

ROUTE 49

33rd-Dauphin To 29th-Snyder

KEY SERVICE CHARACTERISTICS, ISSUES, AND OPPORTUNITIES

- *Route 49 is one of SEPTA's lower ridership urban routes*
- *Low ridership is primarily due to competition from other routes in North Philadelphia, an indirect alignment between North Philadelphia and University City, and a weak terminal in South Philadelphia.*
- *Route level changes could make service faster and more direct, but a more fundamental restructuring of area service could provide greater benefits.*

ROUTE OVERVIEW

Route 49 operates between North Philadelphia and South Philadelphia via the western edge of Center City and through University City. Route 49 provides connections with the Market-Frankford Line and regional rail lines. Additionally, Route 49 provides service to major activity centers and medical facilities, including the Veterans Affairs Medical Center, Drexel University, Grays Ferry Industrial Park, and the University of Pennsylvania Hospital.

Figure 1 | Route Map



Route 49 provides similar service to three other routes in North Philadelphia:

- 29th Street is also served by Route 7 Pier 70 to 33rd-Dauphin and Route 48 Front-Market to 27th-Allegheny. Route 48 is a 15 Minute MAX route that provides much more frequent service.
- Three routes provide a similar service to Route 49 between Girard Avenue and Market Street. These routes are Route 7 Pier 70 to 33rd-Dauphin, Route 48 Front-Market to 27th-Allegheny, and Route 32 Broad-Carpenter to Ridge-Lyceum.

Route 49's operates along an indirect alignment as shown in Figure 1. The major streets that it operates along, starting from the north, are north to 29th Street and 20th Street in North Philadelphia, Market Street in West Philadelphia, and 29th Street to the end of the line in South Philadelphia.

SERVICE OVERVIEW

Schedule

Route 49 operates 20 hours a day from 5:08 AM until approximately 12:49 AM on weekdays, 5:12 AM to 12:50 AM on Saturdays and Sundays (Table 1):

- On weekdays, peak period frequencies average every 16 minutes, and early and midday frequencies average 15 to 19 minutes. Evening and night frequencies average 22 to 51 minutes. However, actual frequencies vary during all time periods.
- On Saturdays, service frequencies average 21 minutes during the day and 33 minutes at night. As on weekdays, actual frequencies vary from the averages.
- On Sundays, frequencies average 21 minutes during the day and 33 minutes at night. As on weekdays and Saturdays, actual frequencies vary from the averages.

Table 1 | Schedule Statistics

Service Day	Span Of Service	Frequency (Range)	Frequency (Average)
Weekdays	4:37 AM to 2:26 AM		
Early AM	4:37 AM - 5:59 AM	15 - 15	15
AM Peak	6:00 AM - 8:59 AM	15 - 31	16
Midday	9:00 AM - 2:59 PM	15 - 20	19
PM Peak	3:00 PM - 5:59 PM	15 - 20	16
Evening	6:00 PM - 9:59 PM	15 - 40	22
Late Night	10:00 PM - 11:59 PM	35 - 60	51
Owl	12:00 AM – 2:26 AM	56 - 60	58
Saturdays	5:01 AM to 2:26 AM		
Day	8:00 AM - 5:59 PM	19 - 30	21
Night	6:00 PM - 7:59 AM	20 - 60	33
Sundays	5:31 AM to 2:26 AM		
Day	8:00 AM - 5:59 PM	19 - 30	21
Night	6:00 PM - 7:59 AM	20 - 60	33

Note: Span of service reflects the time the first bus begins service until the time the last bus finishes service.

Service Patterns

Route 49 operates with a single inbound and outbound service pattern (see Table 2).

Table 2 | Service Patterns

Pattern	Origin	Destination	Unique Feature	Unique Stops	Trips Per Day		
					Wkd	Sat	Sun
Southbound							
229241	33rd St & Dauphin St	29th St & Snyder Ave	Primary Pattern	0	58	46	46
Northbound							
229242	Vare Ave & Snyder Ave	33rd St & Dauphin St	Primary Pattern	0	59	47	47

Note: Unique stops are those not served by the primary pattern

RIDERSHIP

In Fall 2019, Route 49 carried 3,101 passengers on weekdays, 1,340 on Saturdays, and 941 on Sundays (see Table 3). Route 49 is one of SEPTA’s lower ridership urban routes, with low ridership due to competition from other routes that provide very similar service in North Philadelphia.

