

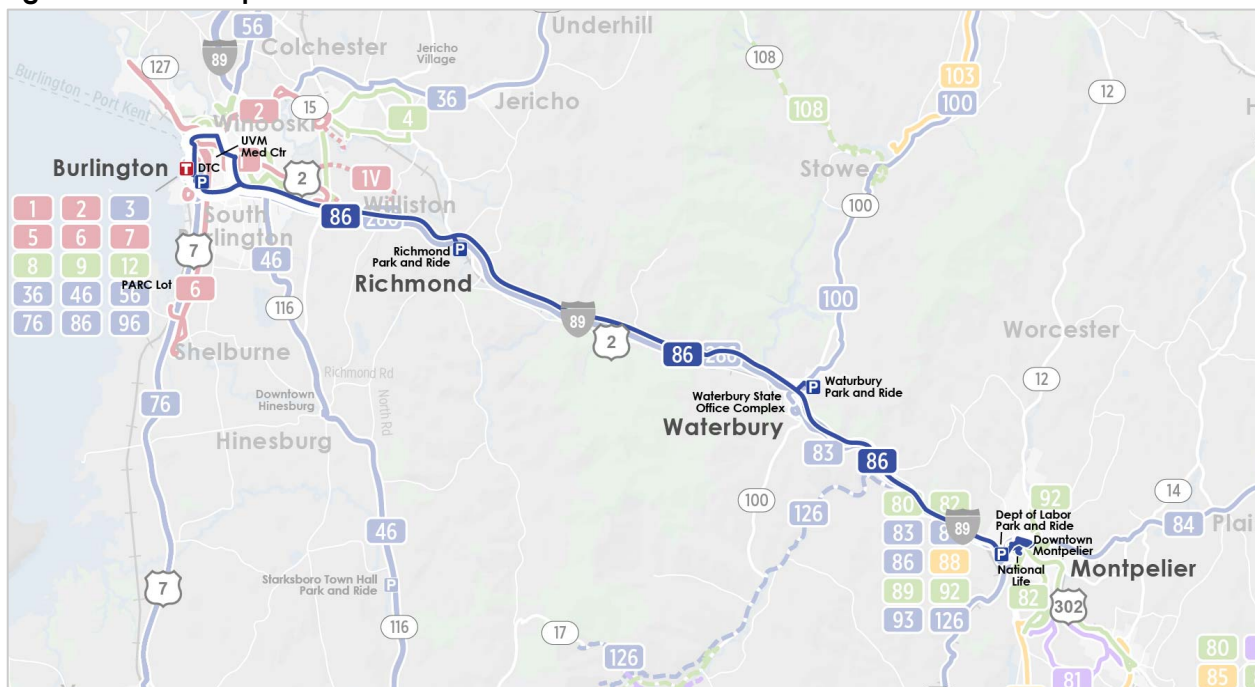
ROUTE 86

Montpelier LINK Express

ROUTE OVERVIEW

Route 86 Montpelier Link Express is a Commuter route that serves the I-89 corridor between Montpelier and Burlington (see Figure 1). It is one of three routes that serve the I-89 corridor, the others being Route 83 Waterbury Commuter between Montpelier and Waterbury and Route 286 Burlington – Waterbury LINK Express, which operates between Burlington and Waterbury.

Figure 1: Route Map



On weekdays, Route 86 provides four round trips during the AM and PM peak periods, and one midday round trip (see Table 1). No Saturday or Sunday service is provided.

Table 1: Route 86 Schedule Statistics

SERVICE DAY	SPAN OF SERVICE	FREQUENCY (MIN)	DAILY TRIPS (OUTBOUND/INBOUND)
Monday-Friday	5:42 AM to 7:30 PM	15-60/2 trips/—	9/9
Saturday	—	—	—
Sunday	—	—	—

Frequencies shown are lowest frequencies during Peak/Midday/Evening service times for weekdays. 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.

OPERATING PATTERNS

Route 86 operates with a number of different patterns with differences largely related to whether the trips are peak period peak direction to Burlington or Montpelier:

- **Peak Period Service to and from Burlington:** AM service to Burlington begins in Montpelier on State Street at People's United Bank and then travels to Main Street at Shaw's and then via Memorial Drive to the Department of Labor Park and Ride Lot. From there it operates via I-89 to Burlington to UVM Medical Center and on to the DTC. The first and fourth (last) AM trips stop at the Waterbury and Richmond Park and Ride lots (because Route 286 serves those lots at similar times as the second and third trips would stop), and the third and fourth AM trips continue on from the DTC to Pine Street at Lakeside Avenue.

