

ROUTE XH

Broad – Erie to Cheltenham – Ogontz

KEY SERVICE CHARACTERISTICS, ISSUES, AND OPPORTUNITIES

- *Route XH operates between the Cheltenham-Ogontz Loop and Erie Station on the Broad Street Line. It provides connections between the neighborhoods of Cedarbrook, West Oak Lane, East Mt. Airy, Germantown and Nicetown. Service is coordinated with Route H, which operates along the same alignment south of Walnut Lane.*
- *Route XH operates frequent service during weekday midday, and it carries 6,000 riders on the average weekday. It also has several weaknesses, including operating slowly, below standard on-time performance and close stop spacing stops.*
- *Opportunities to improve the route include strategies to streamline the route's alignment, a potential shortened alignment, the possibility of combining the route with either Route K or Route 65 to extend it to Wissahickon Transportation Center and/or West Philadelphia, and strategies to improve speed and reliability.*

ROUTE OVERVIEW

Route XH operates between the Cheltenham-Ogontz Loop and Erie Station on the Broad Street Line (see Figure 1). It provides connections between the neighborhoods of Cedarbrook, West Oak Lane, East Mt. Airy, Germantown and Nicetown. Together with Route H, it provides frequent service south of Walnut Lane, along Greene Street, Manheim Street, and Wissahickon Avenue. It also provides similar service to nearby Route 23 on Germantown Avenue and Route 53 on Wayne Avenue.

SERVICE OVERVIEW

Schedule

Route XH operates from 6 AM to 12:18 AM on weekdays and Saturdays and from 6:43 AM to 10:29 PM on Sundays (see Table 1). On weekdays:

- Average frequencies are 11 minutes during the AM and PM peaks
- Average frequencies during the midday period are every 18 minutes.
- Evening frequencies average 30 minutes, dropping to every 40 minutes later at night and 49 minutes overnight.

Saturdays, service frequencies average 21 minutes during the day and 35 minutes at night. Sundays, service frequencies average 28 minutes during the day and 38 minutes at night. Actual frequencies vary during all time periods.

