Roanoke Valley Transportation PLANNING ORGANIZATION
Staffed by the REGIONAL commission

Salem Pedestrian Counts

July 27, 2020

The Virginia Department of Transportation launched a statewide bike/ped count program in the fall of 2020 and has provided Eco-Vision MultiModal EcoCounters, some accessories, training, and data management to RVARC. Salem staff identified downtown Main Street for collecting data on pedestrian activity.

Figure 2. Location of counter. *Left:* Standing on the south side of Main Street facing west. *Right:* Also facing west, with the counter visible.

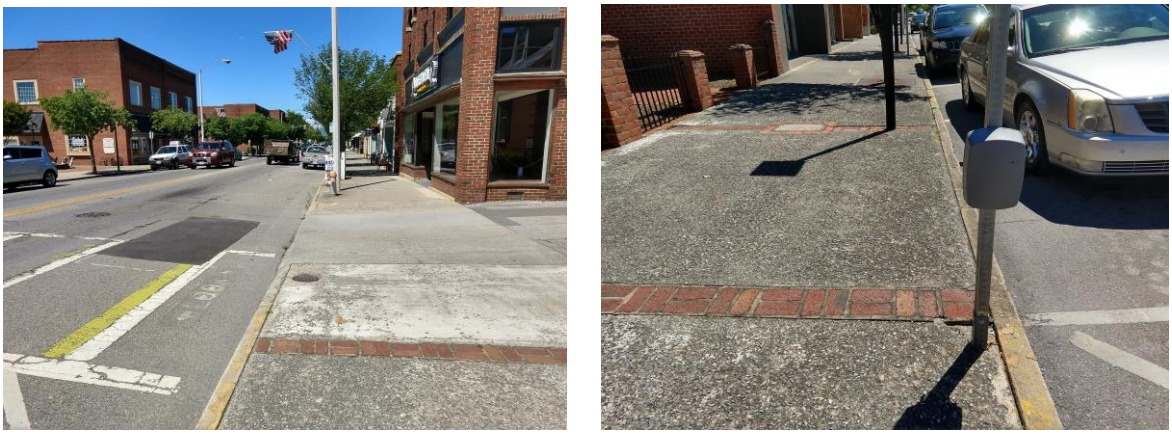

Figure 1. Location of counter. *Left:* Standing on the north side of Main Street facing west. *Right:* Facing east, with the counter visible.

Several planners and citizens walked along Main Street through downtown Salem in 2019 to review pedestrian accommodations. Main Street has average annual daily vehicle traffic (AADT) of 13,000. The #91/#92 bus serves Main Street. Downtown locations that generate pedestrian traffic include the library, City Hall, the Farmers Market, restaurants, bars, retail, and offices, as well as events. The Salem Downtown Plan anticipates more pedestrian activity and funded streetscape projects will

improve walkability. Two counters were placed on Main Street in front of the library (Figure 1) and across the street (Figure 2). Pedestrian counts were collected June 13 – July 23, 2020.

Ideally, permanent counters collect data for a full year so that day-of-year factors can be applied to the raw data from temporary counters such as these to calculate Average Annual Daily Traffic for that location. In July 2019, Virginia Tech professor Dr. Steve Hankey partnered with RVARC to install four pedestrian counters at two locations. After examining travel patterns, the two counters on Campbell Ave SW near Jefferson St were selected to provide day-of-year factors to the Salem Main St pedestrian counts because the characteristics of pedestrian activity in downtown Roanoke location are likely to be similar to downtown Salem. Day-of-year factors were determined for each of the two Campbell Ave counters by dividing the day's count for each counter by the average of 365 days of counts for that counter. The day-of-year factor was the average of the two counters' day-of-year factors. Each day's counts on each of the Main St locations were divided by the day-of-year factor for the corresponding date. The adjusted counts were averaged to calculate the annual average daily pedestrian traffic at each location.

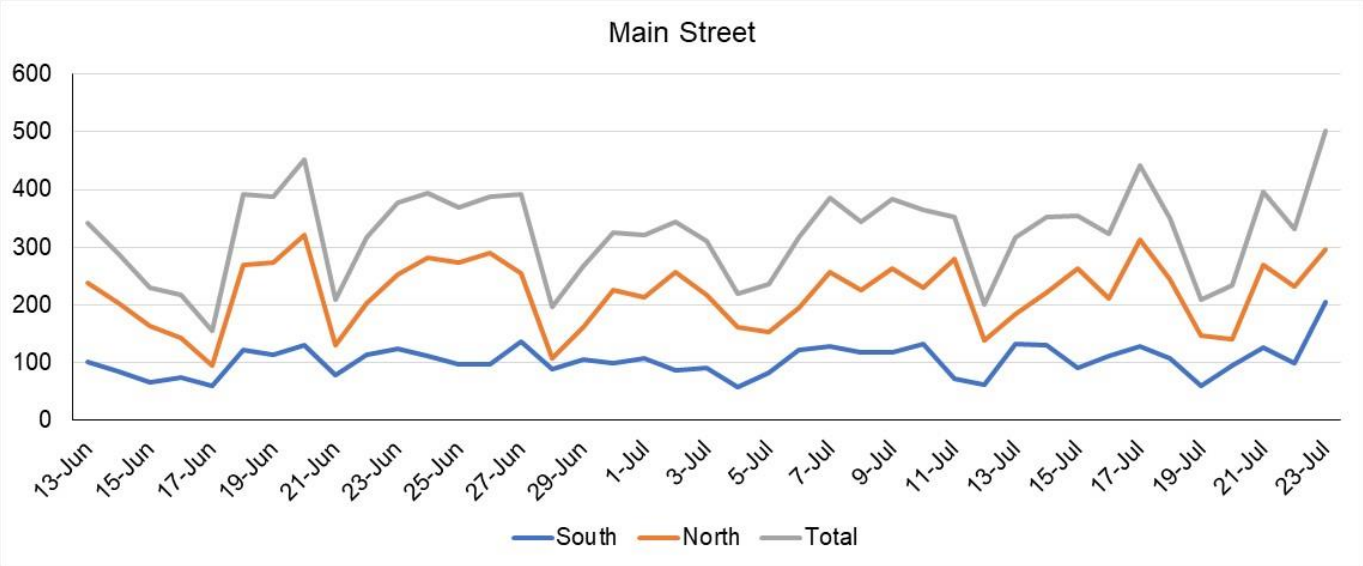

Figure 3. Daily counts not adjusted by day-of-year factor.

