Bicycle and Pedestrian Counter Program White Paper

Overview

The purpose of the Bicycle and Pedestrian Counter Program White Paper is to provide a status update to the existing counter program and identify potential options to upgrade the program. PlanRVA (Richmond Regional Planning District Commission) established a bicycle and pedestrian counter lending program in 2015 and has maintained the equipment and data collection service.

The Richmond Regional Transportation Planning Organization (RRTPO) Fiscal Year 2026 Unified Planning Work Program directed staff to develop an update to the framework for regional bicycle count and data collection program. This study will evaluate that program, identify areas of potential improvement, and evaluate the aging hardware and software from the lending program. This study will also work with our regional partners and the Virginia Department of Transportation (VDOT) to study the potential for collaboration and coordination for how counts in the Richmond region could contribute to the statewide collection of data. Collection of data can enhance the active transportation network in the Richmond region by improving bicycle and pedestrian safety, expanding non-motorized travel choices, and providing increased connectivity to population centers, as well as key local and regional destinations, consistent with state, regional, and local transportation planning initiatives. This study will examine the potential for requiring permanent counters as part of any new project implementation.

The goals and objectives of the Bike Counter Program White Paper are to:

1. Detail Bike Counter Program
    a. History of the program, including lending
    b. Current inventory
    c. Highlights of lending program
    d. Status of equipment and data collection
2. VDOT Bike Counter Program
    a. Brief history of counter program
    b. Current inventory and issues
    c. Counter website and potential partnership
3. Case studies
    a. Mid-Ohio Regional Planning Commission

b. Ada County, Idaho
c. Northern Virginia: Arlington County

4. Conclusion and Recommendations
    a. Upgrading counters
    b. Cooperation with VDOT
    c. Implementation of funding for future counters

1. PlanRVA Bike Counter Program

a. History of the program

In May 2015, the Richmond Regional Transportation Planning Organization (RRTPO) was one of 10 Metropolitan Planning Organizations (MPOs) selected by the Federal Highway Administration (FHWA) to participate in a Bicycle-Pedestrian Counter Technology Pilot Project. For years, the RRTPO had been a champion for the development of safe and connected bicycle and pedestrian networks in the Richmond region, and the investment in bicycle and pedestrian infrastructure continued to increase.

The purpose of the program was to develop regional baseline data for bicycle and pedestrian usage by making the counters available through a lending program to the regional partners of the RRTPO. To count pedestrians, RRTPO staff chose passive infrared counters. For cyclists, the most appropriate option was determined to be pneumatic tubes, which can be positioned in the most appropriate locations for counting cyclists, including possibly on the sidewalk or across an entire roadway. The equipment was made available free of charge to RRTPO regional partners for a period of no longer than six months. The one requirement was that PlanRVA would retain and maintain the data collected by the counters and make it available upon request.

b. Counter Inventory

The program purchased the following counters and equipment from a company called Eco Counter, a company that specializes in the development of equipment for collecting non-motorized volume count data:

Mobile Counter	Serial Number	Equipment
TRAX Cycles Plus #1	29995	Pneumatic tubes, chain, lock, black road tape
TRAX Cycles Plus #2	29996	

Shared-Use Path Counter #1	YPH15078211	Mount (2), bracket (6), screwdriver, locks (2)
Shared-Use Path Counter #2	YPH15078212	Instruction booklet (2)

The telecommunications capabilities of the equipment were designed to use 3G (third generation) technology to transmit the data it collects. The data is stored and maintained on the company's Eco-Visio web servers. It has been loaned out many times over the past decade since it was in service and has been returned in good working condition each time. Pneumatic tubes have to be cut and tossed after each use, same for the road tape, so there has been expected attrition in that segment of the inventory. Otherwise, the equipment is intact. Replacement batteries were ordered and installed for the counters once during the time of service.

c. Highlights of the Lending Program

Several locality projects throughout the region have taken advantage of the counter lending program in the decade of service. This study has selected four projects to briefly highlight the benefits:

- Floyd Avenue, City of Richmond ahead of Floyd Avenue Bike-Walk Boulevard (Fall 2015)
- Old Buckingham Road, Powhatan County in the Courthouse area for a sidewalk study (June 2019)
- Buford Road at Choctaw Road in Bon Air, Chesterfield County for a crosswalk safety assessment (February 2020)
- Franklin Street, City of Richmond bike counters for assessment of cycle track (Summer 2017 & Summer 2022)

Floyd Avenue, City of Richmond

This was the first project selected for the counter program and was the inspiration for the impetus of the counter lending effort. The City of Richmond wanted to collect data to support a plan to convert a two-mile stretch of Floyd Avenue between the VCU Monroe Park Campus to Carytown into a bicycle boulevard, which is a low-speed, low-traffic roadway designed to prioritize bicyclists and pedestrians. The use of traffic-calming implementations, traffic circles, roundabouts, and curb extensions (or bulb-outs) are typically used.

