

ROUTE 24

Southampton and Rockledge to Frankford Transportation Center

KEY SERVICE CHARACTERISTICS, ISSUES, AND OPPORTUNITIES

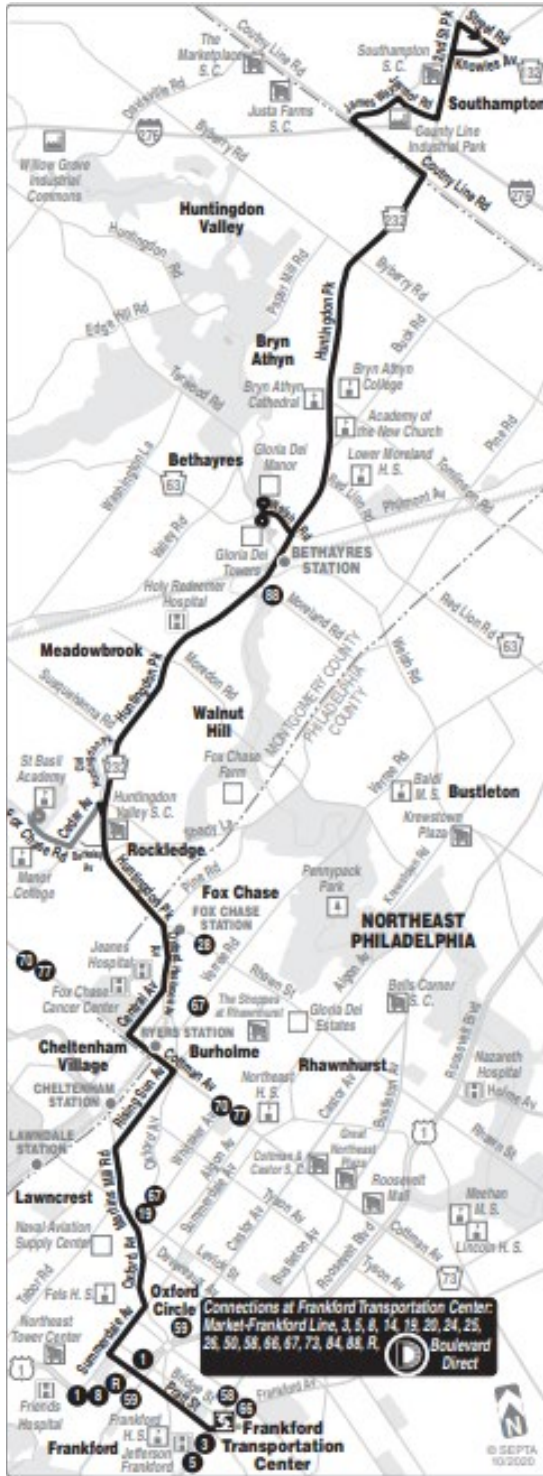
- *Route 24's primary function is to transport riders in the Southampton and Rockledge neighborhoods to and from the Frankford Transportation Center. of northbound boardings occur.*
- *Route 24 duplicates other more frequent services, with the major benefit is that it reduces walking distances for riders in Summerdale and some riders in Lawncrest, Cheltenham Village, Burholme, and Rockledge.*
- *Service is complex with 15 service patterns, seven different terminals, and extension and special purpose variants to Gloria Dei Towers and Southampton.*
- *Despite its length and the density along the southern half of its alignment, Route 24 has lower than expected ridership and substandard productivity. This is likely because it duplicates other higher frequency SEPTA routes along the entirety of its primary alignment, except for along Summerdale Avenue, which is itself a 0.3 mile walk from other higher frequency services. The route has very low ridership north of Holy Redeemer Hospital.*
- *Route 24 could be discontinued, and its resources reinvested into the higher frequency routes it duplicates. Additionally, Route 24 service could be streamlined to be simpler and more direct by operating with a single primary service pattern. Its service span could also be meaningfully shortened.*

ROUTE OVERVIEW

Route 24 operates between Frankford Transportation Center and Huntington Pike at Berkeley Avenue in the Rockledge neighborhood via Pratt Street, Martins Mill Road, and Rising Sun Avenue. Some trips continue to Gloria Dei Towers and/or Street Road in Southampton in Bucks County.

