advantage Program (REAP).

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The following table depicts the General Fund support for the Department of Public Works:

<b>General Fund Support</b>	<b>FY2018-19</b>
Environmental Inspection	\$1,669,183
Standing Water Initiative	\$434,947
Leaf Collection services	\$301,500
Feasibility Studies	\$200,000
GRTC and JOBS services	\$7,177,800
<b>Total</b>	<b>\$9,783,430</b>

The third and final source of funding is generated from miscellaneous fees, which total \$586,511 for the approved budget. These charges/fees are used as enhancements to the Gas Tax revenue for all divisions with the exception of the Standing Water Initiative and Environmental Inspection divisions.

What follows is a discussion of each of the divisions within the approved budget for Public Works.

Roadway Maintenance and Administration

The total approved budget for the divisions that fall within this group is \$50,597,029. Except for Mass Transit, the Roadway Maintenance and Administration divisions represent the core services to maintain the existing roadway system provided by Public Works and therefore utilize \$42,331,218 of State Gas Tax maintenance allocation in providing these services. The remainder of funding is provided by other revenue in the General Fund, including a \$7,177,800 subsidy to support Mass Transit Services. The personnel component is forecasted to increase by a net difference of \$665,586 or 4.4 percent which reflects the budgeting of a salary increase in FY2018-19, the addition of a Construction Inspector to assist with increasing workloads, as well as increasing health care costs. The operating component reflects a net increase of \$1,271,255 or 4.0 percent compared to the prior fiscal year which is primarily due to the two bus route expansions.

The capital outlay component increased by \$143,000 compared to the prior fiscal year. There are several noteworthy capital purchases forecasted within the \$1,815,610 capital component. The capital outlay items include the following: 2 replacement single axle dump trucks, 8 replacement tandem axle dump trucks, 3 traffic detector camera systems, 2 sheds, 2 variable message boards, 1 new Digger Derrick truck, 2 new pickup trucks, 1 pressure washer, and 5 traffic signal controllers.

Standing Water Initiative Division

The Standing Water Initiative Division is a program that is funded solely through the General Fund at a total cost of \$434,947. The personnel component comprises 80.3 percent or \$349,247 of the total budget. The operating component remains flat compared to the prior fiscal year.

Environmental Inspection Division

The Environmental Inspection Division is funded solely through the General Fund at a total cost of \$1,669,183. The Division's budget is forecasted to increase by \$56,647 or 3.5 percent from the FY2017-18 approved budget. This budgetary increase is entirely due to an increase in the personnel component and reflects a salary increase and rising health care costs in FY2018-19. The operating component reflects an increase of \$7,500 compared to last fiscal year. This increase is due to the movement of funds from the capital component to the operating component. Budget adjustments were made to more accurately reflect planned expenditures in FY2018-19.

**Departmental Highlights**

In 2017, the Department of Public Works accepted over 4 miles of new roads into the county road network. In addition, the department completed over 10,000 inspections of active construction projects. Public Works also secured over \$19.6 million in grant funding for roadway and pedestrian capital projects for FY2018-19.

**Supporting Economic Development**

Public Works continued its role in facilitating economic development in the County by improving access to the road system. The department constructed an extension of the westbound Nuckols Road ramp onto I-295 to facilitate traffic flow in the Innsbrook area. In addition, the department secured a \$650,000 Economic Development Access Program grant from VDOT to extend Engineered Wood Way to accommodate future development. The total project estimate for Engineered Wood Way is \$2,800,000 with the remaining funding of \$2,150,000 being provided by local resources.

**Community Outreach**

The Department of Public Works interacts with the public on a daily basis through its services. As such, it is important that the department keep the community

## *Public Works (cont'd)*

informed about these services and respond to customer feedback and concerns. Public Works also conducted eleven citizen information meetings and public hearings for new roadway, sidewalk, and stream restoration projects. The department also partnered with GRTC to hold two stakeholder meetings and three public meetings across the County to present proposed changes to GRTC transit service and receive input as part of GRTC's Transit Development Plan.

### **Road Projects**

#### Charles City Road

The Department of Public Works completed the Charles City Road Improvement Project just south of Richmond International Airport in September 2017. This project widened a 0.3-mile section of roadway to a 4-lane divided facility with curb-and-gutter, drainage improvements, and an upgraded railroad crossing. The project was completed five months ahead of schedule and under budget

#### Dabbs House Road

A 0.8-mile section of Dabbs House Road between Nine Mile Road and East Richmond Road is scheduled to be widened with curb-and-gutter, drainage improvements, a sidewalk, and a right-turn lane on Nine Mile Road. All necessary right-of-way has been acquired and the project is advancing to the utility construction phase in 2018.

#### North Gayton Road Interchange at I-64

The Department of Public Works is working with the Virginia Department of Transportation to complete an engineering study in support of a new interchange to be constructed at N. Gayton Road at I-64 in Short Pump. The study is anticipated to be completed in Spring 2018. Upon approval by the Federal Highway Administration, the county will work to fund and design the interchange.

#### Richmond-Henrico Turnpike

The County leveraged \$14.0 million in bond funds to receive \$11.7 million in Virginia Department of Transportation SMART SCALE funding for the Richmond-Henrico Turnpike Improvement Project. This project will widen and improve the existing 1.9-mile section roadway between Laburnum Avenue and the at-grade railroad crossing located approximately 0.7 mile north of Azalea Avenue. The road will be reconstructed as a four-lane divided roadway with turn lanes, curb-and-gutter, drainage improvements, a 10-foot multi-use trail, and sidewalk. The contract for engineering design for this project is anticipated to be awarded in mid-2018.

