Roanoke Valley Transportation PLANNING ORGANIZATION
Staffed by the REGIONAL commission

Shaffers Crossing and Grandin Village

August 6, 2020

The Virginia Department of Transportation launched a statewide bike/ped count program in the fall of 2020 and provided Eco-Vision MultiModal EcoCounters, some accessories, training, and data management to RVARC. Shaffers Crossing and Grandin Village are locations of interest.

Shaffers Crossing: Average Annual Daily Pedestrian Traffic 47.5

Shaffers Crossing is the 875-foot segment that connects Boulevard St to 24th Street. It passes under four railroad bridges. A new boardwalk was constructed after the collapse of the previous boardwalk. The new ADA-compliant boardwalk is five feet wide and connects to the sidewalks on both ends with ramps (previously there were steps). 24th Street has an average annual daily vehicle traffic of 9,700. 10th Street crosses the railroads 1.2 miles to the east and Peters Creek 2.4 miles to the west; there are no closer places to cross the railroads. Hurt Park Elementary School is on the south side. Goodwill is on the north side. Both sides have affordable housing complexes, industrial uses, and bus lines.

RVARC staff installed a counter on the railing of the boardwalk (Figure 1). Pedestrian counts were collected July 25 – August 3, 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 the one at Shaffers Crossing 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 at 10th Street NW near the Lick Run Greenway were selected to provide day-of-year factors to the Shaffers Crossing pedestrian counts because the travel characteristics of that location are more similar than the other location (Campbell Ave SW) to Shaffers Crossing. Day-of-year factors were determined for each of the two 10th Street NW counters by dividing the day's count for each counter by the average of 365 consecutive 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 Shaffers Crossing 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 that location.

Figure 1. Facing south at the location of the counter

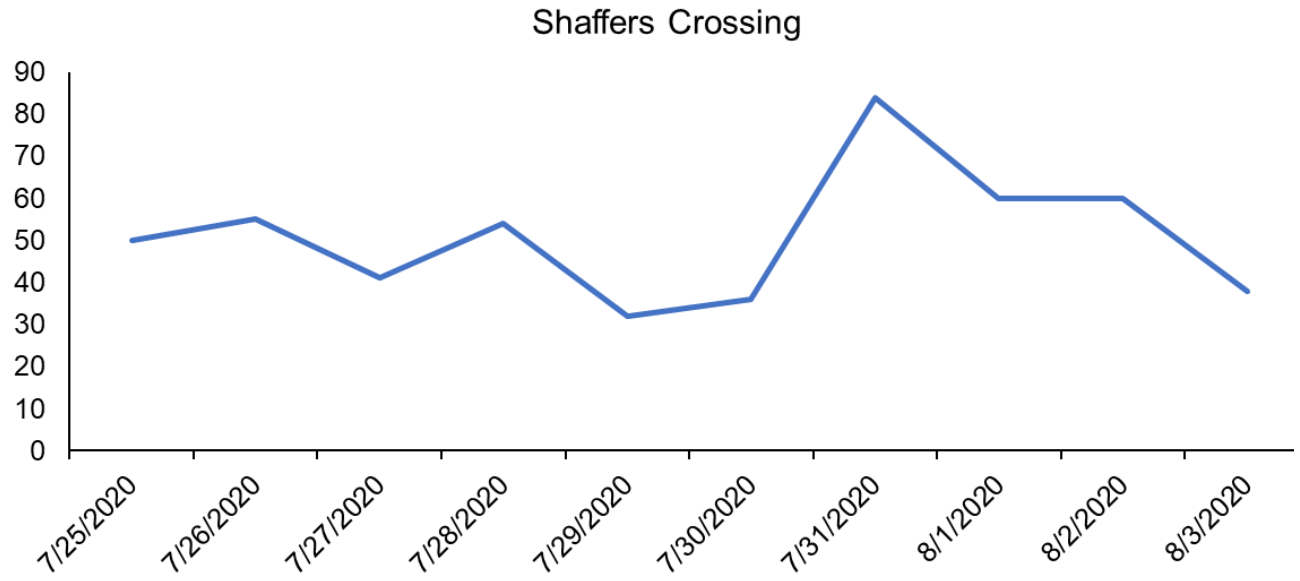

Figure 2. Pedestrian counts at Shaffers Crossing

After adjusting each day's count with the day-of-year factor, the Average Annual Daily Pedestrian Traffic for Shaffers Crossing was 47.5. The raw counts ranged from 32 to 84 (Figure 2).

The duration of counts was too short to analyze weekly patterns. Hourly pedestrian traffic rises to a morning peak at 7:00 am and remains high until 10:00 pm (Figure 3).