The TRAX Cycles pneumatic tube counters (bicyclist and automobile) and the Shared-Use Path counters (infrared, for pedestrians) were put in use for a determined period of approximately two months in Fall 2015, and the counts were cited in data collection for the study.

Old Buckingham Road, Powhatan County

Powhatan County staff needed pedestrian data to support their study efforts on improvements to the sidewalk network within the County Courthouse area along Old Buckingham Road. The fixed location was selected for an existing stretch of sidewalk, and staff borrowed the Shared-Use Path counters (infrared, for pedestrians) for a three-week period in May-June of 2019. The data collected helped support an application for funding to extend the sidewalk network in the Courthouse area further east to the government center and a neighborhood with existing sidewalk and connections to trails. The county has also made efforts to connect west to the Fighting Creek Park complex, the county library, and schools complex west of the courthouse.

Buford Road, Chesterfield County

In winter of 2020, Chesterfield County staff borrowed the TRAX Cycles pneumatic tube counters (bicyclist and automobile) and the Shared-Use Path counters (infrared, for pedestrians) to study a potential crosswalk addition across Buford Road at Choctaw Road in Bon Air (see Image 1). This effort was part of a walkability and improvement for the community in an area where GRTC has a busy transit stop at Bon Air Baptist Church and the Bon Air Shopping Center and traffic is at times heavy along both Buford Road and nearby Forest Hill Avenue. The data collected from the counters helped support the study and a crosswalk was implemented across Buford Road. Chesterfield has since implemented both phases of the Bon Air Pedestrian Improvements, which improved traffic calming on adjacent streets and improved walkability for the community, including to nearby Bon Air Library and Bon Air Elementary School, among other community assets.

Image 1: Counter at potential crosswalk on Buford Road at Choctaw Road in Bon Air.

Franklin Street, City of Richmond

The City of Richmond wanted traffic counts for Franklin Street in a 15-block corridor between Belvidere Street at VCU's Monroe Park Campus and the Capitol Square at 9th Street. The TRAX Cycles pneumatic tube counters (bicyclist and automobile) were loaned to the Department of Public Works for two periods during the analysis of this stretch of road, first in the summer of 2017 and again in the summer of 2022. A buffered two-way cycle track was installed on Franklin Street, which is a one-way street for vehicular traffic, but the bike lanes allow for bikes to travel in both directions due to a roadway reconfiguration that removed parking from the north side of Franklin Street. The counters were deployed again in 2022 to count bicycle traffic a few years after implementation, delayed in part due to the COVID pandemic. VDOT later installed a permanent counter between 3rd and 4th streets.

d. Status of the Equipment

The lending program and data collection is only as good as the performance of the equipment. While the collected data has remained reliable, over the past decade of service for the equipment, technology has advanced and the equipment RRTPO purchased in 2015 is mostly aged and antiquated. New counters are upgraded to 5G, the fifth generation of cellular transmission technology. Old counters, like the ones RRTPO owns, are no longer compatible with transmitting data. To retrieve data, a user must visit each counter in person to download manually, and only certain cellular phones will work with the technology (Android cellular phones). As a result, fewer requests have been made to borrow the equipment, and RRTPO staff have been less eager to loan the aging equipment due in part to the extra manual steps needed to retrieve the data.

In addition to the prohibitive expense of upgrading the equipment to 5G capabilities, the the equipment reached the end of its battery life. The counters have been out of service since the last lending to the City of Richmond's Department of Public Works in 2022. The counters and all the accompanying equipment have been sitting unused in the PlanRVA offices since that time.

The data collected for the duration of the lending program, however, has remained on the Eco Counter website and is available upon request. RRTPO's relationship with Eco Counter has remained intact during this hiatus, and the database has not been removed.

2. VDOT Bicycle Counter Program

g. Brief history of VDOT counter program

The Virginia Department of Transportation (VDOT) operates a Statewide Bicycle and Pedestrian Count Program that presents a network of more than 125 automatic counting systems to continuously monitor active transportation traffic (pedestrian, cyclist, and undefined user type) counts at selected locations, according to the VDOT website. Program development was facilitated by recommendations from the Virginia Transportation Research Council (VTRC) report Assessing the Feasibility of a Pedestrian and Bicycle Count Program in Virginia, completed in 2018.

The overall database includes counts for more than 300 locations and counts from as far back as 2009 for some sites. Some of the participating counters in the program are maintained by VDOT and others are maintained by localities from around the commonwealth, according to VDOT. The Active Transportation Count Program includes the following components and activities:

- Permanent counts
- Year-Over-Year (YOY) counts
- Short duration and technical assistance counts
- Counting equipment loan program
- Adopt-A-Counter program

The website notes that most of the counting systems are permanent and automatic counting systems. Others are temporarily installed, and the period of data collection at those selected sites may be short duration (a few weeks to a few months). Additional counters are not automatic, and the data collection is manually performed at the site of the counter using a mobile device, in most cases. There are approximately 60 counter locations in the Richmond region included on the VDOT statewide website, including some temporary locations and some permanent count locations.

