

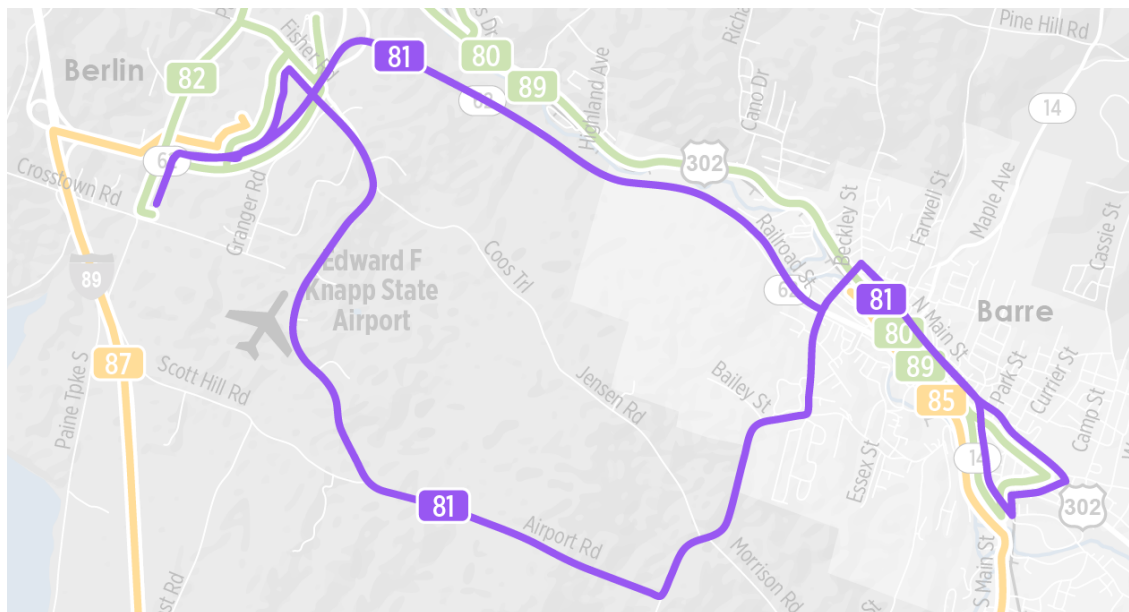
ROUTE 81

BARRE HOSPITAL HILL

ROUTE OVERVIEW

Route 81 is a Rural Local route that operates between Downtown Barre and the Berlin Shaw's. The route travels outbound from downtown Barre along Airport Road and inbound along Route 62. It provides service to Downtown Barre, health and medical facilities between Barre and Berlin, and dispersed shopping destinations in Berlin north of Edward F. Knapp State Airport along Route 62 (see Figure 1). Deviations from the route are available up to three quarters of a mile if requests are made at least 24 hours in advance. Customers can transfer between Route 81 and other services in Berlin at the Berlin Mall and Shaw's, and in Barre at NAPA Auto Parts.

Figure 1: Route Map



On weekdays, Route 81 operates every 60 minutes throughout the day (see Table 1). On Saturdays, service operates every 60 minutes during the day. No Sunday service is provided. Service spans are long on weekdays and slightly shorter on Saturdays.

Table 1: Schedule Statistics

SERVICE DAY	SPAN OF SERVICE	FREQUENCY (MIN)	DAILY TRIPS (LOOP)
Monday-Friday	6:55 AM to 6:20 PM	60/60/—	11
Saturday	7:55 AM to 5:55 PM	60/—	10
Sunday	—	—	—

Note: Peak frequencies are calculated for service between 6:00 am – 9:00 am & 3:00 pm – 6:00 pm. Midday service is from 9:00 am – 3:00 pm. Evening service is for service after 6:00 pm. Saturday and Sunday frequencies are shown as AM/PM.