Route 24's alignment is circuitous and is complicated by 15 service patterns. Over 80 percent of Route 24's ridership occurs on its primary service pattern in Philadelphia, and the entirety of this alignment duplicates or is within a short walking distance of other more frequent SEPTA routes, such as Route 67 (Philadelphia Mills and Bustleton Avenue to Frankford Transportation Center).

Figure 1 | Route Map



SERVICE OVERVIEW

Schedule

Route 24 operates nearly 22 hours a day from 5:13 AM until 2:43 AM during weekdays, and about 21 hours a day from 5:30 AM until 2:13 AM on Saturdays and Sundays (see Table 1):

- On weekdays, peak period frequencies on Route 24 average every 18 minutes, while early morning, midday, and evening frequencies average 25 to 29 minutes. Late night and owl period frequencies average 55 to 60 minutes. Actual frequencies vary during all time periods.
- On Saturdays and Sundays, service frequencies average 30 minutes during the day and 48 to 53 minutes at night. As on weekdays, actual frequencies during all time periods.

Table 1 | Schedule Statistics

Service Day	Span Of Service	Frequency (Range)	Frequency (Average)
Weekdays	5:13 AM - 2:43 AM		
Early AM	4:00 AM - 5:59 AM	25 - 25	25
AM Peak	6:00 AM - 8:59 AM	13 - 25	18
Midday	9:00 AM - 2:59 PM	20 - 31	28
PM Peak	3:00 PM - 5:59 PM	15 - 26	18
Evening	6:00 PM - 9:59 PM	14 - 56	29
Late Night	After 10:00 PM	52 - 61	55
Owl	Before 4:00 AM	59 - 60	60
Saturdays	5:29 AM - 2:13 AM		
Day	6:00 AM - 7:59 AM	29 - 36	30
Night	Before 8:00 AM & After 5:59 PM	30 - 61	48
Sundays	5:30 AM - 2:13 AM		
Day	6:00 AM - 7:59 AM	28 - 61	31
Night	Before 8:00 AM & After 5:59 PM	29 - 65	53

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

Service Patterns

Route 24 operates with 15 service patterns that make service complex (see Table 2). The major differences consist of extensions and special purpose variants. The southern terminal for all trips is Frankford Transportation Center. The northern terminals on the primary alignment are:

- Huntingdon Pike and Berkeley Avenue, adjacent to Huntingdon Valley Shopping Center
- Huntingdon Pike and Montgomery Avenue, which is three blocks away from the Berkeley Avenue terminal and is a transfer point for Route 28 (Fem Rock Transportation Center to Torresdale Avenue and Cottman Avenue)
- Fox Chase Road and Forrest Avenue, which is an alternate pick-up location for the primary alignment and a transfer point for Route 28

There are two additional terminals on the route's extension alignments:

- Knowles Avenue and 2nd Street Pike, adjacent to the Southampton Shopping Center
- Gloria Dei Towers, which is a senior residential community

