

REPORT OF THE SECRETARIAT OF NATURAL RESOURCES AND THE  
SECRETARIAT OF TRANSPORTATION

# Virginia Capital Trail Sponsorship and Maintenance Report

TO THE GOVERNOR AND THE CHAIR OF THE SENATE FINANCE AND  
APPROPRIATIONS COMMITTEE AND THE CHAIR OF THE HOUSE  
APPROPRIATIONS COMMITTEE



COMMONWEALTH OF VIRGINIA

Richmond

The Honorable Ralph S. Northam  
Governor of Virginia

The Honorable Janet D. Howell  
Chair, Senate Finance and Appropriations Committee

The Honorable Luke E. Torian  
Chair, House Appropriations Committee

Dear Governor Northam, Senator Howell and Delegate Torian:

We are pleased to provide this report, ***Virginia Capital Trail Sponsorship and Maintenance Report***, on behalf of the Secretariat of Natural Resources and Secretariat of Transportation.

This report is presented in accordance with requirements enacted under Item 361 of Chapter 854 of the 2019 Virginia Acts of Assembly, in which the Secretariats of Transportation and Natural Resources were asked to assess the feasibility and costs of transferring maintenance and sponsorship of the Virginia Capital Trail from the Virginia Department of Transportation to the Department of Conservation and Recreation.

This report reviews the historic development of the Virginia Capital Trail and Route 5 corridor. Specifics are provided within the report on current maintenance and operational costs of the Virginia Capital Trail, and compares those costs to existing Department of Conservation and Recreation management of the New River Trail.

This cost comparison illustrated that shifting maintenance responsibilities and sponsorship of the Virginia Capital Trail from the Department of Transportation to the Department of Conservation and Recreation will not yield significant cost-savings to the Commonwealth, and affirmed our position that maintenance and sponsorship responsibilities should remain with the Virginia Department of Transportation and Virginia Capital Trail Foundation.

If you have any questions regarding this report or require any additional information, please do not hesitate to contact us.

Respectfully submitted,



Shannon Valentine  
Secretary of Transportation



Matthew Strickler  
Secretary of Natural Resources

## Executive Summary

The Department of Conservation and Recreation and Department of Transportation, in accordance with Item 361 of Chapter 854 of the 2019 Virginia Acts of Assembly and under the direction of the Secretary of Natural Resources and Secretary of Transportation, convened a stakeholder group to assess the feasibility and costs associated with transferring sponsorship and maintenance support responsibilities for the Virginia Capital Trail from the Department of Transportation to the Department of Conservation and Recreation. The stakeholder group consisted of representatives from the Virginia Capital Trail Foundation, members of trail user groups with particular representation from the cycling community, and representatives of local governments from jurisdictions through which the trail traverses.

This report, consistent with the instructions of the General Assembly, focused on all aspects of trail maintenance and support to gain a holistic picture of feasibility and all costs associated with a transfer of sponsorship and maintenance support. This process involved a review of trail funding sources to identify any restrictions due to grants, as well as analysis of the existing management structure for the Virginia Capital Trail. In addition, members of the stakeholder group inventoried existing and proposed trail infrastructure, identified past and current operational and maintenance costs and practices across an array of stakeholders, and considered existing and current revenue sources associated with the Virginia Capital Trail.

This report provides a cost comparison, based on the Department of Conservation and Recreation's management of the 57-mile linear New River Trail. This cost comparison, a review of maintenance responsibilities, and feedback from stakeholders indicate that the current management structure operates in a cost-effective manner that divides maintenance and operational responsibilities across Richmond City, Henrico County, Charles City County, James City County, the Virginia Department of Transportation, and the Virginia Capital Trail Foundation. This report also identifies modest recommendations to improve the experience of Virginia Capital Trail users, including a targeted partnership between the Department of Conservation and Recreation and the Virginia Capital Trail Foundation to provide technical assistance in developing a master plan, specific funding for active transportation corridor maintenance needs, and a unified public safety approach for the Virginia Capital Trail.

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## 1 Legal Framework and Authority

The Code of Virginia in § 33.2-112 specifies that the Commonwealth Transportation Board and Commissioner of Highways may “construct such sidewalks or walkways on the bridges and along the highways under its jurisdiction as it deems necessary for the protection of pedestrian traffic.” The code section goes on to note that “All provisions of law with respect to the acquisition of lands and interests therein and the construction, reconstruction, alteration, improvement, and maintenance of highways in the primary and secondary state highway systems, including the exercise of the power of eminent domain by the Board and the Commissioner of Highways, shall be applicable to such sidewalks and walkways.”

During the 2005 session of the Virginia General Assembly, the legislature passed Senate Bill 1033 sponsored by Senator Benjamin Lambert declaring “That the bicycle and pedestrian transportation facilities within the Virginia Route 5 corridor between the City of Richmond and Jamestown are hereby designated the “Virginia Capital Trail.” This designation shall not affect any other designation heretofore or hereafter applied to these facilities.”

Subject to Title 10.1 of the Code of Virginia, the Department of Conservation and Recreation (DCR) is authorized by the General Assembly to operate 38 state parks and 63 natural area preserves on behalf of the citizens of the Commonwealth. Specifically, § 10.1-201(A) authorizes the Department of Conservation and Recreation to acquire “areas, properties, lands, or any estate or interest therein, of scenic beauty, recreational utility, historical interest, biological significance or any other unusual features which... should be acquired, preserved, and maintained for the use, observation, education, health and pleasure of the people of Virginia.”

## 2 Historic Development of the Virginia Capital Trail

The origin of the Virginia Capital Trail dates to 1975, when the Commonwealth Transportation Board designated the Route 5 Corridor as a Virginia Scenic Byway, only the second such designation in the Commonwealth to be approved at that point in time. Designation as a scenic byway formalized the opinion of the Commonwealth Transportation Board and Department of Transportation that the historic, cultural, and in particular the scenic resources of the Route 5 corridor were worthy of protection by state government.

