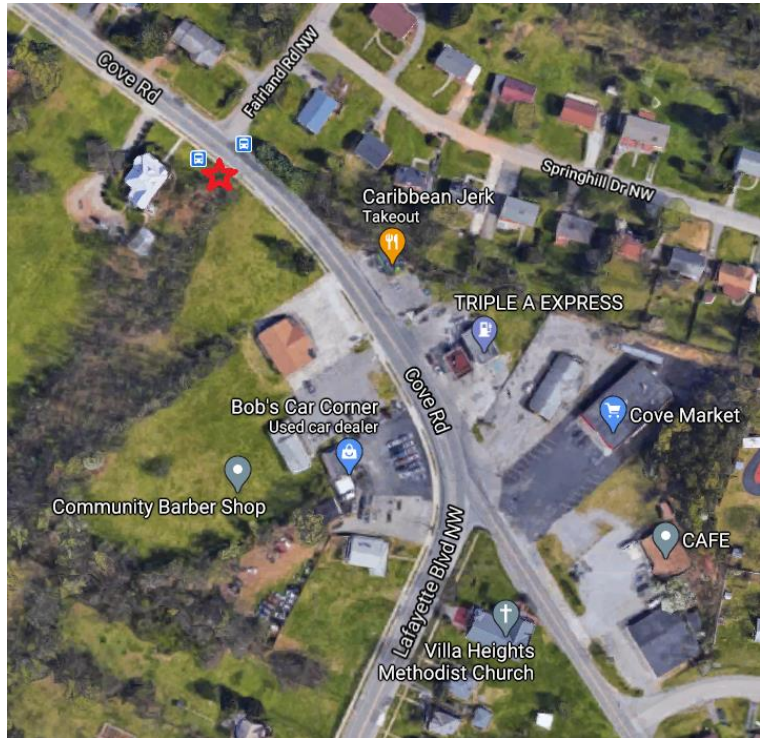


## Cove Road

February 16, 2021

The Virginia Department of Transportation launched a statewide bike/ped count program in the fall of 2020 and provided two Eco-Vision MultiModal EcoCounters, some accessories, training, and data management to RVARC. The EcoCounters are infrared counters. In July 2019, Virginia Tech professor Dr. Steve Hankey partnered with RVARC to install four EcoCounters. These generate provide reference counts to calculate average annual daily traffic from temporary count sites.

Pedestrian and bicycle activity was assessed on Cove Road near Lafayette Boulevard. Cove Road and Lafayette Boulevard connect Melrose Avenue and Hershberger Road. Cove Road Average Annual Daily Traffic is 12,000. It is mostly residential other than Cove Market at the intersection of Cove Road and Lafayette Boulevard.



Cove Road counter location (red star)

When Cove Road and Lafayette Boulevard were repaved, bike lanes were added on one side, crosswalks were added, and curb ramps were upgraded to ADA compliance. The zebra crosswalks at the intersection of Cove Road and Lafayette are marked with additional visible signs. At the location counted, there is a bike lane and a sidewalk on the southwest side only.

RVARC staff installed two Eco-Vision counters with pneumatic tubes to count bicyclists in the bike lane and the infrared sensor directed across the sidewalk to capture pedestrians. A counter on 10<sup>th</sup> Street and a counter on Campbell Avenue were used as the reference counters for pedestrian counts and Memorial Avenue bike lane counters for the bike counts because these locations had a complete year of counts. An initial site closer to Lafayette Boulevard did not work because vehicles frequently encroached into the bike lane due to the curve in the road and caused extra counts. The pneumatic tubes were in place September 26 – October 26, 2020 and the counter captured pedestrian data from September 25 – October 27, 2020.

Day-of-year factors were determined for the reference counters by dividing the day's count by the average of 365 consecutive days of counts for that counter, averaging multiple counters' individual day-of-year factor. Each day's counts on each of the temporary counters were divided by the ped or bike day-of-year factor for the corresponding date to create adjusted counts. The adjusted counts were averaged to calculate the annual average daily pedestrian or bicycle traffic at each counter location.

Table 1. Average Annual Daily Pedestrian Traffic (AADT)

Mode	Average Raw Counts	AADT
<b>Pedestrian</b>	67	95
<b>Bicycle</b>	9	12

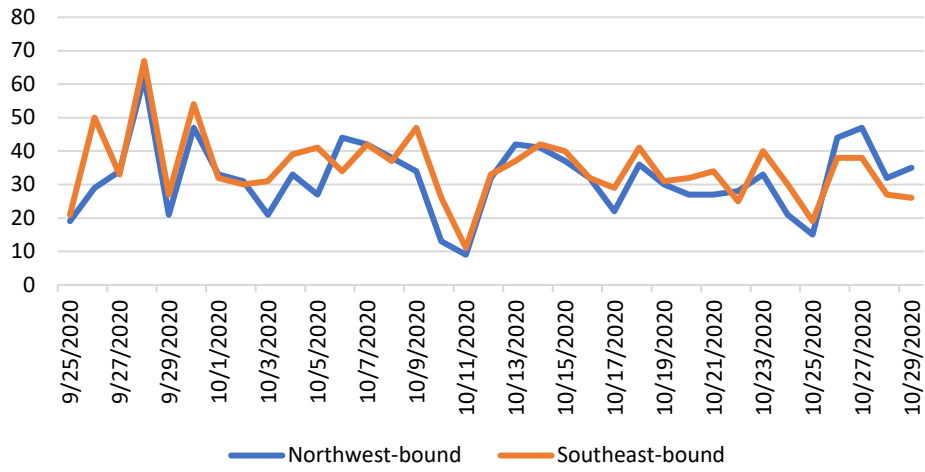
### Average Annual Daily Traffic

There was not a directional split in pedestrian travel (Figure 1). There were almost no wrong-way bicyclists in the bike lane. While the counter was being installed, a child on a manual scooter passed by and the counter picked up the scooter. The lack of wrong-way bicyclists in the bike lane suggests that bicyclists (or scooters) traveling the direction that does not have a bike lane use the travel lane or the sidewalk.