Table 2 | Service Patterns

Pattern	Origin	Destination	Unique Feature	Unique Stops	Trips Per Day		
					Wkd	Sat	Sun
Inbound/Southbound							
229407	Huntingdon Pk & Montgomery Ave	Frankford Transportation Center – Rt 24	Primary Pattern	0	16	13	17
229411	Old Welsh Rd Gloria Dei Towers	Frankford Transportation Center – Rt 24	Special Purpose Variant serving Gloria Dei Towers	14	6	8	8
229406	Huntingdon Pk & Montgomery Ave	Frankford Transportation Center – Main Dropoff	Primary Pattern; Alternate Dropoff Location	0	5	8	4
229412	Knowles Ave & 2 nd St Pk	Frankford Transportation Center – Main Dropoff	Extension Pattern; Alternate Dropoff Location	32	5	0	0
229410	Old Welsh Rd Gloria Dei Towers	Frankford Transportation Center – Main Dropoff	Special Purpose Variant; Alternate Dropoff Location	14	4	1	3
229415	Knowles Ave & 2 nd St Pk	Frankford Transportation Center – Rt 24	Extension Pattern	36	4	3	0
229413	Knowles Ave & 2 nd St Pk	Frankford Transportation Center – Rt 24	Combination Pattern of Extension and Special Purpose Variants	32	4	0	0
229408	Fox Chase Rd & Forrest Ave	Frankford Transportation Center – Main Dropoff	Primary Pattern; Alternate Pick-Up and Dropoff Locations	8	1	0	0
229409	Fox Chase Rd & Forrest Ave	Frankford Transportation Center – Rt 24	Primary Pattern; Alternate Pick-Up Location	8	1	0	0

Pattern	Origin	Destination	Unique Feature	Unique Stops	Trips Per Day		
					Wkd	Sat	Sun
229414	Knowles Ave & 2 nd St Pk	Frankford Transportation Center – Main Dropoff	Combination Pattern of Extension and Special Purpose Variants; Alternate Dropoff Location	36	1	0	0
Outbound/Northbound							
229401	Frankford Transportation Center – Rt 24	Huntingdon Pk & Berkeley Ave	Primary Pattern	0	20	21	21
229403	Frankford Transportation Center – Rt 24	Old Welsh Rd Gloria Dei Towers	Special Purpose Variant	21	10	9	11
229404	Frankford Transportation Center – Rt 24	Knowles Ave & 2 nd St Pk	Extension Pattern	41	8	0	0
229405	Frankford Transportation Center – Rt 24	Knowles Ave & 2 nd St Pk	Combination Pattern of Extension and Special Purpose Variants	45	6	3	0
229402	Frankford Transportation Center – Rt 24	Fox Chase Rd & Forrest Ave	Primary Pattern; Alternate Dropoff	10	2	0	0

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

RIDERSHIP

In Fall 2019, Route 24 carried 2,350 passengers on weekdays, 1,060 on Saturdays, and 850 on Sundays (see Table 3).

Table 3 | Fall 2019 Ridership and Productivity

	Weekdays	Saturdays	Sundays
Daily Ridership	2,375	1,056	868
Rank	68	70	63
Passengers per Revenue Vehicle Hour	38.2	32.1	30.5
Rank	66	60	56

Transfer Patterns

About a third of trips on Route 24 involve a transfer to or from the Market Frankford Line. The largest transfer volumes are to and from:

- The Market-Frankford Line (33.9 percent of all trips)

- Route 18 (Fox Chase Loop to Cedarbrook Plaza) (6.0 percent)
- Route 70 (Frankford Avenue to Gregg Street and Torresdale Avenue and Cottman Avenue to Fern Rock Transportation Center) (3.8 percent)
- Route R (Henry Avenue and Midvale Avenue and Wissahickon Transportation Center to Frankford Transportation Center) (3.5 percent)
- Route 66 (Frankford Transportation Center to Frankford Avenue and Knights Road) (2.4 percent)

Weekend transfer patterns are similar but at a slightly lower rate.

Ridership by Stop

Route 24's major function is to transport people in the Southampton and Rockledge neighborhoods to and from the Frankford Transportation Center. Because Route 24's primary alignment mostly duplicates other services, its major benefit is that it reduces walking distances for riders in Summerdale and some riders in Lawncrest, Cheltenham Village, Burholme, and Rockledge. There is also a significant amount of intermediate ridership on the southern leg, but there is some redundancy there with Route 67. Ridership is significantly lower on pattern variants operating on the northern extension of the route (see Figure 2).