More from VDOT's counter program website:

> *Collecting data on bicycle and pedestrian usage is critical to develop strategies and policy to encourage walking and biking, soft mobilities, ensure security; to inform decision-making in the planning and engineering infrastructure with better maintenance and design; and to build long-term support for walking a biking. The purpose of this website is to share counter data with the public.*
>
> *The website presents "raw" data that is fed directly from the automatic counting systems. As a result, the data may include gaps or extreme counts. The goal of the web site is to provide the most accurate picture of walking and bicycle counts. This may involve sharing both raw data, directly from the system, and data that has been precisely modeled and reconstructed. At any time, the data might be updated and corrected.*

NOTE: The phrase "soft mobility" refers to environmentally friendly, non-motorized, active, or human-powered modes of transportation.

One example to highlight from the VDOT count program in the Richmond region is the Virginia Capital Trail Foundation, which was founded to advocate for and maintain the Virginia Capital Trail, the 52-mile trail that connects Richmond to Jamestown along Route 5. There are currently 10 sites with count data listed on the VDOT website located along the trail. Not all the counters are active, as some of the equipment has deteriorated, and counts are either no longer reliable or no longer retrievable. According to VDOT, most of those counters are TRAFx counters. For any active counters, the foundation is tasked with

downloading the data and sending the information to VDOT to be uploaded to their counter database for display on the Eco-Visio website.

h. Current inventory and issues

As previously noted with the PlanRVA counting equipment, the VDOT count program faces the same outdated technology issues. As of this writing, it was not clear how many counters VDOT maintains, but the staff that oversees the counter program had not committed to equipment upgrades. The telecommunications capabilities of the equipment were designed to use 3G (third generation) technology to transmit the data it collects. The older 3G counters are no longer compatible with transmitting data. To retrieve data, a user must visit each counter in person to download manually, and only certain cellular phones will work with the technology (Android cellular phones). Like with the PlanRVA data, the data collected for use by the VDOT counter program is stored and maintained on Eco-Visio's web servers. VDOT is also facing the prohibitive expense of upgrading the equipment to 5G capabilities and concerned about the battery life on the equipment.

Similar to the highlighted Virginia Capital Trail example, many counters around the commonwealth depend on the localities and organizations which maintain the trails to provide the data to VDOT. Primarily, VDOT houses and maintains the data, but does not maintain the counters. That is the responsibility of the localities and organizations participating in the statewide counter network.

i. Counter website and potential partnership

VDOT's Statewide Active Transportation Count Network website includes point-in-time counts from more than 300 locations around the Commonwealth. The website is hosted by Eco-Counter and was created by the company (set-up fee was approximately $2,700 as of spring 2025). PlanRVA and our nine locality partners can continue to participate in this effort by VDOT to track and display data collected from counters in the Richmond region.