Pedestrian activity was highest at the beginning of the week and steadily declined through the week while bicycle activity was steady throughout the week with a peak on Saturday (Figure 2).

Pedestrian and bicycle activity were highest between 7:00 a.m. and 9:00 p.m. (Figure 3).

### Sidewalk Directional Split



### Bike Lane Directional Split

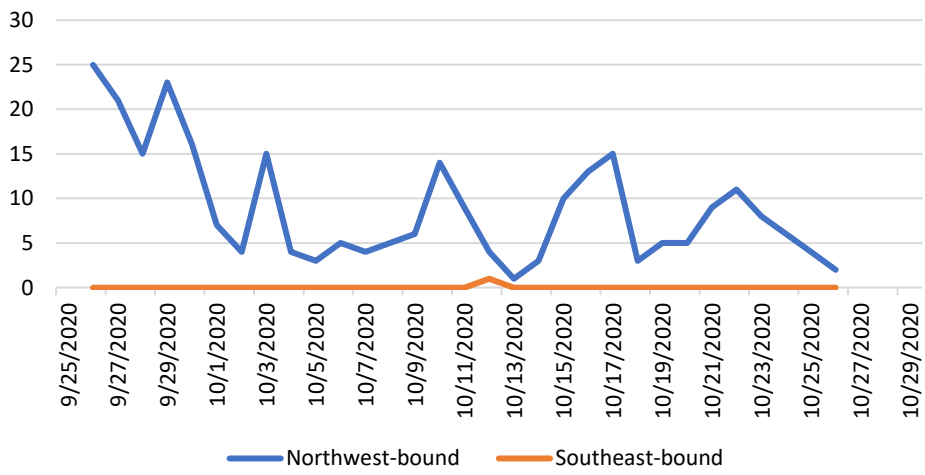


Figure 1. Directional split

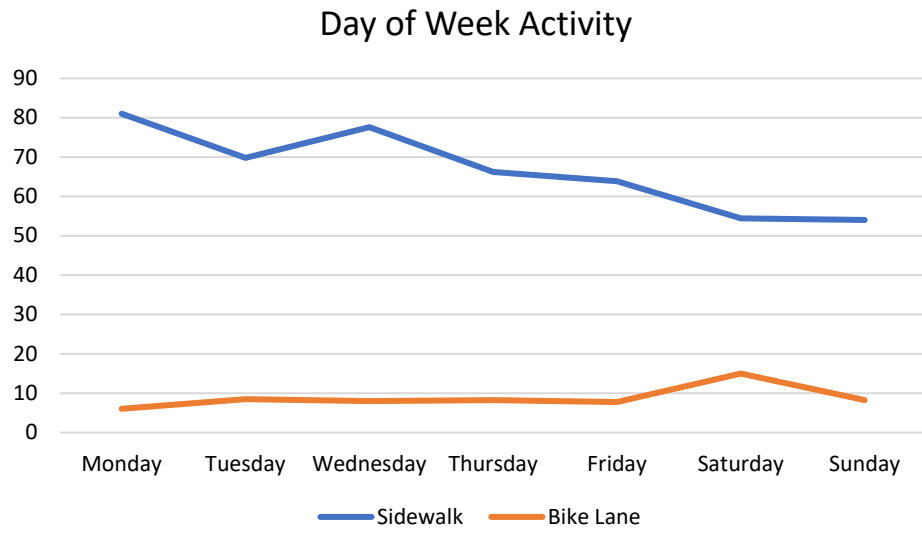


Figure 2. Day of Week

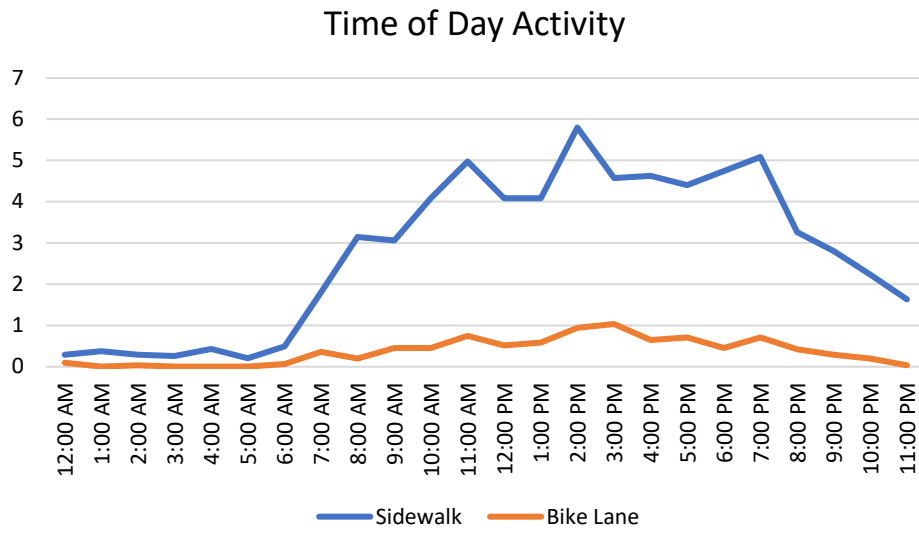


Figure 3. Time of Day