In more detail, ridership is low along the outer extension with the following exceptions:

- 20 passengers a day boarding or alighting at Gloria Dei Towers
- 30 passengers a day boarding or alighting at Route 24's occasional terminal loop in Southampton
- 30 passengers a day boarding at Holy Redeemer Hospital
- There are approximately 18 passengers boarding and 109 alighting on Huntingdon Pike between Bu.rlehome Avenue and Knowles Avenue
- Most other stops through to Oxford Avenue and Martins Mill Road serve 25 or fewer boardings and alightings. Exceptions include:
 - 36 passengers boarding and 11 alighting on Rising Sun Avenue at Longshore Avenue. This is a transfer point for Route 18 (Fox Chase Loop to Cedarbrook Plaza).
 - 71 passengers boarding and seven alighting on Martins Mill Road and Fanshawe Street, adjacent to the Rising Sun Avenue commercial corridor and another transfer point for Route 18.
 - 44 passengers boarding and 24 alighting on Oxford Avenue and Martins Mill Road. This is the location of the Lawndale Plaza shopping mall and a transfer point for Route 19 (Torresdale Station to Frankford Transportation Center) and Route 67 (Philadelphia Mills and Bustleton Avenue to Frankford Transportation Center).
- Beyond Oxford Avenue and Martins Mill Road, ridership activity ranges from 30 or fewer boardings and 50 alightings. Exceptions include:
 - 44 passengers boarding and 19 alighting on Oxford Avenue and Summerdale Avenue. This is also a transfer point for Route 19 and Route 67.

- 67 passengers boarding and 47 alighting on Summerdale Avenue at Sanger Street. There are several businesses at this location including two convenience stores and a pharmacy.
- 61 passengers boarding and 11 alighting on Summerdale Avenue and Bridge Street. There are a few business at this location.
- 47 passengers alighting on Pratt Street and Roosevelt Boulevard. This is a transfer point for Route R (Henry Avenue and Midvale Avenue and Wissahickon Transportation Center to Frankford Transportation Center) and Route -8 (Olney Transportation Center to Frankford Transportation Center).
- 688 passengers alight at Frankford Transportation Center.

Northbound patterns mirror southbound patterns. Weekend patterns are similar but with lower volumes.