Fifteen years later, the 1990 General Assembly asked the Virginia Department of Transportation to conduct a Route 5 corridor study with a particular focus on preservation of Route 5’s historic and scenic characteristics. The report issued after that study in 1991 recommended that the Virginia Department of Transportation and the Department of Conservation and Recreation should work with localities along the corridor to ensure that local zoning and comprehensive planning programs undertaken by the localities would sufficiently preserve the historic and scenic resources and noted that “the commitment to preserve a scenic byway is presently shared by the state and local governments.”

The 1991 report also revealed growing support from stakeholders for the inclusion of multi-use paths alongside Route 5, to safely accommodate growing interest by bicyclists intent on enjoying the scenic and recreational assets of the corridor. To that end, among the recommendations included in the 1991 report, was the following language: “Any improvements to Route 5 should include a minimum four-foot smooth paved shoulder to accommodate a bicycle lane on each side of the roadway between the east corporate limits of the City of Richmond and Route 199 west of the City of Williamsburg.” The Virginia Department of Transportation followed up on the recommendations from the 1991 report, selecting the firm of Vanasse Hangen Brustlin, Inc. (VHB) to conduct a two-year feasibility study from 1997-1999 that determined the preferred alignment of a multi-use trail along the Route 5 corridor.

The next crucial step, after completion of the feasibility study, involved identifying the funding sources necessary to achieve the ambitious trail corridor goal linking Williamsburg to Richmond. Governor Mark Warner’s Secretary of Transportation Whitt Clement identified initial federal and state funding for the project in the 2003 budget, allowing the Virginia Department of Transportation to survey the proposed Virginia Capital Trail corridor. 2004 marked another significant push forward for the Virginia Capital Trail, as citizen advocates and supporters of the trail established the Virginia Capital Trail Foundation as a nonpartisan advocacy partner to provide trail expertise, to raise public awareness, and to seek funding and contributions to enhance and promote the development of the Virginia Capital Trail. In addition, the project received a mix of federal and state dollars, highway enhancement funds, and federal open container funds in the 2004 fiscal year, allowing design work to begin in earnest and negotiations with landowners along the route to proceed. Just a year later in July 2005, Governor Mark Warner offered keynote remarks at the official groundbreaking for the Greensprings Road segment of the Virginia Capital Trail.

With the Virginia Capital Trail Foundation in place to solicit support from state and local stakeholders and ground broken, progress on the Virginia Capital Trail accelerated greatly from 2005 to the present. The Greensprings Road portion of the Virginia Capital Trail opened to the public in 2006, and over the next two years trail development began in Charles City County and Richmond City. While progress slowed during the early days of the Great Recession, by March 2010 the Virginia Capital Trail featured two trailheads at Jamestown and the Richmond Riverfront, completion of the Charles City Courthouse, Chickahominy, Greensprings, and Richmond Riverfront sections, and a trail wide signage system to assist members of the public in navigating the trail. In October 2013, the western terminus of the trail opened at Great Shiplock Park in the City of Richmond. A year later, the largest segment of the trail, known as Sherwood Forest, was completed and opened to the public. Finally, after significant public and private investment and just twelve years after the General Assembly first approved funding to survey the Virginia Capital Trail corridor, the 52-mile trail was completed and the full length of the corridor opened to the public in October 2015.

Since the trail’s completion in 2015, public interest and usage of the corridor has continued to grow, both for recreational purposes as well as for serving as a transportation alternative for many in Williamsburg and Richmond who wish to commute to work via alternative means of transportation. The Virginia Department of Transportation maintains a system of trail counters along the length of the Virginia Capital Trail that have gauged this growing interest from the public. During Virginia Capital Trail’s first year in

operation, the trail recorded 550,000 counts and in 2018, the number of unique counts exceeded 1.4 million, with a daily average of 300 counts. It should be noted that a count measures a person or persons passing by a particular portion of the trail. This total may not directly reflect the actual number of unique users, but does give some indication of usage trends. As the trail’s user base has evolved, so too has the Virginia Capital Trail Foundation adjusted its role with the times. As first envisioned nearly forty-five years ago, the citizens of the Commonwealth now use the Virginia Capital Trail as a source of outdoor recreation and to satisfy an ever-growing demand to commute to and from their workplace via alternative means of transportation. At the same time, the scenic, cultural, and historic resources along Route 5 are preserved for the enjoyment of the citizens of the Commonwealth.

### 3 Funding Sources for Development of the Virginia Capital Trail

From 2003, when capital funding was first allocated to study, develop, and construct the route of the Virginia Capital Trail to its completion in 2015, the Virginia Department of Transportation used a unique combination of federal enhancement, open-container, American Recovery and Reinvestment Act, and Smithsonian funds to pay for the design and construction of the Virginia Capital Trail. These funds could not be used to construct new roadways, but could be used to enhance existing corridors and for the creation of multi-use pedestrian and bike trails. The funding sources utilized require that the Virginia Capital Trail be open to the public and not-for-profit, in order to comply with grant funding requirements. Thus, no mandatory user fees can be collected from daily users of the trail, limiting a source of potential revenue. These unique funding streams allowed the Virginia Department of Transportation to avoid drawing from their regular construction budget in developing the multi-use transportation and community trail. The following charts reflect the capital expenses that went into construction and development of the Virginia Capital Trail.

#### Summary of Federal Funding Sources

Funding Sources	Projects Funded <sup>1</sup>	Funds
Recovery & Reinvestment Act	New Market Trail Segment	\$10.05 million
Federal Highway Enhancement	Chickahominy, Sherwood, Richmond City	\$10.42 million
Federal Open Container Funds	Varina, Sherwood Forest, Charles City Segments	\$44.37 million
National Highway Performance	Sherwood Forest Segment	\$842,695
Scenic Byways Funding	Greensprings Acquisition and Development	\$2.35 million
Primary (Fed)	Chickahominy to Greensprings, Charles City	\$620,136
Primary Mixed (Fed/State)	Capital Trail Feasibility Study, Richmond Section	\$2.38 million
<b>TOTAL (FEDERAL):</b>		<b>\$71.04 million</b>

<sup>1</sup> The projects funded column list is not all encompassing. The projects named reflect where the bulk of dollars were allocated from that particular fund source, but may not reflect smaller projects along the Virginia Capital Trail funded from the same source. The funds allocated column represents the total amount of funds from that source expended to construct the Virginia Capital Trail.