PM service back to Montpelier operates in a similar manner in reverse. All trips begin service on Pine Street at Locust Street and operate to the DTC and UVM Medical Center and then via I-89 to Montpelier. All of these trips except for the first stop at the Richmond, Waterbury, and Department of Labor Park and Ride lots. The first PM trip skips the Richmond and Waterbury Park and Ride lots.

- **Peak Period Service to and from Montpelier:** AM service to Montpelier starts at Burlington's Downtown Transit Center (DTC) and operates via Pine Street to the PARC Park and Ride Lot near the intersection of Shelburne Road and I-189. It then operates to Montpelier via I-189 and I-89 via the Richmond Park and Ride Lot. In Montpelier, it operates to Main Street at Shaw's via National Life and State Street.

PM service from Montpelier to Burlington operates in the same manner but in reverse, and the last trip only stops at the Richmond Park and Ride lot upon request.

- **Midday Round Trip:** The midday round trip begins in Montpelier at 12:02 PM and operates to Burlington in the same manner as the other PM trips to Burlington except that it only serves the PARC lot upon request. Service back to Montpelier operates in the same manner as other PM service except that it only serves the Department of Labor Park and Ride Lot upon request.

RIDERSHIP

Route 86 carries 442 passengers per weekday, and ranks first out of GMT's 15 Commuter routes. Much of the success of is attributable to strong bi-directional ridership.

Ridership by Stop

Inbound, the largest number of boardings are in Montpelier on State Street at People's United Bank (30), National Life (39), and Main Street at Shaw's (21) (see Figure 2). The three park and ride lots serve more modest but still significant volumes: 13 boardings at the Department of Labor, 12 in Waterbury, and 10 in Richmond. The highest number of alightings are at the Richmond Park and Ride Lot (on the PM trips) and in Burlington at UVM Medical Center on AM trips (32), the PARC Lot on PM trips (24), and the DTC (24).

Outbound boarding and alighting patterns are essentially the reverse of inbound patterns (see Figure 3).