#### Three Chopt Road

A project to widen and improve a 2.1-mile section of Three Chopt Road between Gaskins Road and Barrington Hills Drive has advanced to the right-of-way acquisition phase. This project will widen the roadway to a four-lane divided section with curb-and-gutter, drainage improvements, and sidewalks. This project is scheduled to be advertised for construction in mid-2019.

#### Woodman Road Extension

Design is underway for the extension of Woodman Road between Greenwood Road and Brook Road. A 2-lane roadway will be constructed with a 12-ft paved multi-use trail connecting to the River Mill Development. The project includes construction of a 2-lane roundabout at the intersection of Greenwood Road and Woodman Road. Construction is anticipated to begin in early 2019. The Capital Budget includes \$4.9 million for the extension of Woodman Road.

### **Pedestrian and Commuter Improvements**

The Department of Public Works is continuing its initiative to improve bicycle and pedestrian accommodations across the County. In addition to the \$2.5 million allocation included in the Capital Improvement Program, the Department of Public Works received \$15.3 million in grant funding in 2017 for 10 bicycle and pedestrian related projects. In total, the Department has 28 programmed projects scheduled to be completed or under construction over the next four years that will add over 19 miles of sidewalks and paved multi-use trails.

### **Bridge Projects**

The Department of Public Works is tasked with maintaining the aging bridges within the county's road system. In addition to the Creighton Road Bridge Replacement Project completed in April 2017, the Department of Public Works has four additional bridge repair or replacement projects under design. Repairs to the Parham Road and Greenwood Road bridges over the CSX railroad tracks are anticipated to be advertised for construction in 2018.

### **Storm Cleanup**

Crews worked all weekend long to secure Galaxie Road after it was washed out on June 16 following a 4-inch intense thunderstorm that caused severe local flooding. The road was closed for several months while special large diameter elliptical concrete pipes were fabricated, a water line adjusted, and a temporary

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sewer line was constructed to re-open the road. This road repair cost \$253,000.

A late developing snow storm in early December dropped 2.5 inches of snow and caused the Department of Public Works to work diligently through the night to clear the roads. The high daytime temperatures helped with the department's efforts. Shortly after celebrating the new year, a winter storm dropped more than 3 inches of snow with frigid temperatures below 0°F in many parts of the county. This left the Department of Public Works with the task of fighting an uphill battle. Finally, midway through January another winter storm blew through the area dropping around 2 inches of snow with very icy conditions. The Department of Public Works was thoroughly prepared even before the MLK holiday to fight the ice that was expected.

The total for all three winter storms was \$3.2 million and the department used 5,100 tons of salt.

### **Municipal Separate Storm Sewer System Permit (MS4)**

Work is ongoing to comply with the state permit which requires watershed restoration and pollution reductions over a 15-year time horizon. The department has already exceeded the five-year target of 5 percent reduction and has achieved 16 percent to date of the 40 percent required in the first ten years of the program. The department must achieve 100 percent of the pollution reductions by year 15.

Some examples of the work done to date include:

#### Dunncroft Stream Restoration

A stream restoration project improved a 2,200-foot section of an unnamed tributary to Meredith Branch located within Dunncroft/Castle Point Park off Francistown Road. Construction started in February 2017 and was completed in August 2017. The \$800,000 project relocated and stabilized the stream while reconnecting the stream with its floodplain. This stream had been eroding and allowing phosphorus, nitrogen and other pollutants to flow to the Chickahominy River, James River, and ultimately the Chesapeake Bay.

#### Belmont Golf Course Streambank Restoration

A streambank restoration project improved three sections of Upham Brook and North Run totaling approximately 2,000 feet located within the Belmont Recreation Center. Construction started in November 2016 and is anticipated to be complete in March 2018. The \$1.3 million project, partially funded with a grant from the Virginia Department of Environmental Quality's Stormwater Local Assistance Fund (SLAF), consists of removing debris and blockages as well as stabilizing the streambank. This stream had also been eroding and allowing phosphorus, nitrogen and other pollutants to flow to the Chickahominy River, James River, and ultimately the Chesapeake Bay.

Two other stream restoration projects are under design at the Virginia Home for Boys and Girls and Quarter Mill Apartments.

### **Mosquito Control**

The Engineering and Environmental Services - Standing Water Initiative monitored for the presence of mosquito borne disease through 343 residential complaint responses and the collection and identification of 26 distinct species of mosquitoes, which accounted for a total of 55,500 individual mosquitoes. From 95 regularly monitored sites across the county, 759 West Nile Virus (WNV) mosquito samples were tested with 113 positive test results from 34 monitoring sites. This is the highest and most prolonged WNV positive mosquito collection in the Division's history. No mosquitoes were submitted for Zika testing as Virginia Department of Health protocol changed in 2017 to only test from areas with Human Zika cases. The Division performed 937 individual mosquito larvicide applications on county-maintained property using environmentally friendly mosquito larvicide products.

County-wide collaboration continued with a focus on all potential mosquito borne diseases, hence a name change from the Henrico County Zika Working Group to the Henrico Arbovirus Working Group. This group conducted 26 outreach events reaching approximately 2,000 individuals and 5 media-initiated interviews coordinated through the Department of Public Relations and Media Services