### Summary of State Funding Sources

Funding Sources	Projects Funded <sup>1</sup>	Funds
Bonds (State)	Varina, Henrico County	\$2.77 million
Primary (State)	Varina, Sherwood Forest Segment	\$1.91 million
State Maintenance	Williamsburg Cap Trail Improvement Project	\$473,559
Revenue Sharing (State)	Chickahominy River and Greenspring	\$125,890
<b>TOTAL (STATE):</b>		\$5.28 million

## 4 Current Management Structure, Partnerships, and Future Developments

During the trail-building phase, much of the Virginia Capital Trail Foundation’s work emphasized raising awareness of the trail, building support among local and state policymakers, and soliciting private support from major donors. The completion of the trail marked a new era for the Virginia Capital Trail Foundation staff, board, and volunteers, with the non-profit focused more on maintaining the trail in line with the foundation’s management agreement with the Virginia Department of Transportation. The Virginia Capital Trail Foundation’s role has expanded to now focus on such tasks as maintaining and developing the trail in line with user demands, organizing volunteers to be part of their Trail Ambassador Program, placing signage, soliciting private support for construction of trail amenities, managing relationships with local governments, and holding special events like the Cap2Cap Bike Ride. Not surprisingly and perhaps most importantly, the Virginia Capital Trail Foundation spends the bulk of their day-to-day staff time working with volunteers, local governments, and Virginia Department of Transportation staff to maintain the trail and keep its condition suitable for usage by the public. This unique public-private partnership has allowed the trail to evolve and serve a diverse customer base of commuters, recreational enthusiasts, and casual users alike.

### Management Structure

The Virginia Capital Trail Foundation is currently helmed by Executive Director Catherine Anthony with the support of two other full-time staff members. The staff report to a seventeen-member citizen board, comprised of regional cycling and hiking enthusiasts, as well as trail promoters. Ms. Anthony and her staff operate the trail on a day-to-day basis as part of the non-profit’s management agreement with the Virginia Department of Transportation. The non-profit facilitates a trail ambassador program of volunteers who ride the trail to monitor safety and maintenance concerns. Trail ambassadors utilize volunteer labor to ride the trail daily and report concerns and issues to Virginia Capital Trail Foundation staff, who then route the issues to the appropriate entities to be resolved. The Virginia Capital Trail Foundation sponsors the annual Cap2Cap Bicycle Ride, which raises the majority of the non-profit’s approximately \$400,000 annual operating budget. The revenues from that event in combination with private donations underwrite the three staff members, annual marketing expenses, program expenses, and allow the non-profit to add customer-friendly amenities to the trails such as benches, fix-it stations for bicyclists, and rain shelters.



## **Partnerships**

While the Virginia Capital Trail Foundation manages day-to-day operation of the trail, volunteer recruitment and development, marketing, donor solicitation, contact with stakeholders, and general administration of the Virginia Capital Trail as their core functions, maintenance support is largely provided by the localities along the trail as well as through the Virginia Department of Transportation. The Virginia Department of Transportation has three maintenance area headquarters that serve different portions of the trail, in addition to the primary and secondary highway systems in their respective jurisdictions. Each maintenance area headquarters provides litter removal, mowing, tree removal, debris removal, patching of asphalt, signage replacement, bridge and crossing inspection, and drainage inspection over the course of the year.

While the Department of Transportation is the primary maintenance provider for the trail proper, the Virginia Capital Trail Foundation and Virginia Department of Transportation have a memorandum of understanding with James City County and less formal agreements with the City of Richmond and Henrico County to maintain portions of the trail and trailheads. In the case of Richmond and Henrico particularly, these trailheads are integrated with the local park system in each locality, and thus are already being maintained through locality park and recreation budgets. As part of their memorandum of understanding with the Virginia Capital Trail Foundation and Virginia Department of Transportation, James City County mows portions of the trail, picks up litter, has local law enforcement patrol portions of the trail as available, and assume maintenance responsibility (though not replacement costs) for any amenities installed by the Virginia Capital Trail Foundation. Henrico County maintains fourteen miles of the Virginia Capital Trail through mowing and debris removal, most of which passes through their county park system. Henrico County also maintains portable toilets, rain shelters, and benches at the Four Mile Creek trailhead. The City of Richmond maintains just over a mile of the Virginia Capital Trail, providing routine mowing on a monthly basis as well as litter clean-up based on citizen demand.

## **Future Developments**

The Virginia Capital Trail currently connects to the Colonial Parkway, the Dorey Park Connector Trail, Greensprings Interpretive Trail, Powhatan Creek Trail, and to the James River Park System through the Canal Walk. It is a segment of both the East Coast Greenway and Bike Route 76.

## **Proposed Trail Connections**

The Virginia Capital Trail is well-positioned to connect to ten other regional and local trail networks under development, which will increase traffic and therefore maintenance costs on the Virginia Capital Trail. These potential trail connections are currently being incorporated into the trail planning process as goals for trail planners, developers and advocates. Just as a connected highway system was a catalyst for economic development, a connected active transportation network will continue to stimulate business development, encourage healthy activities, and provide transportation options for people without cars along the full corridor.