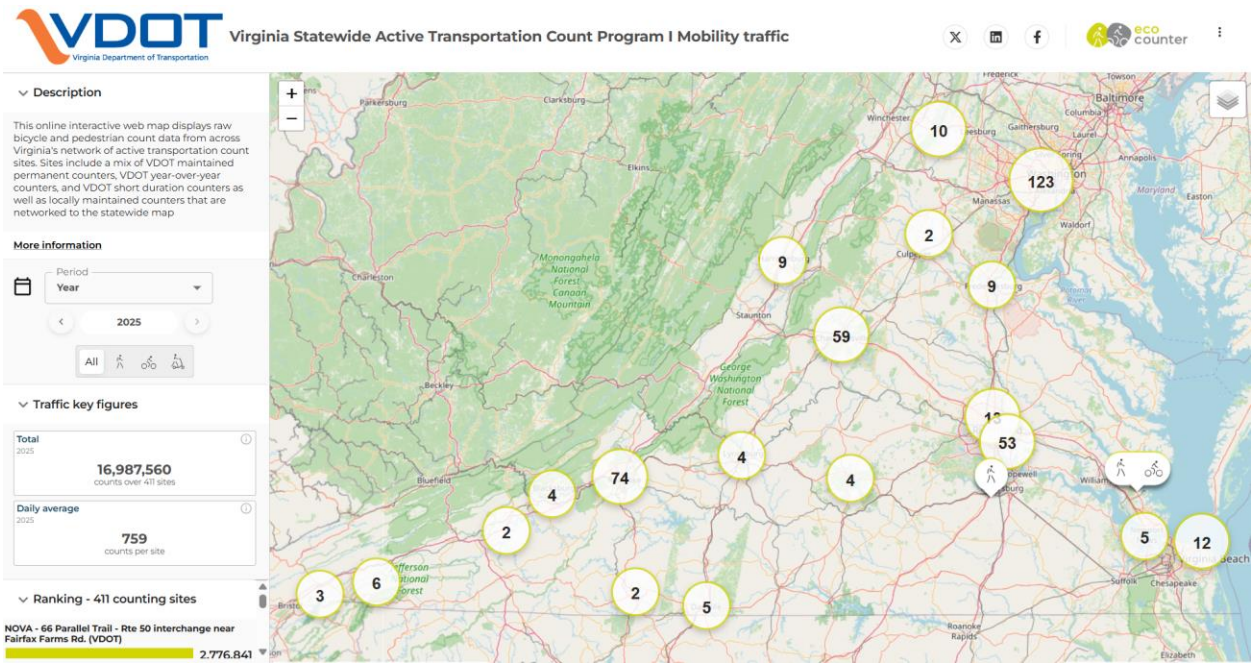

Figure 1: VDOT Statewide Active Transportation Count website

The online interactive web map on the statewide VDOT website "displays raw bicycle and pedestrian count data from across Virginia's network of active transportation count sites." The majority of the counters display counts that combine all types of users for a total volume count, as most of the counters are not sophisticated enough to differentiate mobility type. Locations include a mix of:

- VDOT maintained permanent counters
- VDOT year-over-year counters
- VDOT short duration counters
- Locally maintained counters that are networked to the statewide map

The following images help illustrate the counter website in the Richmond region:

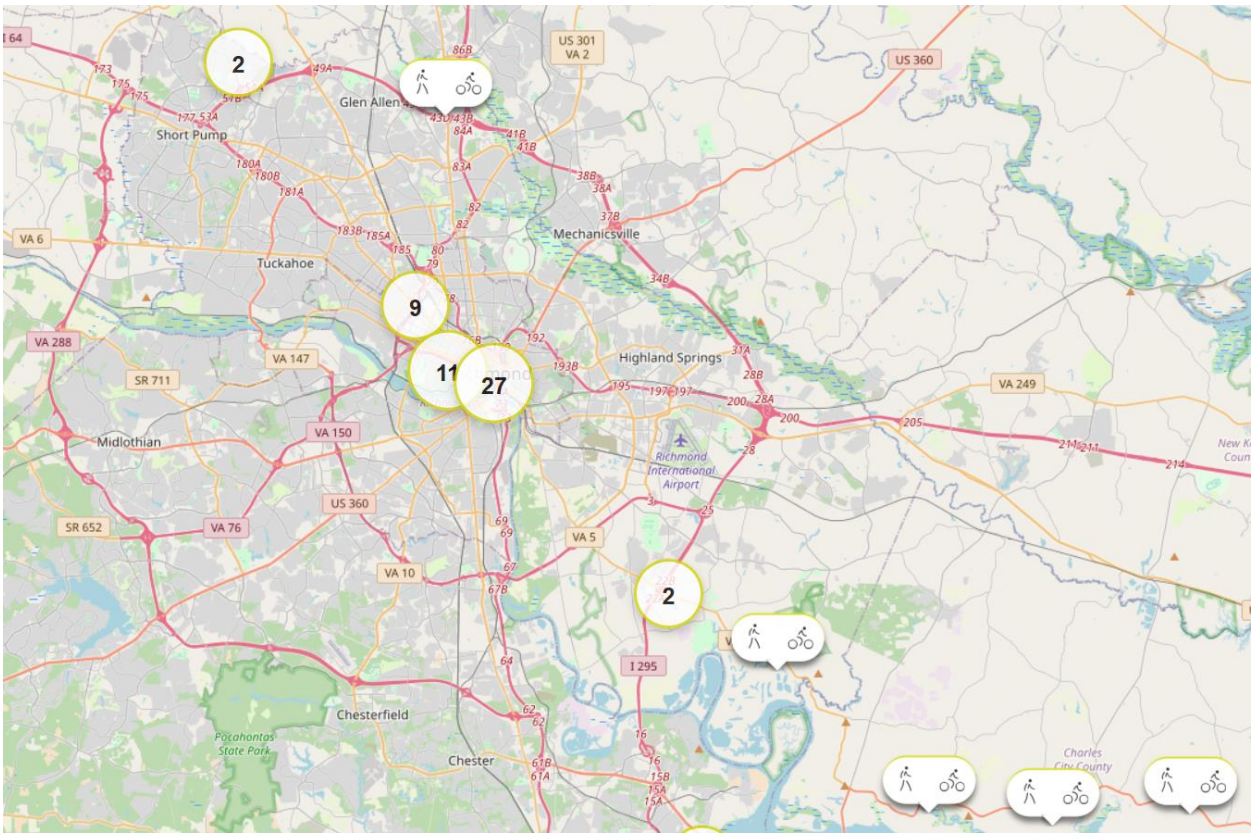

Figure 2: Counter locations on the VDOT website in the Richmond region.