Figure 2: Route 86 Weekday Inbound Ridership by Stop

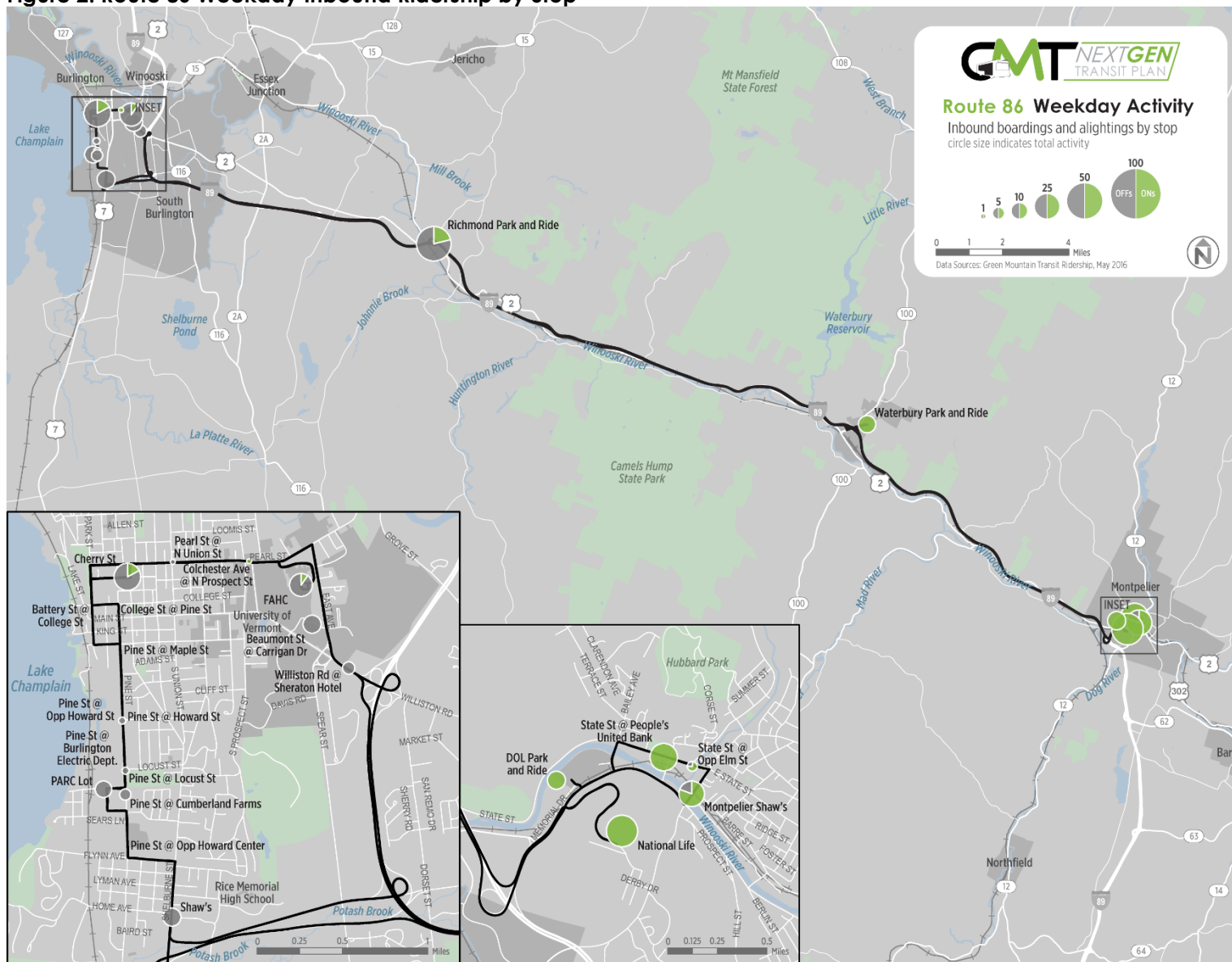
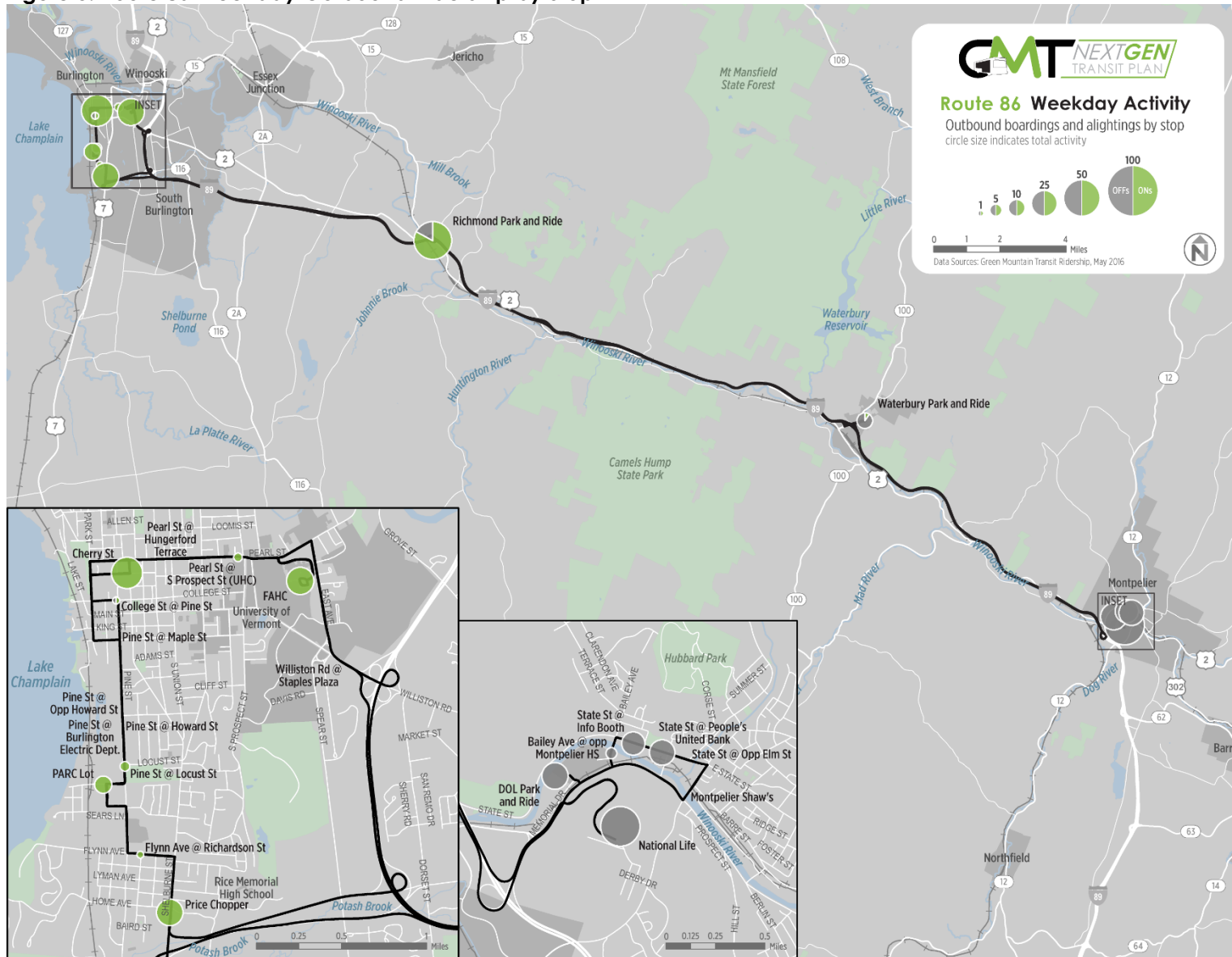