Figure 2 | Weekday Southbound Ridership by Stop: Fall 2019

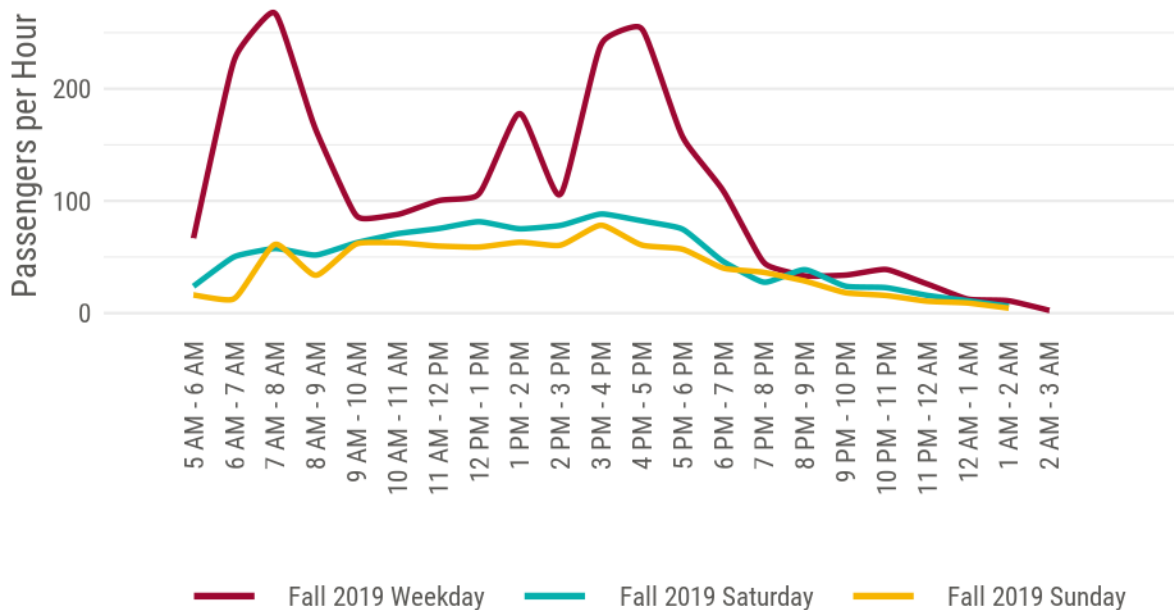


Ridership by Time of Day

Ridership by Hour

In Fall 2019, weekday ridership was very peaked, with 65 percent of all ridership in the AM peak and between 2:00 PM and 6:00 PM (see Figure 5). Midday ridership, on a per hour basis, was lower than peak period ridership, but did exhibit a small peak at 1:00 PM. Evening ridership was much lower than midday ridership and fell quickly after 7:00 PM. Saturday and Sunday ridership did not exhibit peaks and gradually increased through mid-afternoon and then gradually decreased.

Figure 3 | Ridership by Hour: Fall 2019



Ridership and Maximum Loads by Trip

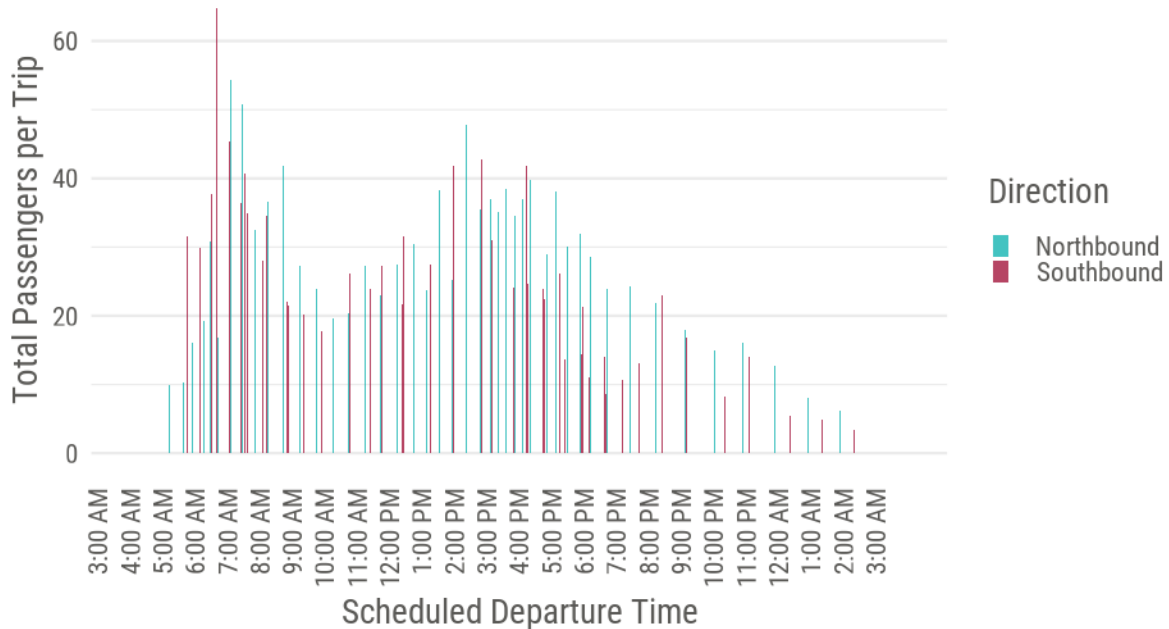
Weekday ridership per trip is low to moderate on most trips, due to a combination of low utilization on the northern portion of the route and infrequent off-peak service (see Figure 4):

- During the AM and PM peaks, most trips carry between 30 and 50 total passengers.
- Midday trips generally carry 20 to 30 passengers.
- Evening trips carry very low ridership, with about 30 passengers per trip at 6 PM to 15 or fewer at 9:00 PM and for the rest of the night, indicating that the service span could be reduced without inconveniencing many riders.