The data tracked and displayed by the VDOT website includes these categories (see Figure 3):

- **Total:** Total traffic volume during the selected time period of the user types selected (indicating a count of all users).
- **Daily average:** Total traffic volume during the selected time period, divided by the number of days in that period. Days with no data are not taken into account.
- **Yesterday:** Total traffic volume the day before the current date.
- **Installation date:** The date on which the counting system was commissioned.
- **Last data:** Date when the counting system has transmitted data to the server.

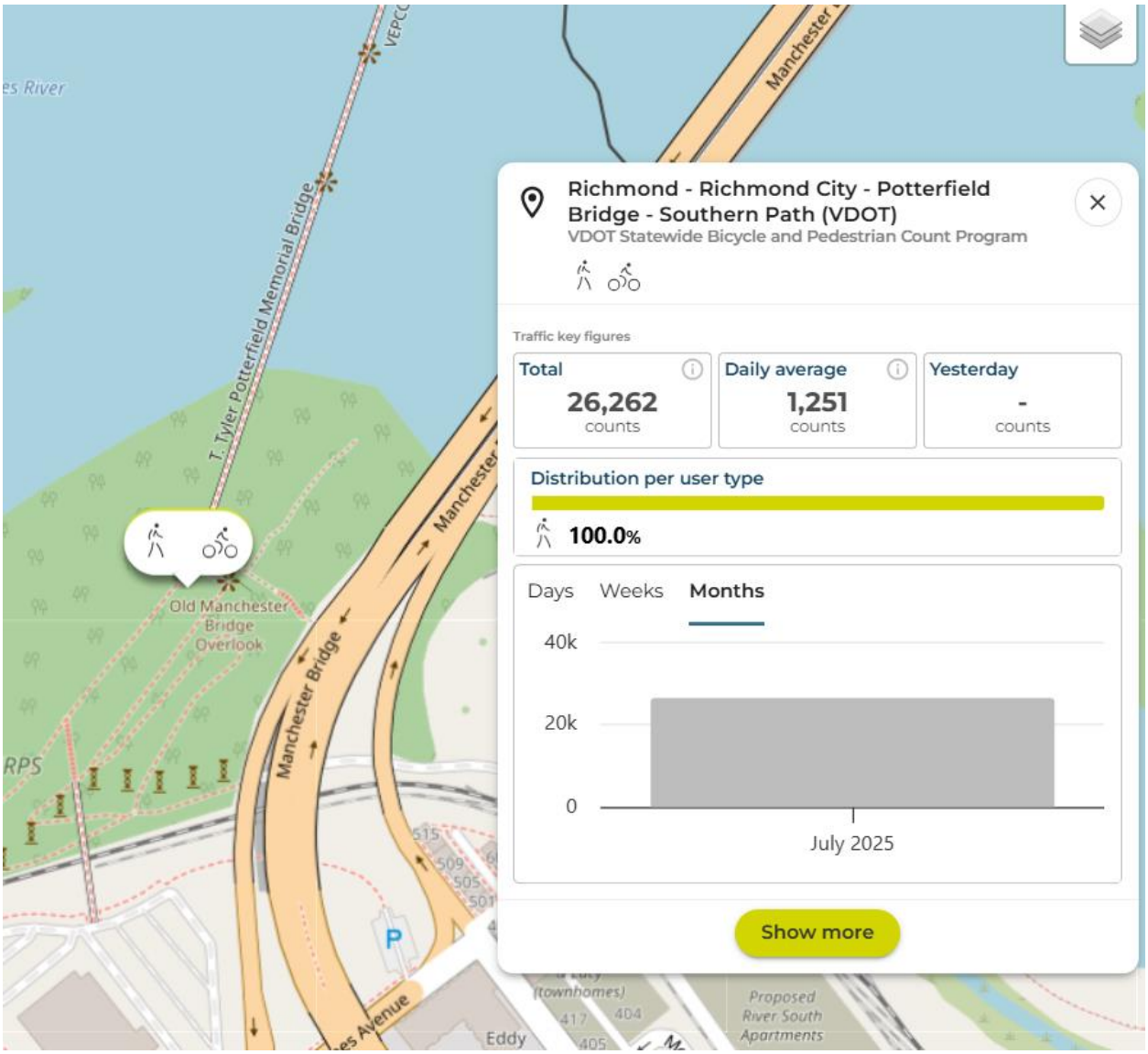

Figure 3: Example of a counter on the VDOT website, T. Tyler Potterfield Bridge in Richmond.

3. Case Studies

a. Mid-Ohio Regional Planning Commission Eco Counter Pilot Count Program

The first case study was the Mid-Ohio Regional Planning Commission (MORPC) and that agency's efforts to track the traffic along the active transportation network in their central Ohio area. The MORPC studied opportunities to improve active transportation safety in the Columbus, Ohio, region through a more robust development of the region's active transportation network. The study focused on a counter program to help provide evidence to support trail usage, ridership, user types, etc.