Table 3 | Fall 2019 Ridership and Productivity

	Weekdays	Saturdays	Sundays
Daily Ridership	3,101	1,340	941
Rank	61	62	60
Passengers per Revenue Vehicle Hour	30.6	19.1	13.4
Rank	89	96	96

Transfer Patterns

The largest transfer rates on Route 49 are to and from:

- Market-Frankford Line (11% of all trips)
- Route 48 Front-Market to 27th-Allegheny (3.6%)
- Route 15 63rd-Girard to Richmond-Westmoreland (2.4%)
- Route 3 33rd-Cecil B. Moore to Frankford Transportation Center (1.8%)
- Route 79 Columbus Commons to 29th-Snyder (1.4%)

Weekend transfer rates are similar but at a slightly higher rate.

Ridership by Stop

Route 49’s major function is to provide connections from North Philadelphia and South Philadelphia to University City. The route provides local service and connections to 30th Street Station and the Market-Frankford Line. Many stops along the route have intermediate levels of ridership activity (see Figure 2).

Figure 2 | Weekday Northbound Ridership by Stop


In detail, on weekday southbound trips in Fall 2019:

- 590 passengers boarded and 140 alighted at the 20 stops along the route's outer loop and along 29th Street. The highest ridership stop was Dauphin Loop with 100 boardings. Other stops generally served fewer than 50 boardings and very few alightings.
- 390 passengers boarded and 210 alighted at the 14 stops along Fairmount Avenue and 21st Street.
- Only 120 passengers boarded and 220 alighted at the eight stops along Market Street.
- 340 passengers boarded and 490 alighted at the seven stops in University City. The highest ridership stop was 34th Street at Market Street, which is the connection point with the Market-Frankford Line.
- 80 passengers boarded and 420 alighted at the 11 stops in South Philadelphia.

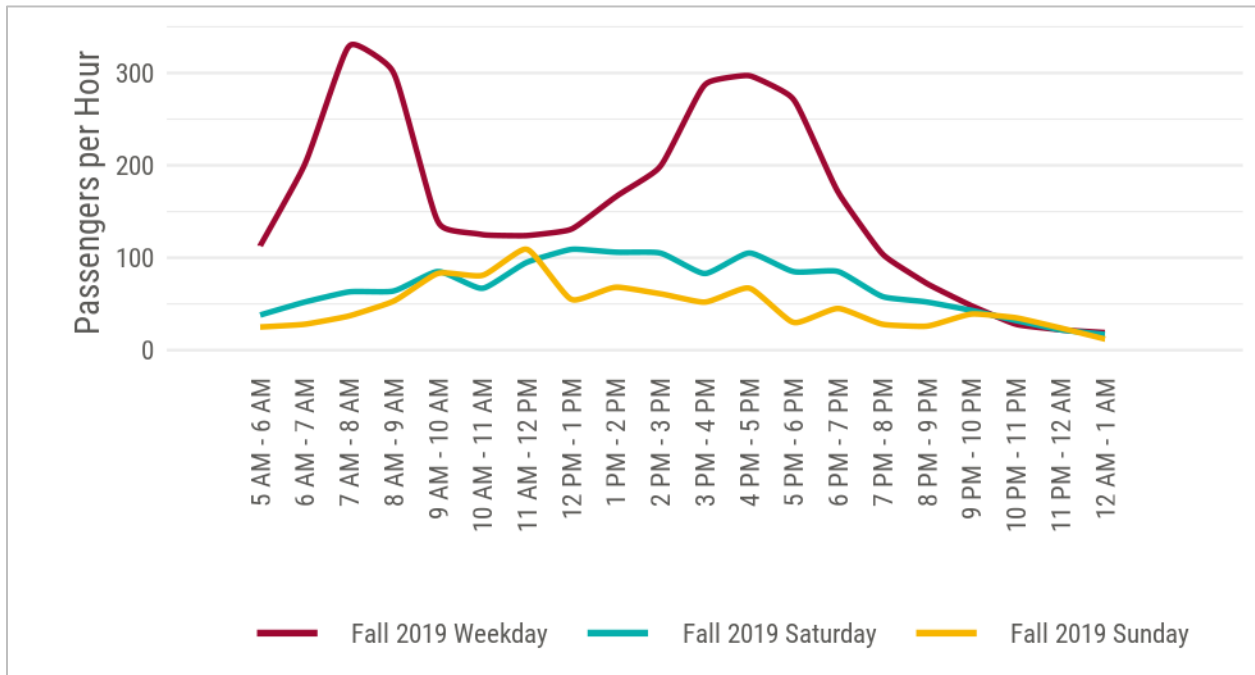
Northbound patterns were similar. Weekend patterns were similar but with lower volumes and less travel to University City and the Market-Frankford Line.

Ridership by Time of Day

Ridership by Hour

In Fall 2019, weekday ridership was extremely peaked, with ridership in the AM and PM peaks nearly three times higher than other times of the day (see Figure 3). Saturday and Sunday ridership by hour patterns were much flatter with ridership generally increasing through midday and then declining.