After adjusting each day's count with the day-of-year factor, the Average Annual Daily Pedestrian Traffic for Main Street was 491, 164 on the south side and 328 on the north side. The raw counts ranged from 282 to 2,529 (68 to 1,033 on the south side and 173 to 1,496 on the north side) (Figure 3).

Daily traffic patterns were analyzed. Pedestrian traffic was lowest on Sundays (about 2/3 of average) and steady the rest of the week, almost 20% higher than average on Thursday (Figure 4). Data was not adjusted by day-of-year factors so that weekly patterns could be observed.

Hourly pedestrian traffic on Main Street climbed early and showed a peak from 9:00 am to 2:00 pm with a lower evening peak from 6:00 pm – 9:00 pm (Figure 5). The hourly pattern was the same on both sides but with different volumes.

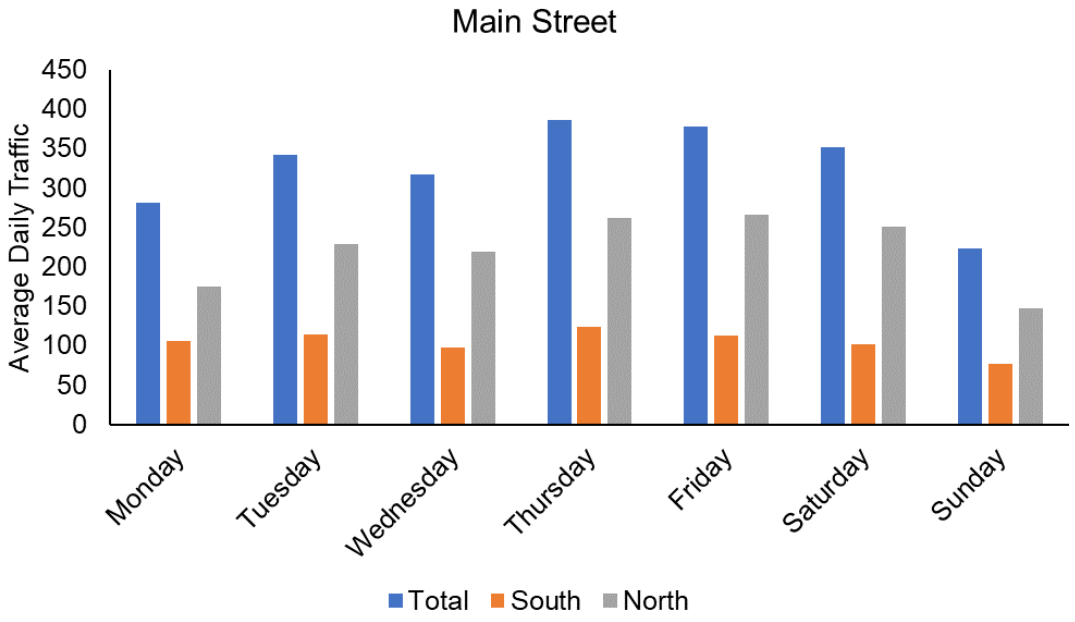

Figure 4. Day of week average daily pedestrian traffic (not adjusted).

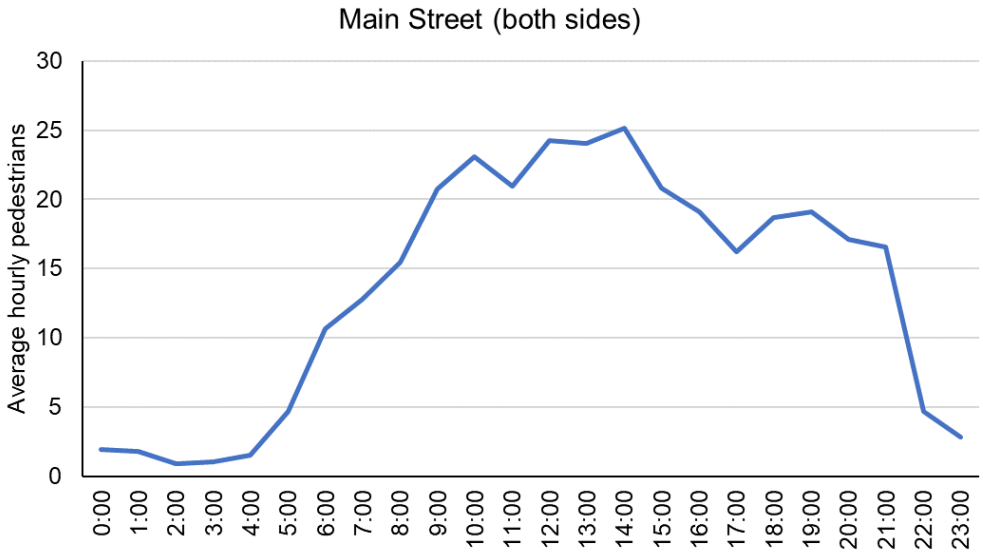

Figure 5. Average hourly pedestrian traffic on Main Street (south and north sides).