“The collection of non-motorized traffic counts is critical to supporting the development and maintenance of a safe, comfortable, and connected active transportation network,” according to the study.

During a pilot program in June 2021, MORPC purchased two Eco Counter Urban MULTI units from Eco Counter that were later transferred to the City of Columbus Department of Recreation and Parks (CRPD) for installation on the Central Ohio Greenways (COG) trail system, according to the study. A Memorandum of Understanding (MOU) between the agencies allowed the transfer as well as permission to manage the equipment and data.

For the pilot program with the recreation and parks department, the goal was to install and test equipment that could be used on a permanent basis on the COG trail system, as stated in the study. Eco Counter Urban MULTI units were identified as the best equipment for their goals. Those units are designed for permanent installation, have the ability to differentiate between user types (i.e., bicycle and pedestrian), as well as direction of travel. The counters include a metal bollard with a passive infrared sensor and inductive loops that are installed directly into the trail pavement. The sensor is mainly for pedestrian counts, and the loops are for bicycle counts.

MORPC paid a total of $11,830 for the equipment for this pilot (2021 dollars), which included the two Eco Counter Urban MULTI units, which displayed data at 15-minute recording intervals (instead of 60-minute intervals, as is more common), shipping fees, as well as a yearlong subscription for automated data transmission for each unit.

Per the MOU, recreation and parks were responsible for the equipment installation, which they put out to bid as a lump sum contract. CRPD also handled maintenance of the equipment. This required minimal staff labor to clear environmental build-up around the equipment to ensure accuracy of the sensors.

The following summarized conclusions and recommendations came from their study:

- Eco Counter Urban MULTI unit has a sleek and modern design that compliments the existing trail infrastructure and fits nicely into both urban and more natural trail environments. The equipment does not distract from the natural beauty and recreational use of the trails.
- Eco Counter Urban MULTI was very easy to install and could potentially be installed by parks maintenance staff. If a community prefers to hire a contractor for

installation, it is recommended that the equipment be installed as part of a larger trail construction project, or multiple equipment units be installed at once to get more interest from multiple contractors.

- Eco Counter Urban MULTI provides a comprehensive view of when, where, and how our trails are being used, which can provide important insights for maintenance and planning needs. The data has also provided added value for recent funding applications to further expand and improve the quality of the trail system.
- The automated data transmission subscription provided a nearly real-time look into trail usage, making the data extremely accessible for staff to quickly conduct timely analyses. The additional information provided by this specific type of equipment – direction of travel and differentiation of user type – was also extremely valuable.
- CRPD concluded the automated data transmission is desired, but the cost will be cumbersome for them to assume alone. Additionally, they do not have the staff resources to manually collect the data on a regular basis. It was suggested that the cost to provide automatic data transmission be shared across COG members who participate in regional data collection and sharing.

Included in the study, research conducted by the Institute for Transportation Research and Education at North Carolina State University for the North Carolina Department of Transportation and the Federal Highway Administration also identified this specific equipment as the best available for these particular needs. The research summarized that this equipment has an acceptable benefit-cost ratio based on its high level of accuracy in data collection and design for permanent, long-term use, as well as an acceptable level of installation "difficultly" and high quality of associated software tools.

b. Ada County, Idaho

Boise, Idaho, is known for being an inviting place for outdoor activity. The city is located in Ada County, which has a pretty robust network of bicycle and pedestrian infrastructure, including trails, sidewalks, and a variety of bike lane types.

Ada continues to progress improvements to the county's bicycle facility network that "maximizes safety, provides connectivity, and supports bicycling as a viable transportation mode among Ada County road users. We understand cyclists are a major part of the ACHD [Ada County Health Department] community, and we are focused on creating infrastructure that is cyclist-friendly," according to the county's website.

Part of Ada County's efforts to improve their infrastructure include data collection. They have a contract with Eco Counter that includes 12 counters (as of Fall 2025) with a plan to add approximately four more counters each year. The county considers the data from the counters to be validation of the routes along the bike and trails network. The counters are strategically placed along separate facilities and shared use paths. The county has emphasized data collection along key community assets, such as schools, employment centers, grocery stores, etc.

Since implementation of bicycle counters, Ada County staff has recommendations:

- Install counters along project areas before infrastructure is added to provide data on usage of pre-implementation, which could then be compared with usage of the infrastructure after the project is complete.
- Plan for any potential electromagnetic interference from structures like power polls, transformers, generators, etc. These can disrupt transfer of data with 5G transmission.
- Plan with battery replacement schedules.
- If data transmission (5G) does not work, plan with how data can be manually retrieved from the counters.
- Plan ahead for pests. Some counters can be blocked by insect nests or webs or even bird nets.
- Expect that data can be corrupted by spikes in usage that is not intended to be counted (such as pests interfering with proper counts, maintenance workers on lawn mowers, etc.).