- ***Appomattox Riverfront Trail (ART Trail)***: The ART Trail connects six localities that border the lower Appomattox River (Chesterfield, Dinwiddie, Prince George, Colonial Heights, Hopewell, and Petersburg). The 2017 Trail Master Plan mentions a potential connection from City Park in Hopewell to the Virginia Capital Trail via Route 10 to the Jordan Point Bridge (Route 156) across the James River. A ferry making this connection is another option. This vision is supported by the Friends of the Lower Appomattox River (FOLAR), PlanRVA and the Crater Planning District Commission.
- ***Birthplace of America Trail (BoAT Trail)***: The Transportation Technical Advisory Committee of the Hampton Roads Transportation Planning Organization seeks two paths connecting the South Hampton Roads Trail and Ft. Monroe to Jamestown and the Virginia Capital Trail. The total trail system is about 95 miles, and the plan has been approved and adopted in regional plans as of July 2017. The Peninsula Route would connect Jamestown, the College of William & Mary, Newport News Park, Yorktown Battlefield, Hampton University, the VA Medical Center, and Fort Monroe. The Southside Route would use the Scotland Ferry to connect to Smith’s Fort Plantation, the Town of Surry, Bacon’s Castle, the Isle of Wight Courthouse, Smithfield, St. Luke’s Church, and the South Hampton Roads Trail (a segment of the statewide Beaches to Bluegrass Trail) in the City of Suffolk.
- ***East Coast Greenway (ECG)***: The East Coast Greenway connects 15 states and 450 cities and towns for 3,000 miles from Maine to Florida. Fostering a safe walking and biking route through the country’s most populated corridor, the East Coast Greenway Alliance’s goal is to offer a shared use path fully separated from traffic, although much of the route through Virginia is still on-road. In Richmond, the historic coastal route of the ECG splits from the spine route and follows the Virginia Capital Trail and the Scotland Ferry towards the Dismal Swamp Trail. The spine route roughly follows Route 1 and connects to North Carolina south of Clarksville. There is potential for the spine route to follow the High Speed Rail Corridor south of Petersburg.
- ***James River Heritage Trail***: This braided trail network includes water and land trails along the James River and its tributaries. The concept plan for this statewide trail is under development, but the vision is a network of communities that share their traditions, history, and lifestyle to foster sustainable recreation and stewardship of treasured landscapes and local waters, trails, and byways.
- ***Ashland to Petersburg Trail***: Working with stakeholders, VDOT is studying a preferred corridor for a multi-use trail within Chesterfield, Hanover, Henrico, Colonial Heights, Petersburg, Richmond, and Ashland. The study’s purpose is to identify a trail corridor that will improve safety for the non-motoring public, enhance connectivity, and maintain consistency with state, regional, and local transportation plans. The Trolley Line Trail will be a major component of this trail system from Ashland through Henrico County.
- ***Three-Notch’d Trail***: The original Three Notch’d Road (sometimes called Three Chopt Road) connected Richmond to the Shenandoah Valley as a main east-west route from the 1730s to the 1930s, until U.S. Route 250 was built on much of the original route. The Rivanna Trails Foundation (RTF) is spearheading

an effort to connect Charlottesville to Crozet and the Blue Ridge Tunnel along the Three-Notch'd Trail, but there is also interest in connecting eastward to the VCT. In May 1781, Thomas Jefferson and state officials fled Richmond to escape the British. The General Assembly adjourned its session to meet again in Charlottesville on May 28. They held a quick session on the morning of June 4 at the Swan Tavern in Charlottesville and again at Trinity Church in Staunton June 7-23. There is interest in connecting these temporary state capitols to the VCT.

- **BridgePark:** BridgePark is a proposed linear public park that would span the James River and connect the riverfront experience to the City Center, on both sides of the James. The park would transform 9th Street (including a portion of the Manchester Bridge over the beautiful James River) into a world-class destination for biking, walking, art, education, events, and community engagement. Stretching from Manchester to Jackson Ward, the path includes VCU's downtown campus, the John Marshall House, the State Capitol, Kanawha Plaza, Brown's Island, the Manchester Climbing Wall, and Southside's historic streets.
- **Gillies Creek Greenway:** The Gillies Creek Greenway, proposed in 2015 in the Gillies Creek Greenway Plan, will be a ten-foot-wide paved path for pedestrians and bicyclists. The greenway will connect neighborhoods in Greater Fulton and beyond to the James River and increase visibility of Gillies Creek. The greenway is planned to eventually extend from the James River along Gillies Creek to Oakwood Cemetery. It will intersect the VCT near the Intermediate Terminal.
- **Cannon Creek Greenway:** The Shockoe Valley Streets Improvement Project, currently under development by the City of Richmond, will connect the Cannon Creek Greenway to the James River and the VCT. This connection will link residential neighborhoods in northeast Richmond with the James River.
- **Shared Use Path on Courthouse Road (Route 155) in Charles City:** VDOT is helping plan a 0.53-mile multiuse path on southbound Courthouse Road (Route 155) between the VCT and Charles City County High School.

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### Virginia Capital Trail Current Operational and Maintenance Costs

The unique management structure of the Virginia Capital Trail means that operational and maintenance costs are split across the non-profit Virginia Capital Trail Foundation, the Virginia Department of Transportation, and the localities served. Based on the operational responsibilities of each partner in the Virginia Capital Trail, the costs are allocated respectively between each entity. The information in this section illustrates the best estimations available from partners for their overall costs to operate and maintain the trail under the current management structure. These figures help establish a baseline cost for maintaining the Virginia Capital Trail, which can then be compared to the Department of Conservation and Recreation's cost to maintain a linear trail system.

Stakeholders were able to provide some background on their annual contributions to the Virginia Capital Trail. The annual budget of the Virginia Capital Trail Foundation is approximately \$400,000 annually, with revenues largely coming from trail sponsors as well as funds associated with the Cap2Cap Trail Ride. The budget is anticipated to grow further with future events like the Cap Trail 10 Miler and 5K race scheduled for late October 2019<sup>2</sup>. James City County provided invoices from their most recent fiscal year, indicating they spent approximately \$23,000 in staff time and resources to maintain their segment of the trail pursuant to the memorandum of understanding they have with the Virginia Capital Trail Foundation. The Virginia Department of Transportation's Ashland residency, which provides maintenance to the largest portion of the Virginia Capital Trail, expended \$24,479 in Fiscal Year 2015, \$221,049 in Fiscal Year 2016, \$184,934 in Fiscal Year 2017, \$196,148 in Fiscal Year 2018, and \$85,026 in Fiscal Year 2019. The Ashland residency of the Department of Transportation also spent \$170,000 over the past four years, including \$68,000 in FY 2019, on traffic engineering and pedestrian safety improvement studies. The Virginia Department of Transportation's Williamsburg residency, which serves the smaller eastern portion of the

Virginia Capital Trail alongside James City County, expended approximately \$52,500 in FY 2019 replacing bridge planks, removing trees and debris, repairing and replacing signage, and conducting studies and sign upgrades. The Williamsburg residency also anticipates a one-time expense of \$80,000 in Fiscal Year 2020 for an emergency bridge replacement.