Figure 3 | Ridership by Hour: Fall 2019

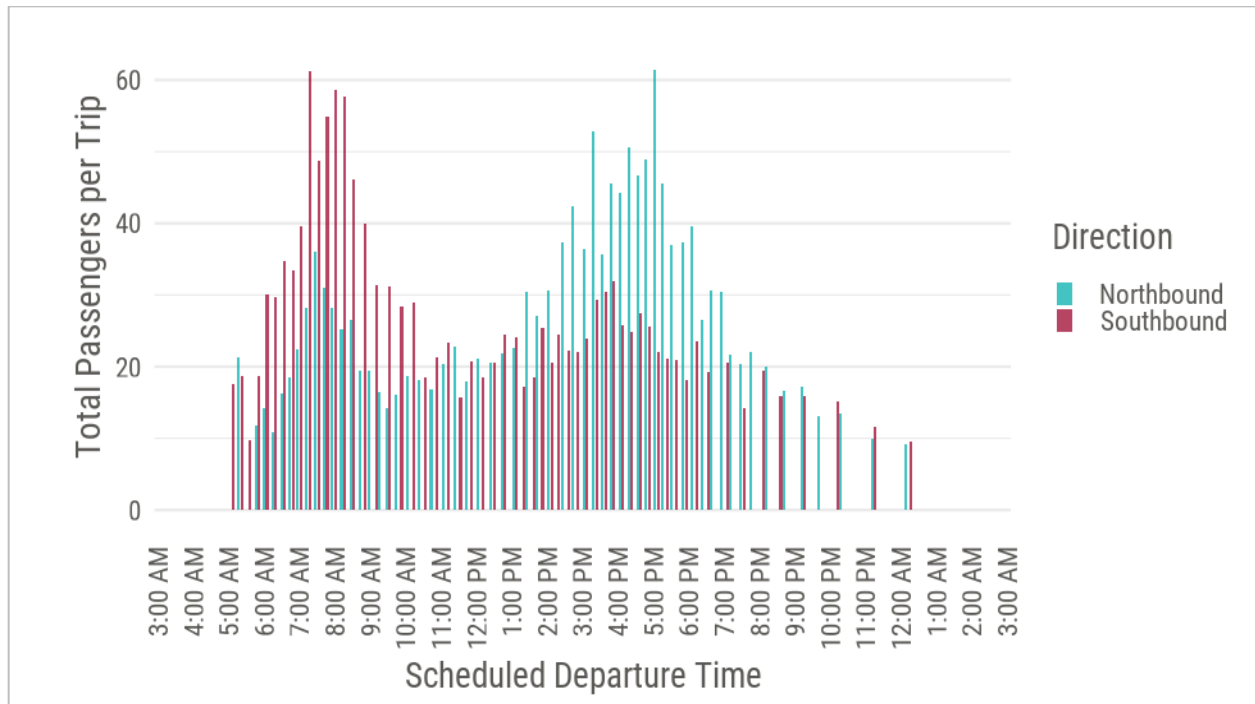


Ridership and Maximum Loads by Trip

In Fall 2019, weekday ridership ranged between 40 and 60 total passengers during peak periods, 20 to 40 during the midday, and less than 20 in the evening and night (see Figure 4). Maximum loads were low, with only a few trips approaching seated capacity and most running light loads. This indicates that more service was provided than was necessary to meet demand.

Saturday and Sunday ridership per trip ramped up to approximately 20 passengers per trip in the middle of the day and with lower early and late ridership. Maximum loads were less than 15 on virtually all trips.

Figure 4 | Fall 2019 Weekday Ridership by Trip



ON-TIME PERFORMANCE AND RUNNING TIMES

On-Time Performance

In Fall 2019, Route 49’s on-time performance was 75% on weekdays, 74% on Saturdays, and 75% on Sundays. While below standard, this is better than on most other city routes.

On weekdays, 12% of trips were late and early, but on Saturdays and Sundays over 14% of trips were early.

On weekdays and Saturdays, nearly 2% of trips were missed.

Table 4 | On-Time Performance

	Early (>2 Mins Early)	On Time (<2 Mins Early to 6 Mins Late)	Late (>6 Mins Late)	Missed Trips
Goal		80%		
Fall 2019 Actual				
Weekday	12.6%	75.1%	12.3%	1.8%
Saturday	14.3%	74.3%	11.3%	0.8%
Sunday	16.3%	74.8%	8.9%	2.3%

Note: On-time percentages are for trips that are run (do not include dropped trips)

AVERAGE SPEEDS AND STOP SPACING

In Fall 2019, Route 49 averages only 8.2 mph throughout the day on weekdays. During peak periods, the route is slow along its entire length but particularly along Market Street and in University City. For example, northbound in the PM peak, service averaged less than 6 mph

along Market Street west of Broad Street (see Figure 5). Southbound speeds were slightly faster than northbound but are still slow.