Route 81 has three service variants, with three operating on weekdays and two on Saturdays (see Table 2). The primary alignment, 81-1, operates the first eight trips on weekdays. This variant serves Berlin Health & Rehab/CVSAS and Berlin Shaw's by request only. Variant 81-2 operates on the last three full trips on weekdays and all of the 10 full trips on Saturdays. This variant serves Berlin Shaw's as a hard stop and serves Berlin Health & Rehab / CVSAS by request only. Variant 81-3 operates the final trip on both weekdays and Saturdays. It runs a shortened northbound trip through downtown Barre beginning at the NAPA Auto Parts stop and terminating at North Barre Manor.

Table 2: Service Variants

VARIANT	ORIGIN	DESTINATION	UNIQUE FEATURE	TRIPS PER DAY		
				WKD	SAT	SUN
LOOP				12	11	—
81-1	NAPA Auto Parts	NAPA Auto Parts	Berlin Health and Berlin Shaw's stops by request only	8	0	—
81-2	NAPA Auto Parts	NAPA Auto Parts	Berlin Health stop by request only	3	10	—
81-3	NAPA Auto Parts	N. Barre Manor	Truncated route	1	1	—

RIDERSHIP

On weekdays, Route 81 carries an average of 60 passengers per weekday and 5.0 passengers per round trip. On Saturdays, ridership is slightly higher at 62 passengers, and 5.6 passengers per round trip.

Ridership by Stop

Weekdays

Most Route 81 riders travel between downtown Barre, and a few limited locations on Hospital Hill (see Figure 2). The highest boarding stops in Barre are the downtown Barre stops at NAPA Auto Parts, North Main Street at Keith Avenue, Key Bank, and Barre Manor, which together have about 51 boardings per weekday.

On Hospital Hill, the highest ridership stops are the Central Vermont Medical Center (11 boardings), Berlin Mall/Walmart (16 boardings), BAART (which provides opiate treatment services; 5 boardings), Shaw's (two boardings), and the CVMC Aquatic Center /Pediatric Primary Care (two boardings). On most days there is no ridership from other locations or for the demand-response service for off-route service.

Saturdays

Saturday ridership patterns are similar to weekday patterns, but with lower volumes downtown (31) and at the Central VT Medical Center (four) and more at the Berlin Mall (19 boardings) (see Figure 3).