For the most recent FY 2019, spanning from July 2018 to June 2019, the approximate total expenditures from three of five partners involved in the Virginia Capital Trail is estimated to be approximately \$628,554. Note that this figure reflects the salaried staff of the Virginia Capital Trail Foundation, and wage staff employed by the Virginia Department of Transportation and James City County whose work specifically involves the Virginia Capital Trail. This estimation includes James City County's maintenance costs specific to the Virginia Capital Trail, which are the subject of a memorandum of understanding, however it does not reflect some additional local government expenditures on maintenance by Richmond City and Henrico County. The reason for this is that Richmond City and Henrico County maintenance expenditures related to the Virginia Capital Trail overlap in part with other local municipal park maintenance and upkeep costs. In addition, these figures also do not reflect any staff time or resource expenditures related to public safety and law enforcement functions in the vicinity of the Virginia Capital Trail.

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<sup>2</sup> It is noted that funding provided by the Virginia Capital Trail Foundation presumably would be available whether the trail is maintained by VDOT or by DCR and hence, for purposes of this report, has no bearing on the feasibility and costs associated with transferring sponsorship and maintenance support responsibilities for the Capital Trail from VDOT to DCR.

### Capital Trail Total Expenditures by Stakeholder – FY 2019

Stakeholder	Trail Responsibilities <sup>3</sup>	Expenditure
Virginia Capital Trail Foundation	Administration, Marketing, Programs, Fundraising	~\$400,000
Department of Transportation	Maintenance, Pedestrian Safety Improvement Studies	\$205,525
Local Governments (James City)	Greensprings Segment Maintenance	\$23,029
<b>TOTAL:</b>		~\$628,554

This report, consistent with the instructions of the General Assembly, focused on all aspects of trail maintenance and support. While the topline expenditures above are a helpful data point, the figures above include some non-maintenance funding associated with special events like the Cap2Cap Bike Ride and marketing expenses. Those expenses are not as clearly tied to the annual operation and maintenance costs of the trail, and therefore should be excluded in light of the narrow guidance from the General Assembly.

The chart above also includes administration expenditures by the Virginia Capital Trail Foundation that do have a direct impact on operations and maintenance. For instance, traffic engineering and safety improvement studies can identify operational efficiencies and enhance public safety. The Virginia Capital Trail Foundation facilitates the trail ambassador program, which trains and develops volunteers and provides the public with a daily presence on the trail. The Foundation also fields and routes safety and maintenance complaints to the appropriate stakeholders, and act as the public face of the trail. The full-time staff associated with the Virginia Capital Trail Foundation manage day-to-day operational concerns. This administrative role, much like the role of a state park’s management team, correlates directly with overall operational and maintenance costs. Expenses related to the administration of the Virginia Capital Trail Foundation, as well as traffic safety and engineering studies, can and should be part of the narrower calculation of operational and maintenance expenditures.

The instructions of the General Assembly request a study of the transfer of maintenance responsibilities for the Virginia Capital Trail, therefore it is important to identify the current maintenance practices associated with the Virginia Capital Trail to make sure those activities align with the Department of Conservation and Recreation’s maintenance practices. Maintenance activities currently undertaken by the Virginia Department of Transportation or localities include: litter removal, mowing, tree trimming, debris removal, facility upkeep, patching of holes, drainage, signage placement, bridge maintenance and inspection, and as needed patching and resurfacing of pavement along the trail. Activities not reflected in the annual maintenance figures due to their non-routine nature are large-scale repaving of trail segments as well as replacement of bridges and other crossings. Infrastructure replacement of that nature is typically

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<sup>3</sup> The trail responsibilities column list is not all encompassing. The responsibilities named reflect a general description reflecting where the bulk of dollars were spent. The list of responsibilities may not reflect smaller duties performed by the funding source along the Virginia Capital Trail funded from the same source. The absence of Henrico County and Richmond City figures are due to the fact that expenditures related to the Virginia Capital Trail are tied in with other conflating and unrelated costs as part of the local parks and recreation budget for those localities. The expenditure column represents the total amount of funds from that source known to be expended on the Virginia Capital Trail in fiscal year 2019.

not included in the annual maintenance or operating budget of a state park, and is considered more specialized. In addition, the Virginia Capital Trail spends a portion of its budget on special events and programming, which are not directly tied to maintenance and operations, allowing that figure to be reduced.

With those considerations in mind, the overall expenditures presented above can be narrowed to include those more traditional maintenance functions performed by the Virginia Department of Transportation and James City County listed above, as well as isolating the administrative overhead associated with the Virginia Capital Trail Foundation’s management role. The following table provides a more accurate maintenance and operation cost for comparison with the Department of Conservation and Recreation:

**Capital Trail – Direct and Indirect Operating and Maintenance Expenditures – FY 2019**

Stakeholder	Trail Responsibilities <sup>4</sup>	Expenditure
Virginia Capital Trail	Administration, Stakeholder Management, Amenities	~\$150,000
Department of Transportation	Maintenance, Pedestrian Safety Improvement Studies	\$205,525
Local Governments (James City)	Greensprings Segment Maintenance	\$23,029
	<b>TOTAL:</b>	~\$378,554

**Current Maintenance Frequency and Standards**

The current maintenance practices undertaken by the Virginia Capital Trail Foundation, Virginia Department of Transportation, and localities along the trail are undertaken on an as-needed basis, and are reactive to customer complaints and concerns. Those maintenance activities entail the following:

Current Maintenance Profile of the Virginia Capital Trail	
Activity	Current Maintenance Practice Frequency
Litter removal	Ranges from Monthly to Weekly
Mowing	Ranges from Monthly to Weekly
Tree Trimming	Ranges from none to Bi-Monthly
Debris Removal	Ranges from as needed to weekly
Bridge Inspection and Maintenance	2 year frequency for official inspections; weekly inspections by maintenance personnel
Resurfacing	As needed and conditions warrant
Drainage	As needed
Patching	As needed
Signs	As needed
Traffic Engineering	As needed

<sup>4</sup> The responsibilities named are a general description reflecting where the bulk of maintenance-related and operational management dollars were spent. The list of responsibilities may not reflect smaller tasks which are funded by the funding source along the Virginia Capital Trail. Henrico County and Richmond City figures are not set out because expenditures related to the Virginia Capital Trail are tied in with other conflating and unrelated costs as part of the local parks and recreation budget for those localities. The expenditure column represents the total amount of funds from that source known to be spent specifically on maintenance or administration of the Virginia Capital Trail in FY2019.