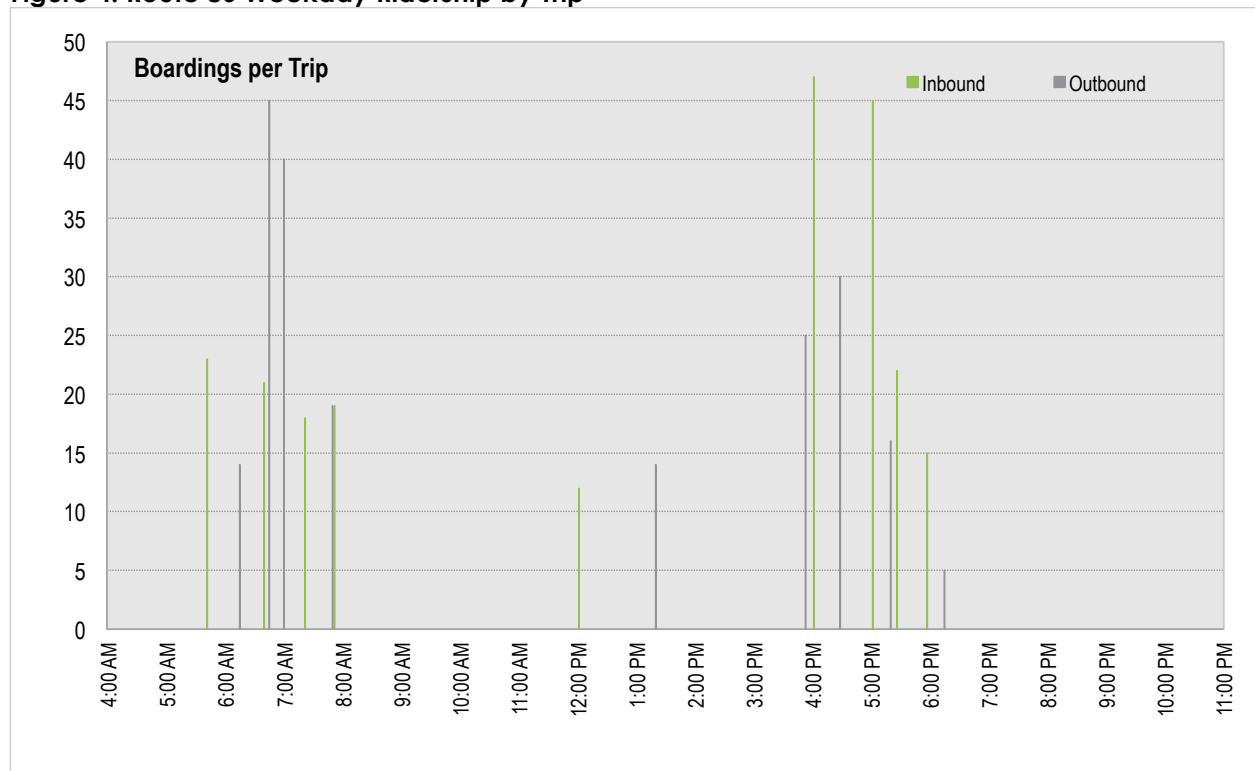
Figure 3: Route 86 Weekday Outbound Ridership by Stop



Ridership by Trip

Route 86's ridership per trip, somewhat surprisingly, is highest to Montpelier in the morning and back in the afternoon, and significantly higher than to and from Burlington (see Figure 4). Furthermore, in both the AM and PM peaks, half of the Montpelier-oriented trips carry 40 or more passengers. Given normal day-to-day variability, these trips are often overcrowded.