There is a notable amount of ridership turnover along the route, especially on Rising Sun Avenue and Summerdale Avenue. As a result, almost all trips operate below seated capacity. There is one AM peak trip that operates above seated capacity, but otherwise all peak period trips do not operate close to seated capacity.

On Saturdays, ridership ramps up to approximately 20 riders per trip at 7:00 AM. It then jumps to around 30 passengers per trip until about 5:00 PM (see Figure 8) and then slowly declines to fewer than 15 passengers for the remainder of service. All trips operate well below seated capacity. Sunday ridership by trip patterns are like those on Saturday but with lower ridership.

Figure 4 | Weekday Ridership by Trip: Fall 2019



ON-TIME PERFORMANCE AND RUNNING TIMES

In Fall 2019, Route 24’s on-time performance was 78 percent on weekdays, 84 percent on Saturdays, and 82 percent on Sundays (see Table 4). On weekdays, nearly 12 percent of trips were early, and 10 percent of trips were late, signaling some running time variability.

Table 4 | On-Time Performance: Fall 2019

	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	11.7%	78.4%	9.9%	0.9%
Saturday	3.5%	84.0%	12.5%	0.2%
Sunday	9.6%	82.2%	8.1%	0.9%

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

AVERAGE SPEEDS AND STOP SPACING

Route 24’s average weekday speed is 14.9 miles per hour. During peak periods, however, Route 24 is very slow along much of its length but particularly at Huntingdon Pike and Oxford Avenue north of Cottman Avenue. For example, in the PM peak southbound bus speeds decline to less than three miles per hour along this segment of the route. Additionally, northbound bus speed decline to less than eight miles per hour along the Summerdale Avenue/Pratt Street segment between Oxford Avenue Frankford Transportation Center (see Figure 5), likely due to traffic congestion and very close stop spacing.

Route 24 has an average of 9.3 stops per mile (see Figure 6). This means that stops along the route are about 500 feet, or only a two-to-three-minute walk apart. Stop spacing is particularly close between Central Avenue and Cottman Avenue and Huntingdon Pike and Berkley Avenue, where there are 13.3 stops per mile.