One of the most notable aspects of the current maintenance regime is that most, if not all, actions are reactive to customer concerns and conducted only on an as-needed basis. The Virginia Department of Transportation notes receiving approximately 75 maintenance requests per year related to the Virginia Capital Trail, between both the Ashland and Williamsburg residencies. When compared to the approximately 1.4 million recorded “counts” from public users in 2018, this would indicate that maintenance requests from the public very likely account for less than 1% of overall users.

The chart above also does not reflect preventative maintenance, which will be a growing need in the coming years. Though the trail as a whole has been open for only four years, some parts of the Virginia Capital Trail are approaching a decade of use. The Virginia Department of Transportation Williamsburg residency has been sealing cracks prior to major resurfacing projects, but with wooden bridges and asphalt exposed to the elements as well as increasing year-over-year commuter and recreational use by the public, the need to prolong the life cycle of existing trail infrastructure will likely continue to grow. There is currently no dedicated line-item budget within the Virginia Department of Transportation for maintenance of active transportation corridors, non-motorized commuter paths, or multi-use paths like the Virginia Capital Trail.

VDOT costs set forth in this report represent direct “reactive” cost generated from service requests only. At this point in time, VDOT has not established a maintenance plan for the Capital Trail, but is working with all relevant stakeholders to develop such a plan for short-term and long-term costs or needs required to maintain the trail. In addition, for the “reactive” costs, VDOT has only considered costs for hourly staff, materials and equipment and has not tracked or reported administrative costs associated with maintenance of the Capital Trail. Hence, the lane mile costs reported for VDOT and its partners (excluding Richmond and Henrico) in this report do not reflect the more realistic and higher VDOT per lane maintenance costs/needs of the trail that can only accurately be reported once a maintenance plans is established.

## 6 Anticipated Maintenance Costs for Department of Conservation & Recreation

In the previous section, using budget information from all Virginia Capital Trail partners revealed that the cost of administration, operation, and maintenance for the Virginia Capital Trail in Fiscal Year 2019 was approximately \$378,554 or approximately \$7,280 dollars per mile of trail maintained which, as noted previously are costs associated with only reactive maintenance or service, account only for hourly staff, materials and equipment costs and are lower than costs that will likely be incurred in future years, once VDOT has established and implemented a maintenance plan for the trail that takes into consideration short-term and long-term needs. With that figure in mind, the next step in the feasibility study requested by the General Assembly was to identify the approximate cost of those same core functions in the event that the Department of Conservation and Recreation assumed responsibility for maintenance and operation of the Virginia Capital Trail. To accomplish this task, staff from the Department of Conservation and Recreation performed a cost analysis for New River Trail State Park, a 57-mile linear park that follows an abandoned railroad right-of-way, consisting of three major bridges, thirty minor crossings, and a largely



gravel surface. The New River Trail is not a perfect reflection of the Virginia Capital Trail, but due to the length and maintenance challenges offers a strong parallel.

Key differences to be aware of include the frequent commuter use of the Virginia Capital Trail in Richmond and James City County, as well as the fact that much of the Virginia Capital Trail's length is paved with asphalt relative to the largely gravel surface of the New River Trail. The Department of Conservation and Recreation has a more frequent maintenance regime for debris and trash removal, and employs staff that have law enforcement responsibilities within park boundaries.

Despite these differences, Department of Conservation and Recreation staff were able to estimate the current costs per mile of trail to maintain the New River Trail to state park maintenance standards, and thus establish a baseline cost for comparison. It should be noted that the cost analysis in this section assumes that the General Assembly would appropriate sufficient funding for wage and full time employees, as well as start-up equipment and ongoing operational needs.

### **Comparative Cost Analysis for a Linear Trail – Maintenance and Operations**

The New River Trail is a 57-mile linear park consisting of a gravel trail that follows an abandoned railroad right-of-way. The park parallels the scenic and historic New River for much of its length. The New River Trail passes through four counties and the city of Galax. The trail's gentle slope makes it great for visitors of all ages to hike, bike and ride horseback. The trail features two tunnels, three bridges, and nearly thirty smaller bridges and trestles. Potable water is available only at Galax, Cliffview Campground (Dannelly Park), and Foster Falls, as well as at the horse trailer lots at Ivanhoe, Draper, and Dora Junction, and there are five non-flush toilets available along the trail. The New River Trail and the day-use area are open daily from dawn to dusk.

### **Annual Maintenance Costs per Mile of New River Trail**

New River Trail maintenance costs include operating support, supplies, and wages for 12 seasonal maintenance staff and five full-time maintenance-performing employees. These employees handle mowing, cleaning bathrooms, general maintenance of grounds and buildings, operation of park contact stations, refuse services, water/sewer (day use/vault/portable toilets), and electrical services.

New River Trail State Park currently dedicates \$120,300 in salary and benefits for full-time employees performing maintenance functions along the trail, which, when coupled with seasonal staff wages, results in an annual cost of \$226,948.81. The services, supplies, equipment, and other materials to support this maintenance team cost an additional \$206,082. This means that the total annual cost for maintenance functions of New River Trail State Park is approximately \$553,331 or \$9,707 per mile of trail served.