Figure 4: Route 86 Weekday Ridership by Trip



In more detail:

- AM Peak:** The second and third Montpelier-bound trips at 6:45 and 7:00 AM carry an average of 40 and 45 passengers, respectively. The first trip at 6:15 AM carries 14 passengers and the last trip at 7:50 carries 19 passengers. This suggests that the four trips should be clustered closer together to better balance loads.

The four Burlington-bound trips all carry loads that are much more balanced, at between 18 and 23 passengers.

- PM Peak:** The first and second Burlington-bound trips, which depart at 4:02 and 5:02 PM, are the most heavily used of all trips, with 47 and 45 passengers, respectively. After that, ridership drops off rapidly to 22 passengers on the 5:27 PM trip and 15 on the 5:58 PM trip. These figures suggest that more service is needed between the 4:02 and 5:02 PM trips, and possibly earlier service.

The Montpelier-bound trips have much more variable ridership than their AM counterparts, with 25 and 30 riders on the first two trips at 3:53 and 4:28 PM. Ridership then drops quickly to 16 on the 5:20 PM trip and only five on the 6:00 PM trip. This suggests that the 6:00 PM trip should depart earlier.

Maximum loads on most trips are relatively close to total ridership, which indicates that there is little turnover on the route. Three trips have a maximum load that exceeds 35 passengers.

SERVICE PRODUCTIVITY

Route 86, by far, ranks highest of GMT's 15 Commuter routes in terms of weekday ridership and ranks highest in terms of ridership per revenue hour (see Table 2). On weekdays, the route carries an average of 442 passengers per day, or 19.6 passengers per revenue hour. Route 86 meets the VTrans threshold for cost effectiveness and falls just short of the productivity threshold for commuter routes. This is due to low ridership on a few trips.

Table 2: Route 86 Service Productivity Statistics

	MONDAY-FRIDAY	SATURDAY	SUNDAY
Average Daily Ridership	442	—	—
Pax/Revenue Service Hour	19.6	—	—
Commuter Average	8.8	—	—
Pax/One-Way Trip	17.0	—	—
VTrans Productivity Threshold	17.35	17.35	17.35
Pax/Revenue Mile	0.6	—	—
Commuter Average	0.4	—	—
Cost/Passenger	\$4.48	—	—
VTrans Effectiveness Threshold	\$10.59	\$10.59	\$10.59

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

POTENTIAL SERVICE IMPROVEMENT OPTIONS

Overall, Route 86 is a very successful route, and opportunities to make it stronger are listed below:

- **Serve Waterbury Park and Ride Lot with Route 286 Waterbury Commuter Instead of Route 86:** Route 86 serves the same markets as Route 286, but also with service to and from Montpelier that makes it a much stronger route, and in many respects, Route 286 acts as a complement to Route 86. At the present time, many Route 86 trips are overcrowded, but Route 286 trips are underutilized. This, in part, is because Route 286's schedule is designed primarily to supplement Route 86 and only secondarily to serve Waterbury commuters. One way to better balance loads would be to operate the each route to more specifically serve their primary markets, which are Burlington – Montpelier commuters for Route 86 and Burlington – Waterbury commuters for Route 286, and to shift and to shift all service to the Waterbury Park and Ride lot from Route 86 to Route 286. This would also make Route 86 faster.
- **Add Service:** AM Montpelier-bound service and PM return service experiences overcrowding on trips that depart Burlington between 6:45 and 7:00 AM and on trips that depart Montpelier between 4:02 and 5:02 PM. Additional service is needed during and near these periods.
- **Revise Schedules:** While some trips are crowded and over crowded, some are much less lightly utilized. For example, the 6:15 AM trip to Montpelier carries 14 passengers, but

could likely carry more if departed at 6:30. Similarly, the 6:00 PM trip to Montpelier trip carries only five passengers and would almost certainly carry more people if it departed earlier.

- **Simplify Service:** The first PM trip from Burlington to Montpelier skips the Richmond and Waterbury Park and Ride Lots. Service to those lots on this trip would provide better schedule consistency and additional park and ride opportunities for Burlington commuters.
- **Consolidate Stops in Burlington:** Routes 86 makes several stops on Shelburne Road and Pine Street and circulates through downtown Burlington making additional stops. Making fewer local stops and providing more direct service would save travel time for riders and maintain the integrity of the LINK brand as an express service.