Route 49 has an average of nine stops per mile and more than 11 stops in West Philadelphia and North Philadelphia stops (see Figure 6).

Figure 5 | Average Speeds: PM Peak Northbound

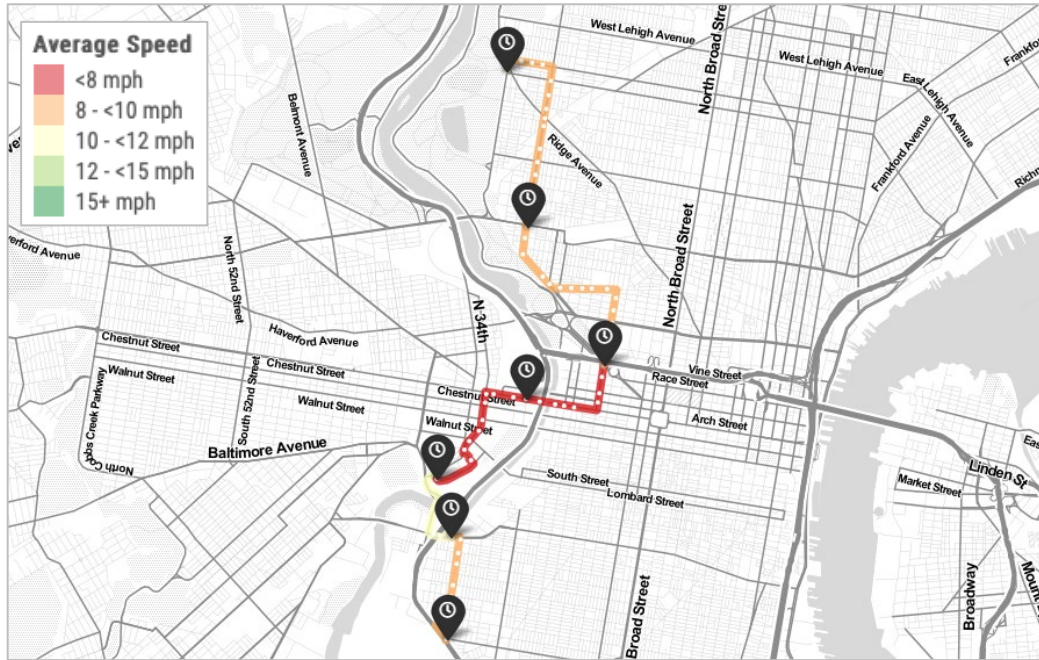


Figure 6 | Stop Spacing by Route Segment



Rider Characteristics

The characteristics of Route 49 riders are similar to those for the system as a whole, but with more riders who live in poverty and without a vehicle (see Table 5).

Table 5 | Rider Characteristics

	Route 49 Riders	Systemwide Average
Median Household Income	\$31,788	\$32,713
Share in Poverty	35%	30%
Ethnicity		
White	38%	38%
Black	50%	46%
Hispanic	8%	10%
Other	4%	7%
Without a Vehicle	48%	37%
Seniors	13%	15%
With a Disability	1%	2%

SERVICE IMPROVEMENT OPPORTUNITIES

Opportunities to strengthen Route 49 are listed below. Some suggestions may be contradictory, as there is usually more than one approach to improving a route:

- Provide Service between Girard Avenue or Spring Garden Street and University City via 34th Street:** Route 49 operates between North Philadelphia and University City via the east side of the Schuylkill River in an indirect manner that duplicates three other routes. Faster and more unique service could be provided by operating service west across the river on Girard Avenue to south on 34th Street.
- Combine Route 49 and a Crosstown South Philly Route to Provide a Stronger and Very Frequent South Philadelphia to University City Connection:** Route 49 only serves the western edge of South Philadelphia and does not have a strong anchor there. A combination of Route 49 with one crosstown South Philly route like Routes 29, 64, or 79 would provide a new one-seat ride between South Philly and the Broad Street Line and University City. This new route would support very frequent service.
- Split Route in University City:** A combination of Route 49 with Route 79 would create a relatively long route, which could be shortened by splitting the route in University City. Convenient connections between North Philadelphia and South Philadelphia would still be available via other routes.
- Reduce Off-Peak Service Frequencies:** Ridership and loads on off-peak services are low, indicating that potentially too much service is provided. If the above comprehensive route redesigns are not implemented, off-peak and weekend frequencies could be reduced to every 30 minutes.