### **Annual Operating Costs per Mile of New River Trail**

New River Trail currently has nine full-time employees, including five law enforcement officers. Trail infrastructure includes two park offices, two maintenance shops, 22 parking accesses, 31 trestles-bridges, two tunnels, and 22 seasonal staff providing coverage and services for the public and care to buildings and



grounds. These administrative costs are in addition to the maintenance and operating costs outlined above. New River Trail State Park currently dedicates around \$107,679 to administration and day-use operating costs for the state park. This means that the estimated total operating cost for day-use functions of New River Trail is approximately \$107,679 or an additional \$1,889 per mile of trail served.<sup>5</sup>

### **Administrative Operations (\$107,679)**

This funding includes two seasonal staffers in addition to a full-time office manager operating two offices. Rates of pay for seasonal staff are \$12 per hour to cover an office manager for two days per week and \$10 per hour to cover a receptionist five days per week over nine months of the park season. Expenses include costs annually for wages, FICA, postage for mail and shipping, organization fees (chamber of commerce), employee training costs, office supplies, stationery forms, gasoline for operations, custodial supplies for cleaning offices, copier rentals, electrical service, and office furniture/incidentals. Wage/FICA costs for each office are \$13,789, and these figures are based on having two park offices staggered along the length of the trail.

### **Cost Considerations Specific to the Virginia Capital Trail**

The comparative cost analysis above captures many of the basic operating and maintenance functions of day-use linear trail systems; however, the costs above do not reflect some unique maintenance expenses that make the Virginia Capital Trail distinct from the New River Trail. Department of Conservation and Recreation staff examined these additional expenses at length, to assess the anticipated cost to the Department of Conservation and Recreation if the agency were to take over maintenance responsibility of the Virginia Capital Trail. In the event that the costs specific to the Virginia Capital Trail were included as part of an annual maintenance budget, it would add an additional \$515,000 in ongoing maintenance and operational costs or \$9,035 per mile per year.

- **Resurfacing Costs:** Currently resurfacing costs are not part of the routine operating budget of New River Trail. The gravel along the trail occasionally needs to be resurfaced, and when it does that comes at a cost of \$12,172 per mile of gravel resurfaced. This includes roller rental costs, road grader operation, delivery of rock dust for to the surface, and wage staff time to complete the project with proper equipment. **NOTE:** For a paved trail, such as the Virginia Capital Trail, the cost estimate runs closer to \$100,000 per paved mile of trail. This estimate is based on Washington & Old Dominion Trail's annual budget for trail resurfacing for paved trail. The Washington & Old Dominion Trail completes 3-4 miles of resurfacing annually using contracted services.
- **Tree Removal:** Tree removal falls outside the normal operating budget for New River Trail. Generally, using contracted services for removal of safety issue-danger trees along trail structures and neighboring properties costs between \$5,000 and \$10,000 per year.

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<sup>5</sup> DCR's costs reported for the New River Trail take into consideration annual maintenance costs, long-term replacement costs and administrative costs such as law enforcement and staffing which are costs not considered or factored in VDOT costs currently incurred for purposes of maintain the Capital Trail. Thus the disparity in costs between maintenance of the New River Trail and the Virginia Capital Trail are attributable in part to additional costs for elements not considered or included in VDOT cost estimates.

- Trestle Redecking: New River Trail counts replacement of posts, decking, handrails and associated wages, materials and hardware outside the scope of normal operations. Replacement of boards is generally expected every 5-8 years, and considered a special project. New River Trail would estimate a budget of \$80,000 per year to replace four bridges annually.
- Trestle and Bridge Structural Repairs: New River Trail, much like the Virginia Capital Trail, is currently in the process of completing assessments on bridges and trestles for repairs. This expense item would include repairs such as scaling of abutment, piers, ties, and bents and major structural repairs. This would be performed through services contracted under the Department of Conservation and Recreation, with an estimated annual expense of \$325,000 to cover one major structural repair along the trail per year.

### **Cost Comparison: Virginia Capital Trail vs. New River Trail**

The cost of administration, operation, and maintenance for the Virginia Capital Trail in Fiscal Year 2019 was approximately \$378,554 or approximately \$7,280 dollars per mile of trail maintained. The combined cost of administration, operation, and maintenance for DCR to administer the gravel New River Trail is \$661,010 or approximately \$11,597 per mile of trail maintained. When factoring in unique aspects of the Virginia Capital Trail, such as the paved surface, trestle redecking, and structural repairs to bridges and major crossings (all items which are not routinely part of an annual operational or maintenance budget for a state park), this raised the estimated cost for DCR to \$20,807 per mile.

There are several notable reasons for this cost differential: 1.) The Department of Conservation and Recreation employs law-enforcement rangers to provide public safety services to park guests an amenity not reflected in the figures, for the Virginia Capital Trail. 2.) New River Trail features more physical assets such as contact stations and park offices, which have utility, maintenance, and upkeep costs. Many of the physical assets along the Virginia Capital Trail have lower carrying costs. 3.) The New River Trail has nine full-time employees and 22 seasonal staff providing an array of services to maintain the trail to state park standards, whereas the Virginia Capital Foundation has only three full-time employees, the Virginia Department of Transportation relies on four to five seasonal wage employees for maintenance, and the localities served by the trail split costs using existing parks and recreation staff who maintain the Virginia Capital Trail on a less frequent basis.

## **7 Current and Future Revenue Generation Opportunities**

Given that the maintenance and operational costs of the Virginia Capital Trail have been thoroughly examined in this report, it is appropriate to look at current and future revenue generation potential of the Virginia Capital Trail to see what, if any, funds may be used to offset those costs. As noted previously, due to the many sources of federal grant funding utilized in the development of the Virginia Capital Trail, no user fee or toll can be charged to members of the public without violating terms of the grant agreements. Despite this restriction, the Virginia Capital Trail Foundation has flexibility in its role as a 501(c)3

organization to solicit private donations from individual and corporate sponsors, and to then utilize those funds to enhance trail amenities, support their staff overhead, conduct marketing campaigns, and administer the Trail Ambassador program just to name a few functions.