Figure 2: Weekday Ridership by Stop

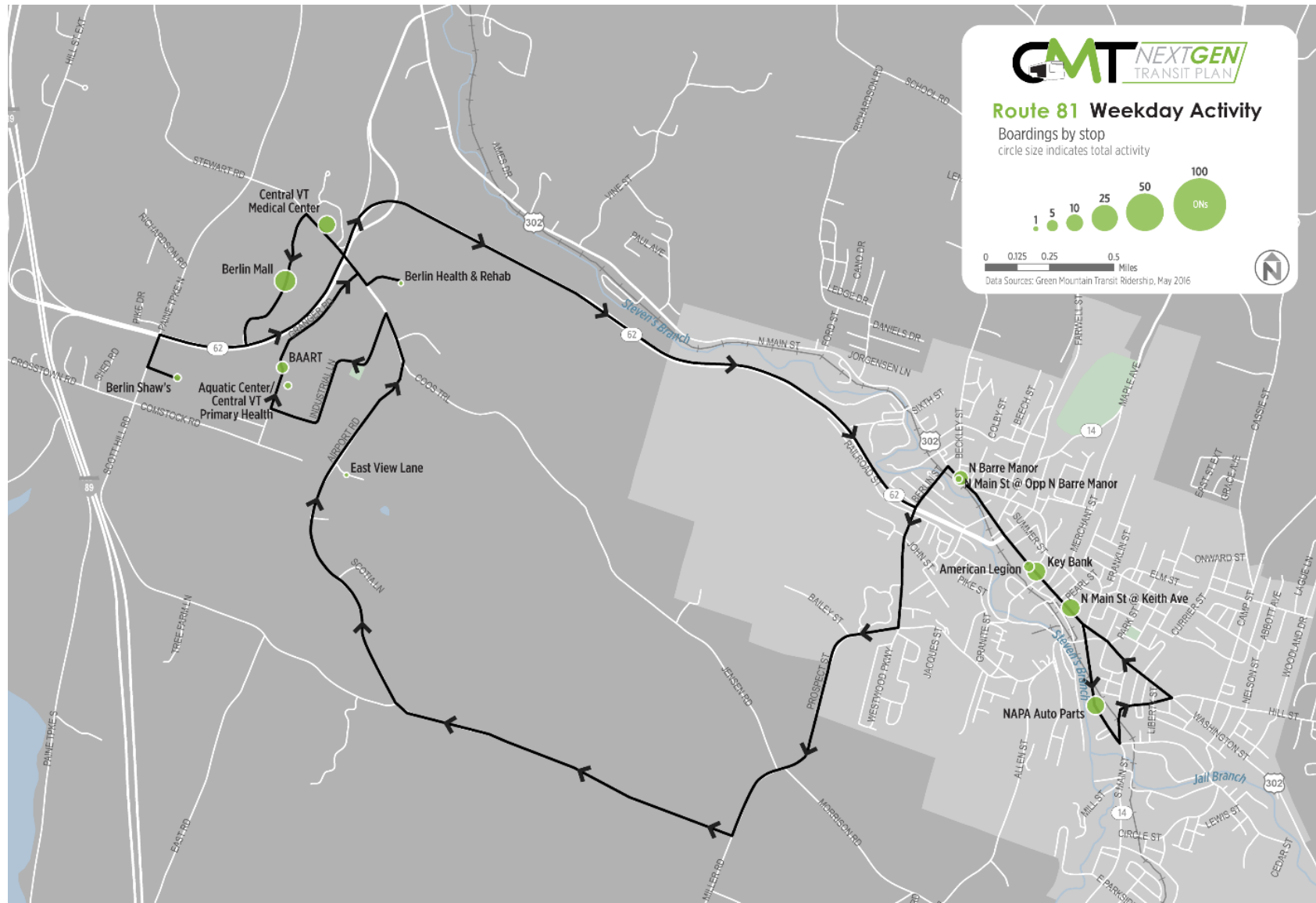