Figure 4: Example of types of counters Ada County has implemented.

c. Northern Virginia: Arlington County

Considering the significance of partnering with the Virginia Department of Transportation (VDOT) and its efforts to count active transportation traffic, this study also chose to monitor the Northern Virginia region and how it works with VDOT to track and display counts.

BikeArlington and WalkArlington are programs and initiatives of Transportation Resources for Arlington County (TRAC), a Transportation Demand Management (TDM) agency of Arlington County, Va., according to the BikeArlington website. "TRAC was established in 1989 to enhance Arlington's economic vitality. The Bureau's mission is to educate and empower everyone who travels to, though, and within Arlington with timely and useful information about transit, walking, biking/scootering, and carpooling/vanpooling." TRAC is funded in part by grants from the U.S. Department of Transportation (DOT), the Virginia Department of Transportation (VDOT) and the Virginia Department of Rail and Public Transportation (DRPT).

Arlington County launched its bicycle and pedestrian counter program in 2009, according to the BikeArlington website. The county has more than 30 permanently installed counters — mostly on bridges and trails — and they track and classify bicyclists and pedestrians separately. A dozen more counters are installed in bike lanes in Arlington and track only

bicyclists. Arlington also owns six portable counters used on sidewalks and for short-term or special studies.

"Counter data helps planners identify peak travel times for different trails and prioritize the most heavily used locations. It also informs decision making, such as the need for maintenance and safety improvements," according to BikeArlington.

Arlington's most popular trails—Washington & Old Dominion (W&OD), Bluemont Connector, Four Mile Run, and Mount Vernon—are all monitored, as well as the major Potomac River crossings. According to BikeArlington, different sections of a trail can have very different use patterns depending on the time of day. For instance, where the W&OD Trail intersects with the Custis Trail, there is a distinct bike commuting wave in the morning, eastbound on the W&OD from Falls Church and onto the Custis Trail toward Rosslyn. The reverse movement takes place in the afternoon, according to BikeArlington's count data. There are other cited examples of traffic patterns using the data collected by bicycle and pedestrian counters.

BikeArlington's counter dashboard is publicly available, and all data on bicycle and pedestrian traffic is anonymous. The counter data is also available on a web dashboard serving the National Park Service's National Capital Region Trail Monitoring and Analysis Program. BikeArlington data is also shared on the VDOT Statewide Active Transportation Count Network website.

5. Conclusion and Recommendations

Bicycle and pedestrian counters can provide useful data to help transportation planners analyze the trails, bike lanes, cycle tracks, shared use paths, sidewalks, etc., that they are tasked with building and maintaining. From the examples we have seen through a case study and our partners around the Commonwealth, if the Richmond region is to improve the monitoring and evaluation of active transportation infrastructure, some form of bicycle and pedestrian traffic monitoring should be considered and implemented.

a. Upgrading Counters

The PlanRVA counters purchased in 2015 are due for upgrades. Eco Counter was the vendor for that purchase, and to begin this section of this study, we will look at examples of their current products that should be considered for upgrades.

Pedestrian counters

Pyro-Box Evo: The best thing about this product is that it can be mobile or permanent. It was made for counting users on sidewalks, shared use paths, streets, etc. The counter can be installed in 30 minutes and requires limited maintenance, according to Eco Counter. Remote system upgrades and maintenance are possible through transmission. The product does not appear to be capable of differentiating user types it counts.

- Protected by a vandal-proof shell
- Can be mounted on existing infrastructure such as signs, light poles, fences, etc.
- 2-year battery life
- 4G wireless transmission
- Bi-directional

The counter has three options for the desired range of the distance the counter will detect (3 yards, 15 yards, 39 yards).

Price range is $2,600-$4,875, depending on the features and upgrades needed.

Pedestrians & Bicycles

Urban MULTI Evo: This product is only for permanent counts. The product uses an inductive loop system, installed just under the road or trail surface, acting as a semi-invisible counter that cyclists ride over. It combines the technologies of the PYRO Evo pedestrian counter and the ZELT Evo bicycle and scooter counter (permanent counter), according to Eco Counter. The Urban MULTI Evo counts and classifies pedestrians, bicycles, and scooters as they pass. Made for counting users on sidewalks, shared use

paths, streets, etc. Remote system upgrades and maintenance are possible through transmission.

- Battery or solar powered
- Offers direction and speed detection
- Waterproof, robust, and adapted for the urban environment
- Remote system updates and maintenance
- 1-year battery life
- 4G wireless transmission
- Bi-directional

The counter has four options for the desired range of distance the counter will detect (less than 5 yards, 10 yards, 15 yards, and 20 yards).

Price range is $4,300-$7,225, depending on the features and upgrades needed. There are options for upgrades for speed detection and scooters.