Figure 5 | Average Speeds: PM Peak Southbound

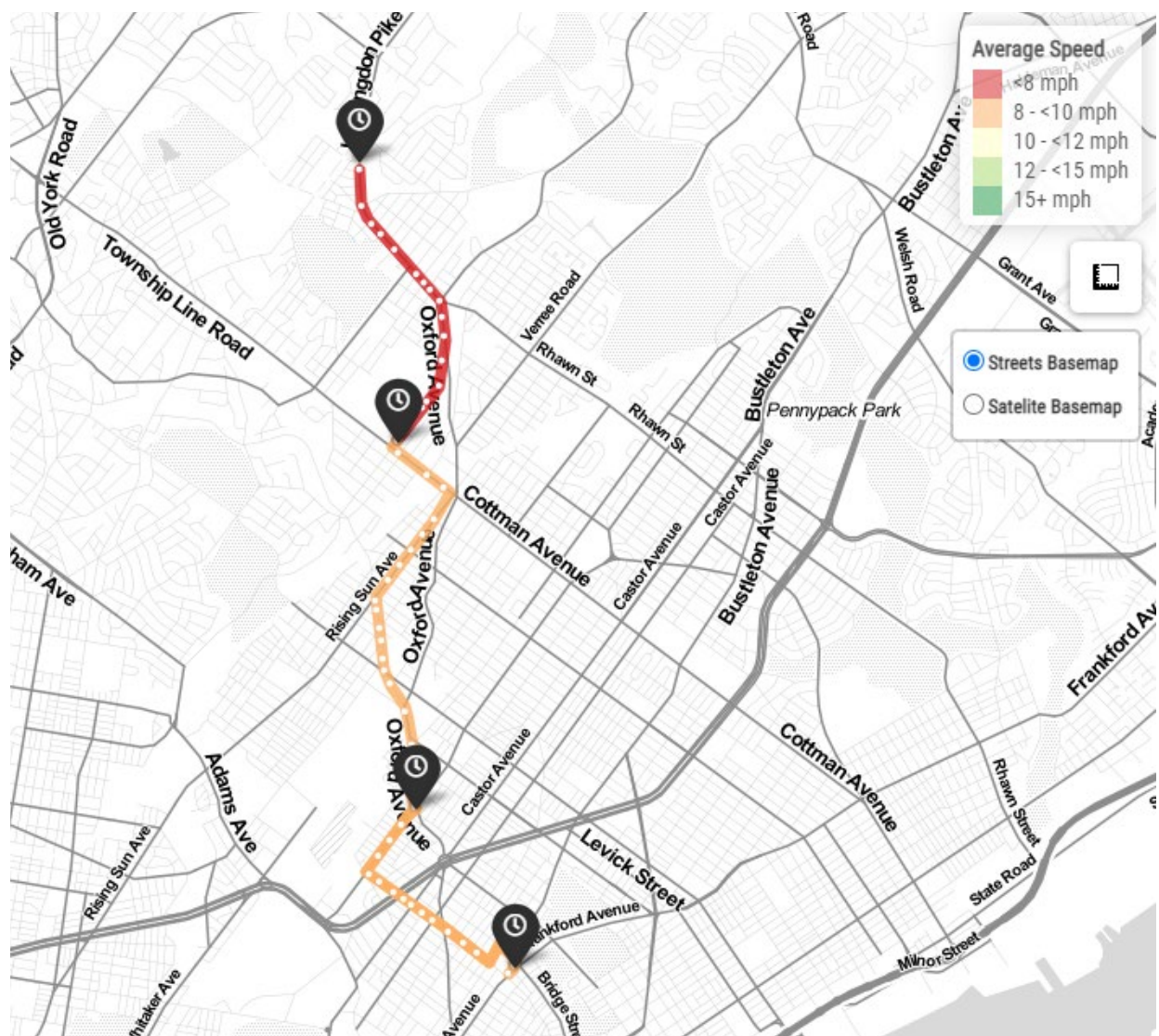
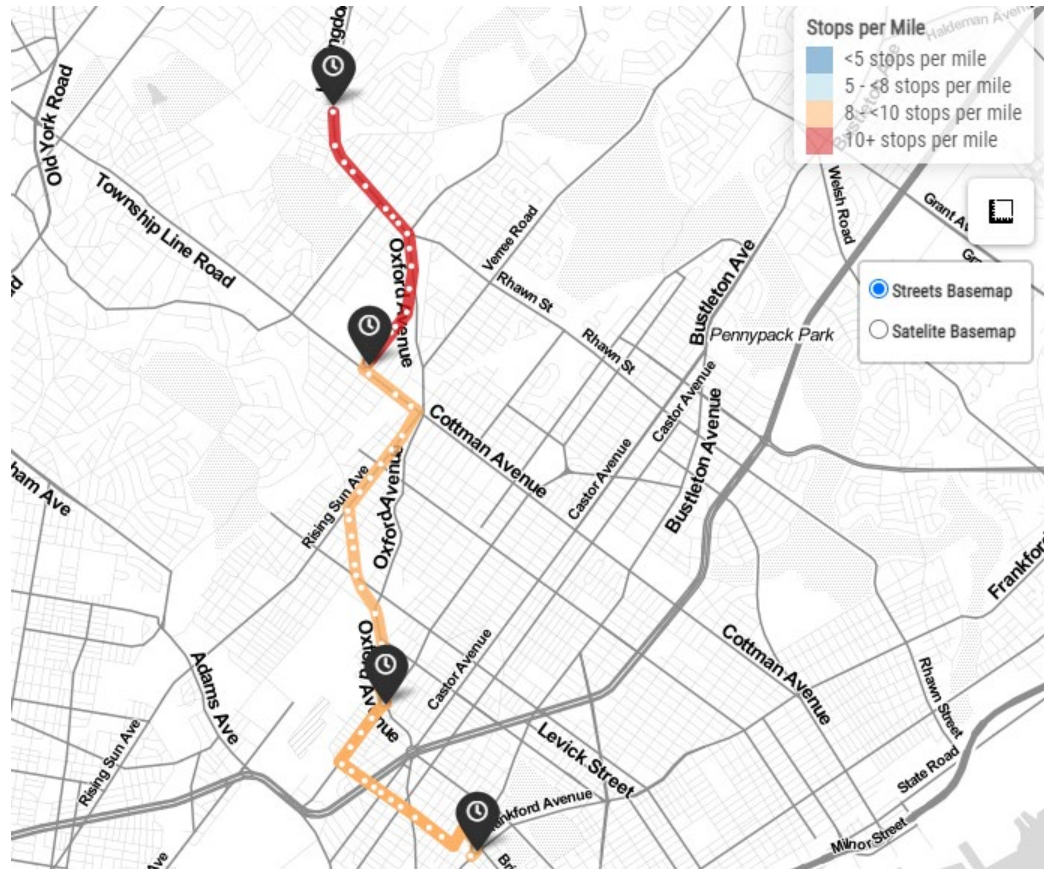