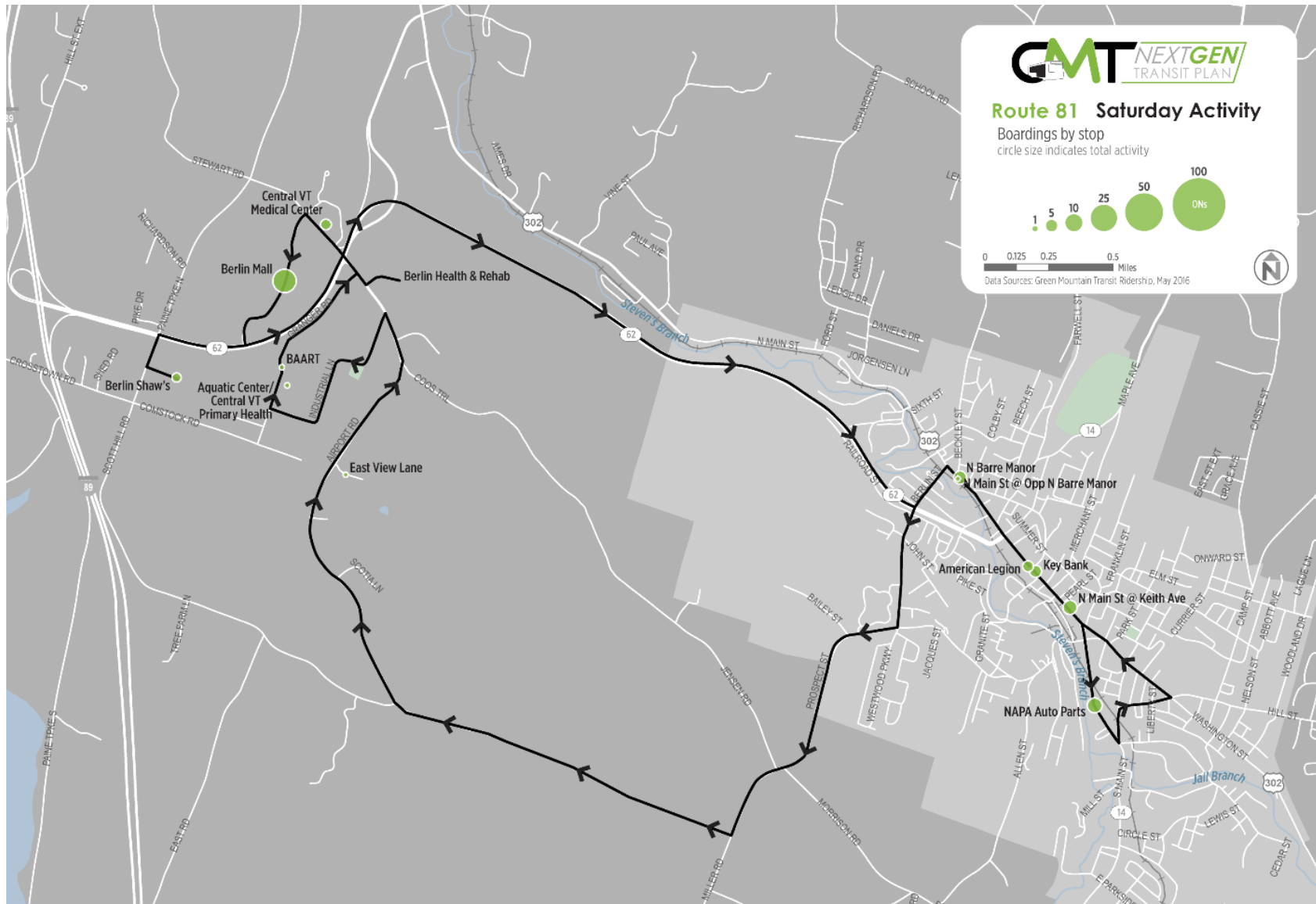