TRAFx counters

According to VDOT, the majority of participants in the Statewide Bicycle and Pedestrian Count Program use TRAFx counters. They appear to be the most user-friendly, easy to maintain and install, and are affordable. Count data is collected manually from the counters in the field and uploaded for use, no transmission option.

Trail Counter: This product can be mobile or permanent. Key product information:

- Counts people on trails, paths, sidewalks, roadways
- Mobile, easy to change locations
- Mount on a tree, or put inside a low-cost, lockable electrical box
- Infrared scope
- Does not require a receiving unit or reflector to operate
- Maximum range: 20 feet
- Compact, unobtrusive, camouflaged design

- Long battery life (up to 10 years)
- Large storage capacity (millions of counts)
- Low operating costs (less than $1/year for batteries)

Price begins at $2,490 for the system package, depending on the features and upgrades needed. Additional counters would cost in the ~$600 range. Package includes a counter, dock (field case), data collection service, cables, manual, and technical support.

b. Cooperation with VDOT

As stated previously in this study, participation with the Virginia Department of Transportation (VDOT) will be vital to the success of data collection, analysis, and display. VDOT has been working to acquire counters, working with Eco Counter, and it may be best for PlanRVA to work with VDOT to procure funding or to cooperate with VDOT to work with Eco Counter in a joint effort to acquire counters.

VDOT worked with Henrico and Hanover counties to install temporary and potentially permanent counters along the completed section of Fall Line (Design Build 1). VDOT first installed a counter north of Woodman Road in Henrico in Fall 2025. A second counter was requested by Hanover staff at the Gwathmey Church Road intersection with Fall Line which VDOT installed in Spring 2026.

Many of the funding programs implemented in the Richmond region involve the direction of federal and state funds to localities through VDOT. If a program to increase the active transportation counters in the region is implemented, inclusion of funding for counters to permanently track bicycle and pedestrian traffic could be included as part of the overall funding request for new active transportation projects. As we are seeing with the implementation of Fall Line, collecting data for the trail can be useful. Our region could adopt a recommendation to add the cost of counters into any project proposal. If possible, the counters could be purchased and installed ahead of the project implementation to get active transportation counts before and after the project

to provide data comparisons. If the region is to adopt a process to include counters as part of any active transportation project, PlanRVA staff could make a recommendation to the RRTPO Technical Advisory Committee to help provide budgetary requirements, benefits, and guidance for how a funding request like that may impact future projects.

VDOT has stated the following priorities for their counter program:

- New counting equipment – replacement of existing equipment; additional capabilities – intersections, mixed traffic
- Updated coordination with count "network" partners
- More robust analysis of collected count data

c. Implementation of Funding for Future Counters

If PlanRVA is to seek funding for new, upgraded bicycle and pedestrian counters, one of the first steps would be to include this as a task and budget request for an upcoming Unified Planning Work Program (UPWP). If funding was made available, including a work task in the UPWP to allow for the staff time allocation for the lending program to be reactivated. That would include time to complete the research process and funding to acquire upgraded counters. Staff time would also be needed for working with the PlanRVA localities to promote the program, assist the localities that request to borrow the counters, and any time needed to help install, maintain, and store the counters. This staff position would also need to maintain the relationship with the company from which the counters are purchased and the data is stored.

A second effort may be to apply for funding through one of the many transportation funding programs available to our MPO. In that scenario, the allocation of time would be needed for staff to develop the applications for funding. If funding is rewarded, the staff scenarios detailed in the previous paragraph would again be necessary.

Outside of the coordinated efforts for PlanRVA to participate in the VDOT Statewide Active Transportation Count Network, another interesting way to publicly display the count information along a central location of the trails network could be to install a counter at a key trail junction, like the potential Fall Line and Viginia Capital Trail crossing at Kanawha Plaza, at Brown's Island, or along the Canal Walk. Those locations are all currently or planned to be active transportation hubs and provide separation from automobiles. A larger electronic display of trail counts for many of the most travelled sections of Fall Line, Capital Trail, the James River Park (especially the T. Tyler Potterfield Bridge), and other potential locations could not only serve to inform with data but also act as encouragement for interested potential riders.

Figure 5: Eco-DISPLAY Classic+ example from Eco-Counter

Eco Counter has a product called the Eco-DISPLAY Classic+ ($11,000 one-sided, $13,000 two-sided) that can be placed along trails that show a live count of pedestrians and cyclists. There are two other smaller options (Eco-DISPLAY Light, $11,000-$13,000

& Eco-DISPLAY Compact, $6,700-$7,900). Sharing data with a display along the trail, these counters could provide a fun way of showing active transportation users statistics to support their taxpayer dollars and how they benefit from it. Also, sharing pedestrian or bicycle volumes following a big event where many people used active transportation to travel to the site or along daily work and school commuter routes could be good ways to illustrate the significance of that infrastructure investment.