Presently, the Virginia Cap2Cap Bike Ride held in May is the major source of private dollar revenue. The event pays for itself, and underwrites the costs of administering the Virginia Capital Trail Foundation for the remainder of the year. It is responsible for nearly all of the organization's approximately \$400,000 annual budget, though Virginia Capital Trail Foundation staff also directly solicit some contributions, sell annual sponsorships, and allow users to sponsor mile markers along the length of the trail. It should be noted that, while the Virginia Department of Conservation and Recreation routinely hosts festivals and major events similar to the Cap2Cap Bike Ride, much of the private revenue generated by those events winds up reverting to the festival and event sponsors. In addition, maintenance and operational staff allocated to the Virginia Capital Trail are unlikely to have time to dedicate to the planning and execution of special events without relying on volunteer support from the Virginia Capital Trail Foundation.

In addition to current revenue streams from the Cap2Cap Bike Ride, private solicitations, and trail marker sponsorships, the Virginia Capital Trail Foundation recently announced plans for a Capital Trail 10-Miler and 5k event in partnership with Richmond Road Runners in October, with proceeds reverting to the Virginia Capital Trail Foundation. Though the event is in its first year in 2019, it is anticipated to be cash-positive for the Virginia Capital Trail and will likely further grow the organization's capacity to operate and administer the trail for the benefit of the public. While no other special events have been identified as of yet, it stands to reason that the Virginia Capital Trail Foundation could grow their existing annual special events or add to the list to diversify their income streams and expand their capacity as trail managers in the years ahead.

## 8 Recommendations and Conclusion

In conclusion, the Secretariat of Transportation and Secretariat of Natural Resources offer the following recommendations:

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### Recommendation 1

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The costs associated with moving maintenance responsibilities from the Department of Transportation to the Department of Conservation and Recreation will not yield significant cost-savings to the Commonwealth and localities, and therefore, maintenance and sponsorship responsibilities should stay with the Virginia Department of Transportation and Virginia Capital Trail Foundation.

**Rationale:** The primary basis of this recommendation is that, after review of the maintenance responsibilities associated with the Virginia Capital Trail, the current maintenance regime by the Virginia Department of Transportation and James City County, Henrico County, Charles City County, and Richmond City is being delivered in a cost-effective manner. The Virginia Department of Transportation remains the owner of the Virginia Capital Trail corridor, even with a transfer of maintenance responsibilities. The

Virginia Department of Transportation has greater in-house expertise in traffic engineering, paving and resurfacing needs of paved roads used by commuters. While duties such as mowing, trimming, and debris removal can be taken on by the Department of Conservation and Recreation within the course of normal maintenance ranger responsibilities, a full transition of all maintenance duties is unlikely due to the Department of Transportation's specialized expertise, and contracted services would still be required for more complex tasks. Finally, the Virginia Capital Trail Foundation is currently handling many of the operational and administrative tasks associated with linear trail management using private funds. If the Department of Conservation and Recreation were to take over maintenance responsibilities, the full-time and wage maintenance rangers hired would require administrative and operational support, shifting that cost to the taxpayers and requiring the General Assembly to appropriate new full-time employees and wage positions for DCR to handle administration and upkeep of the new asset.

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### **Recommendation 2**

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The Department of Conservation and Recreation, without incurring additional operational costs, should lend its linear park planning expertise to the Virginia Capital Trail Foundation and Virginia Department of Transportation to provide technical assistance in developing a Virginia Capital Trail master plan.

**Rationale:** The Virginia Capital Trail developed incrementally over the course of a decade with a guiding vision to connect Virginia's colonial capital of Williamsburg to its current capital of Richmond. The Virginia Capital Trail Foundation's role has evolved in that time, largely as a reaction to increased usage and maintenance pressures. Through technical assistance from the Department of Conservation and Recreation's Division of Planning and Recreation Resources, the non-profit can work with their citizen board and members of the public to establish a long-term plan mapping out capital needs, desired amenities, and safety improvements, and establish a time horizon for those projects. This would give the Virginia Department of Transportation a sense of the foundation's long-term needs and plans, allow non-profit staff to work towards specific goals and benchmarks for the Virginia Capital Trail's future, and provide clarity to the public about future development of the Virginia Capital Trail along the Route 5 corridor.

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### **Recommendation 3**

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Given the increasing use of active transportation paths such as the Virginia Capital Trail, it would be advisable for the General Assembly to develop a dedicated fund for future capital needs as well as ongoing maintenance and operational costs of active pedestrian and commuter multi-use paths operated by the Virginia Department of Transportation that serve as alternatives to highways and secondary roads.

**Rationale:** The Virginia Capital Trail came together as a product of a diverse array of largely federal funding sources, as part of a growing trend of alternative transportation models. While the Virginia Capital Trail serves a role in outdoor recreation as well as preservation of scenic and historic assets, there is a growing trend among local users, particularly in Richmond, Williamsburg, and James City County, to commute to work along the path. There is currently no dedicated state fund to support future capital requests for multi-use paths, and no specific line-item within the Virginia Department of Transportation budget to cover long-

term maintenance costs of active transportation corridors such as pedestrian and bicycle paths. As these active transportation corridors continue to grow and age, additional funding would help ensure they are adequately maintained to the standard expected by the public.

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**Recommendation 4**

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To address existing operational gaps, establish reciprocal law enforcement agreements between the Virginia Capital Trail jurisdictions and the Department of Transportation or amend the Code of Virginia to allow state and local police to issue tickets along the full length of the Virginia Capital Trail.

**Rationale:** The Virginia Capital Trail Foundation and stakeholders identified a gap in current management capabilities related to law enforcement and public safety along the trail. The Virginia Capital Trail currently lacks a dedicated law enforcement presence along the full length of the trail. Each locality currently provides coverage based on their individual resources and is limited when offenders cross local boundaries, which leads to a fragmentation of law enforcement efforts. This gap in public service can be filled relatively easily with either a simple amendment to the *Code of Virginia* or through law enforcement reciprocity agreements related to the Virginia Capital Trail.