Figure 3: Saturday Ridership by Stop

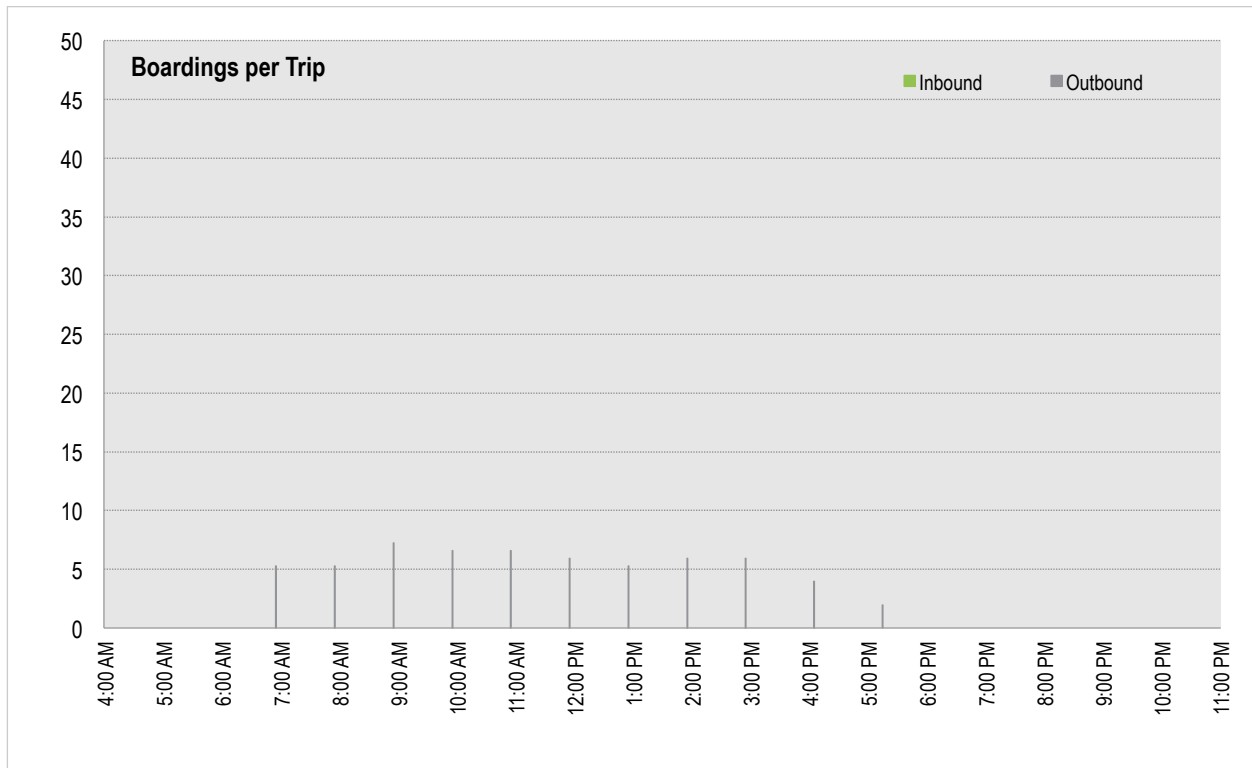


Ridership by Trip

Weekdays

On weekdays, Route 81 ridership is fairly flat throughout most of the day at 4 to 7 passengers per round trip (see Figure 4). The last round trip carries only two passengers.