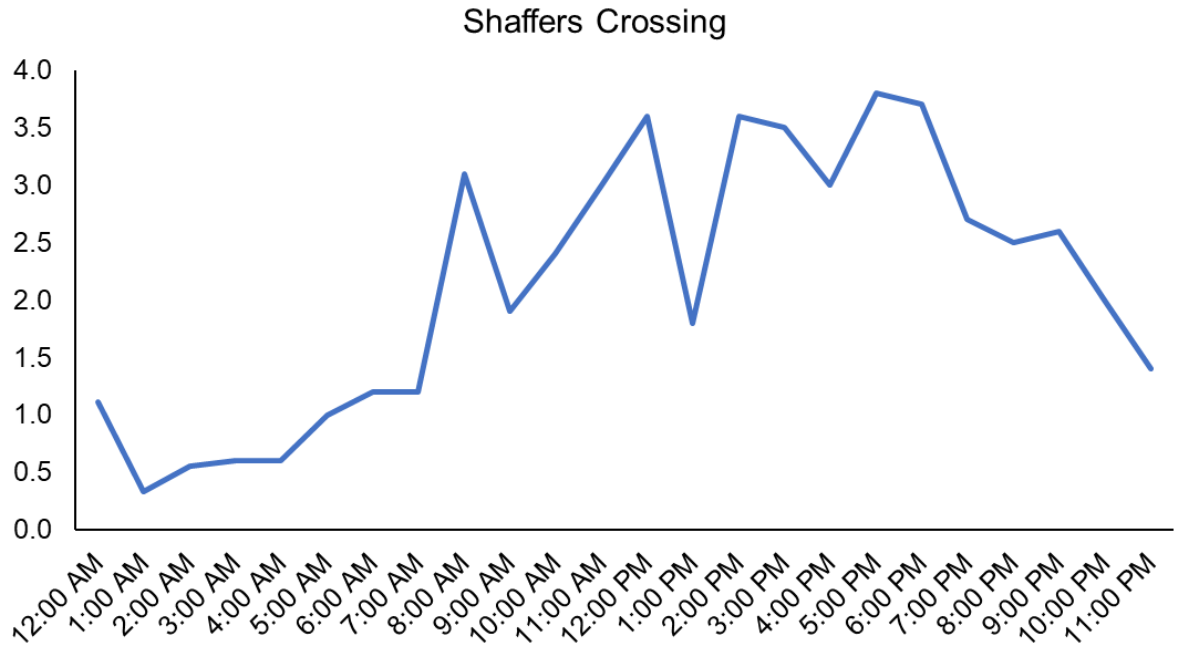

Figure 3. Average hourly pedestrian traffic

Grandin Village: Average Annual Daily Pedestrian Traffic 296

Grandin Village is a village center at the intersection of Memorial Avenue and Grandin Road, both of which are part of Route 11. A streetscape project in 2004 on Grandin Road and bike lanes striped on Memorial Avenue in 2015 slowed traffic and improved the walkability. The Grandin Theater, the Roanoke Natural Foods Co-op, and the Co-Lab serve as anchor uses and the village has several restaurants and some retail. There is a church and an elementary school. The #65/#66 bus route serves Grandin Village.

RVARC staff installed a counter on the west side of Grandin Road facing Heights Community Church (Figure 4). Pedestrian counts were collected July 25 – August 3, 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 the one at Grandin Village 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 Avenue were selected to provide day-of-year factors to the Grandin Village pedestrian counts because the travel characteristics of that location are more similar than the other location (10th Street NW) to Grandin Village. Day-of-year factors were determined for each of the two Campbell Avenue counters by dividing the day's count for each counter by the average of 365 consecutive 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 at Grandin Village 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 that location.

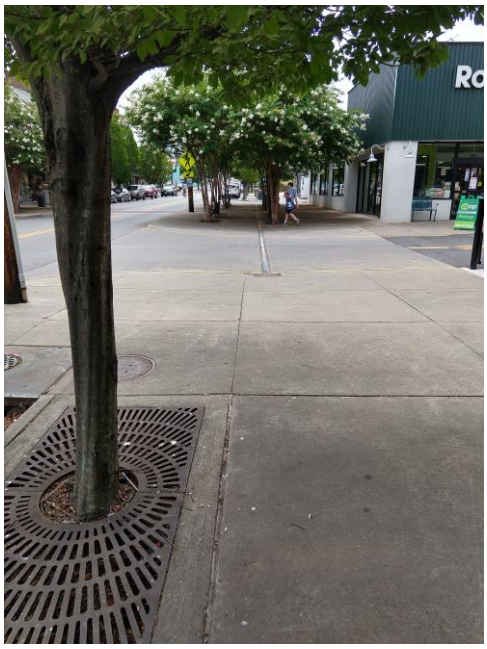

Figure 4. Facing south at the location of the counter.