Figure 6 | Stop Spacing by Route Segment (Southbound)



RIDER CHARACTERISTICS

In most respects, Route 24’s service area is typical of SEPTA’s service area (see Table 5). The differences are that Route 24 carries a higher percentage of Hispanic riders and a lower percentage of riders without a vehicle.

Table 5 | Rider Characteristics

	Route 24 Riders	Systemwide Average
Median Household Income	\$32,961	\$32,713
Share in Poverty	28%	30%
Ethnicity		
White	36%	38%
Black	42%	46%
Hispanic	17%	10%
Other	5%	7%
Without a Vehicle	31%	37%
Seniors	14%	15%
With a Disability	2%	2%

SERVICE IMPROVEMENT OPPORTUNITIES

Opportunities to strengthen Route 24 are listed below. Some suggestions may be contradictory, as there is usually more than one approach to improving a route.

Potential ways to simplify service include:

- **Operate All Service Between Frankford Transportation Center and a Single Northern Terminal:** The large number of variations is unnecessary and complicates the route's operations and schedule. Additionally, most of the stops north of the route's primary alignment have extremely low ridership. Route 24 service could be simplified by operating only one northbound and one southbound service pattern. All service would operate between Frankford Transportation Center and a strong northern terminal such as Huntingdon Pike and Berkley Avenue or Holy Redeemer Hospital.
- **Combine with Route 67:** Several portions of Route 24 are circuitous, and the route's deviation to Fox Chase Road from the nearby frequent transit networks make the route less desirable than nearby services. A simpler and more direct route alignment could be achieved by combining Route 24 and Route 67 as they operate similar service between the Frankford Transportation Center and Cottman Avenue and Oxford Avenue.
- **Shorten Service Spans:** Ridership on Route 24's evening trips is very low, especially after 9:00 PM. Service could terminate at 9:00 PM or 10:00 PM without inconveniencing many passengers, and the resulting savings could be reinvested into other, more productive services. The discontinuation of weekend could also be considered, with just over 1,000 riders on Saturdays and 850 riders on Sundays.
- **Discontinue Service:** Route 24 duplicates other SEPTA services along nearly its entire length, however at a much lower frequency. Its 15 service patterns also make the route very difficult to understand. These characteristics contribute to Route 24's substandard productivity and low weekend ridership. Route 24 service could be discontinued, and its resources reinvested into the routes it duplicates to strengthen connections between rapid transit lines and North and Northeast Philadelphia neighborhoods. Alternative service options would need to be investigated to ensure riders still have access to Gloria Dei and Holy Redeemer Hospital.