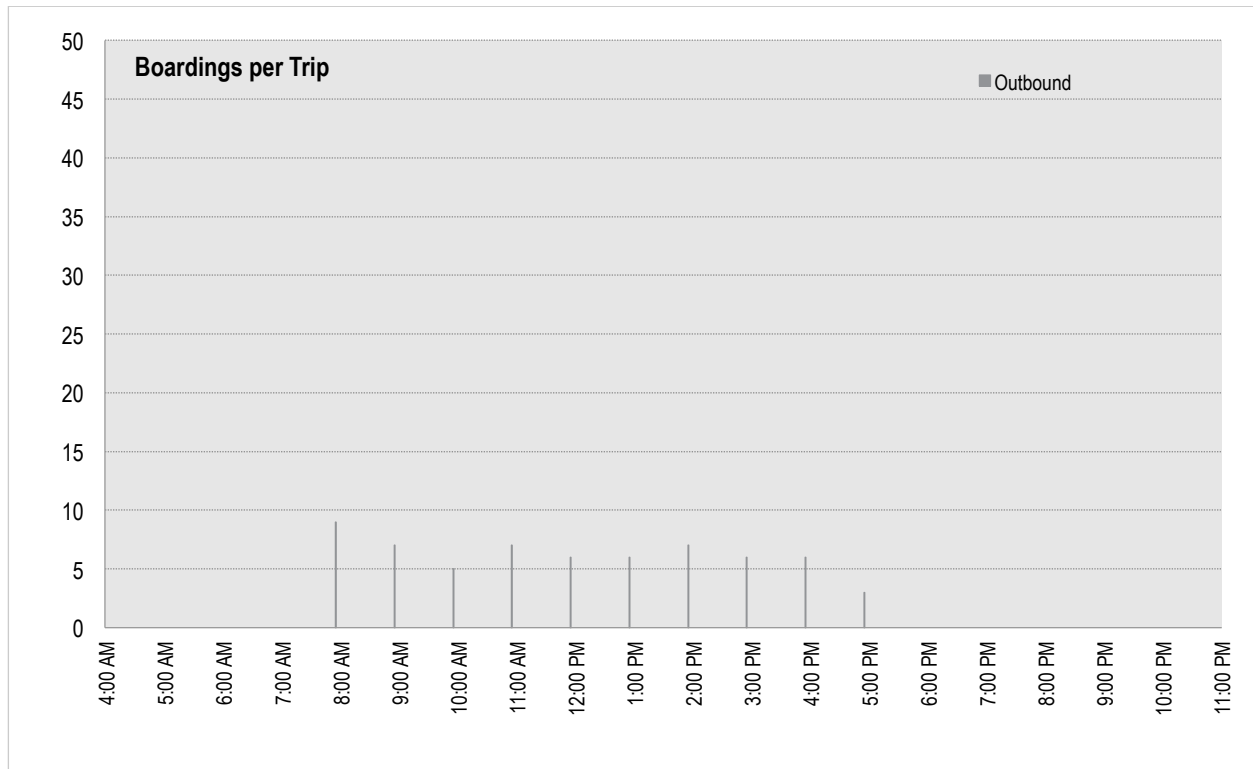
Figure 4: Weekday Ridership by Trip



Weekends

On Saturdays, Route 81 ridership is also relatively flat throughout the day at five to seven passengers per round trips, but with the higher ridership on the first round trip (nine passengers) and lower ridership on the last round trip (three passengers) (see Figure 5).

Figure 5: Saturday Ridership by Trip



SERVICE PRODUCTIVITY

On weekdays Route 81 carries 60 passengers per weekday and 5.5 passengers per vehicle service hour at a cost of \$14.52 per passengers (see Table 3). On Saturdays, Route 81 carries 62 passengers and 6.2 passengers per vehicle service hour at a cost of \$11.72 per passenger. These figures do not meet VTrans' service thresholds of 9.71 passengers per vehicle service hour and \$8.13 per passenger.

Table 3: Productivity Statistics

	MONDAY-FRIDAY	SATURDAY	SUNDAY
Average Daily Ridership	60	62	—
Pax/Revenue Service Hour	5.5	6.2	—
VTrans Productivity Threshold	9.71	9.71	9.71
Pax/Round Trip	5.0	5.6	—
Rural Local Average	3.8	3.6	—
Pax/Revenue Mile	0.5	0.5	—
Rural Local Average	0.6	0.6	—
Cost/Passenger	\$14.52	\$11.71	—
VTrans Productivity Threshold	\$8.13	\$8.13	\$8.13

Source: Green Mountain Transit, May 2016; VTrans Performance Reviews (2016)

SERVICE IMPROVEMENT OPTIONS

Route 81 is designed primarily to connect residents in downtown Barre to a number of major trip attractors on Hospital Hill, which include CVMC, the Berlin Mall/Walmart, and to a lesser extent, Shaw's. It also serves a number of small medical offices and social-service agencies in scattered poorly connected locations throughout the Hospital Hill area, and outbound from Barre, operates very circuitously to do – so circuitously that a round trip takes one hour. However, with the exception of BAART, which service five passengers per weekday, and CVMC Aquatic Wellness Center/Pediatric Primary Care, which serves two passengers per weekday, the others serve an average of only one passenger per day. The route's slow circuitous routing almost certainly discourages many from using the route.

Opportunities to strengthen Route 81 are listed below. Some suggestions may be contradictory, as there is usually more than one approach to improving a route.

- **Provide Fixed-Route Service to Major Locations and Fixed-Route Service to Low Volume Locations:** The route's long circuitous routing almost certainly discourages many potential riders. One solution would be to provide direct fixed-route service between Berlin, CVMC, the Berlin Mall/Walmart, and Shaw's, and to serve the other locations with demand response service or through local taxi companies, Uber, and/or Lyft.
- **Operate Symmetrical Service:** Route 81 operates as a large one-way loop between Barre and Berlin, providing slow and confusing service that forces riders to travel out of direction for most of their trip. Since Route 81's segment on Airport Road is 1.6 miles longer than the segment on Railroad Street, operating along Railroad Street only in both directions would provide faster and more consistent service for riders. Within Berlin, Berlin Mall, Central Vermont Medical Center, and BAART along one alignment in both directions.
- **Consolidate Route 81 with Route 82 Montpelier Hill:** Routes 81 and 82 provide similar services on Hospital Hill. The two routes could be combined into a Montpelier to Barre via Hospital route.
- **Serve the Berlin Shaw's as a Regular Stop:** On weekdays, Shaw's is served on most trips as a request stop and on only a few trips as a request stop. On Saturdays it is served only by request on all trips. Supermarkets typically have significant demand as transit destinations, and the request only service likely suppressed demand. With other changes to streamline service, Shaw's could be served as a regular stop on all trips.