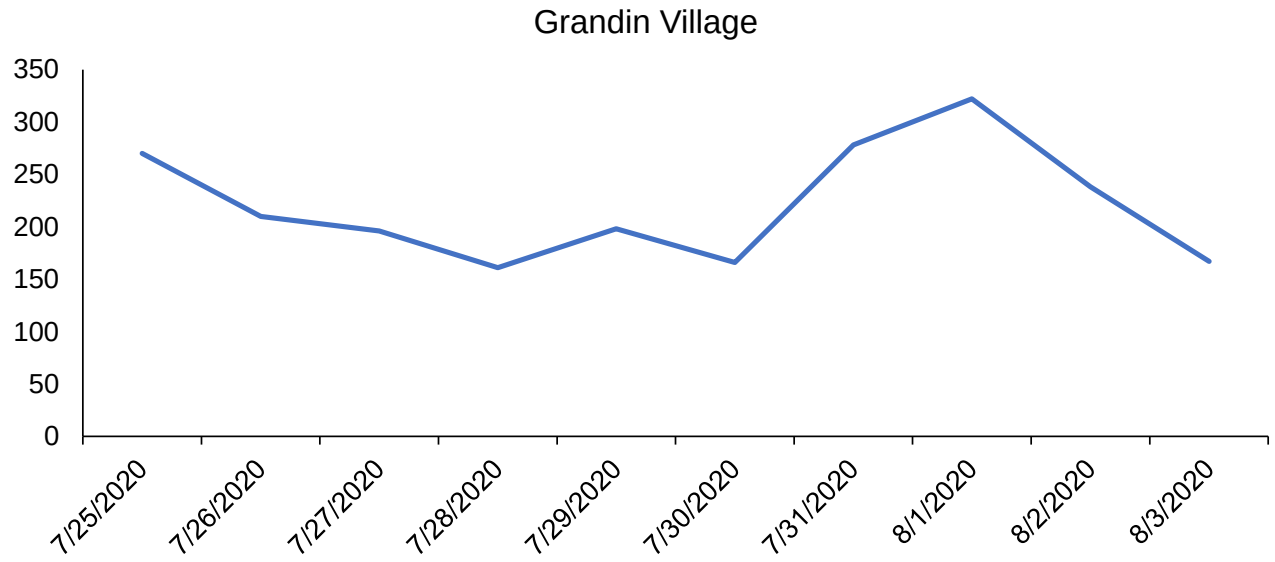

Figure 5. Pedestrian counts at Grandin Village

After adjusting each day's count with the day-of-year factor, the Average Annual Daily Pedestrian Traffic for Grandin Village was 296. The raw counts ranged from 161 to 322 (Figure 5).

The duration of counts was too short to analyze weekly patterns. Hourly pedestrian traffic rises to a morning peak at 7:00 am and remains high until 9:00 pm (Figure 6).

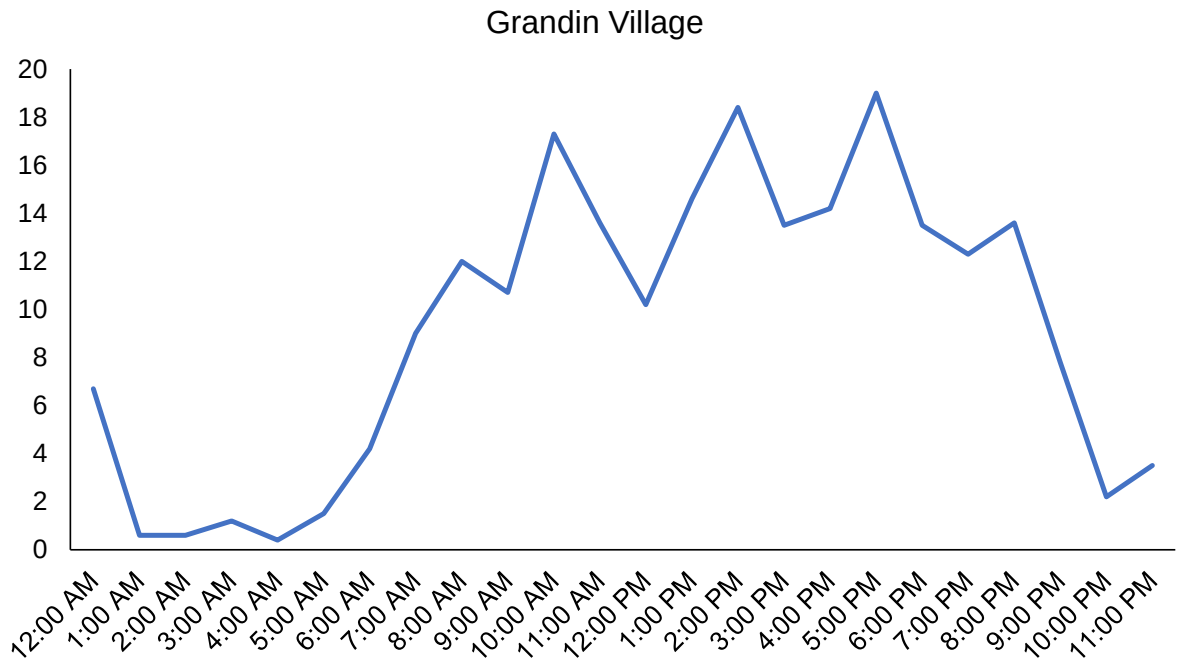

Figure 6. Average hourly pedestrian traffic