Figure 1 | Route Map

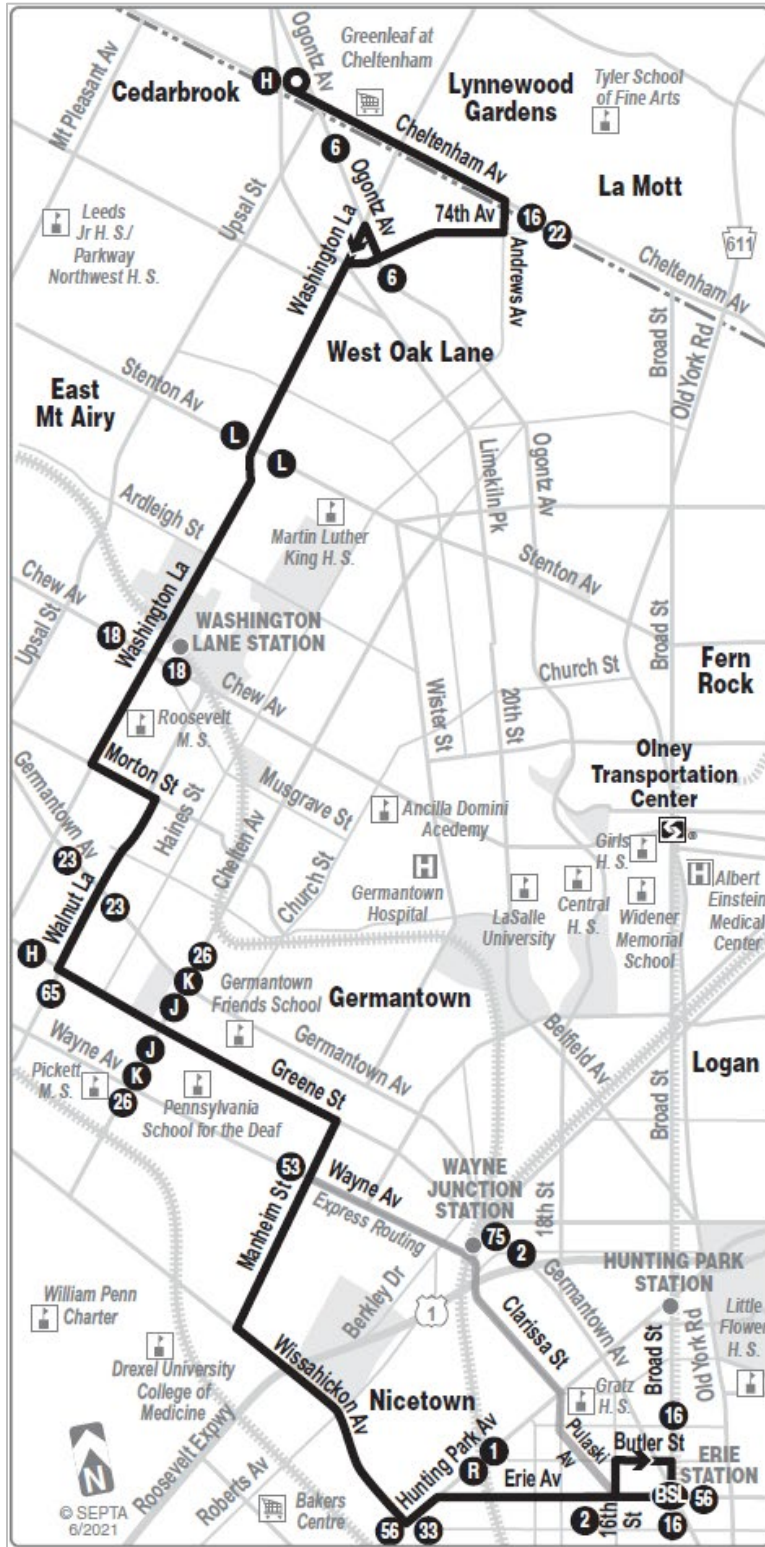


Table 1 | Schedule Statistics

Service Day	Span Of Service	Frequency (Range)	Frequency (Average)
Weekdays	5:48 AM to 12:18 AM		
AM Peak	6:00 AM to 8:59 AM	4 – 26	11
Midday	9:00 AM to 2:59 PM	6 – 20	18
PM Peak	3:00 PM to 5:59 PM	8 – 16	11
Evening	6:00 PM to 9:59 PM	16 – 41	30
Late Night	10:00 PM to 11:59 PM	38 – 41	40
Owl	Midnight to 12:18 AM	38 - 60	49
Saturdays	5:59 AM to 12:18 AM		
Day	8:00 AM to 5:59 PM	20 – 36	21
Night	Before 8:00 AM & After 5:59 PM	20 - 60	35
Sundays	6:43 AM to 10:29 PM		
Day	8:00 AM to 5:59 PM	24 – 41	28
Night	Before 8:00 AM & After 5:59 PM	25 - 60	38

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

Service Patterns

Route XH has four southbound and two northbound service patterns (see Table 2). The alternative service patterns follow an express routing to the Broad Street Line, via Wayne Avenue and Clarissa Street. Two early morning weekday southbound trips begin east of Cheltenham-Ogontz at Cheltenham and Andrews Avenues

Table 2 | Service Patterns

Pattern	Origin	Destination	Unique Feature	Unique Stops	Trips Per Day		
					Wkd	Sat	Sun
Southbound							
230093	Cheltenham Av & Ogontz Av Loop	Erie Av & Broad St – XH FS	Primary Pattern		57	43	33
230092	Cheltenham Av & Ogontz Av Loop	Erie Av & Broad St – XH FS	Serves Wayne Av and Clarissa St	1	2	0	0
230096	Cheltenham Av & Andrews Av	Erie Av & Broad St – XH FS	Does not serve Cheltenham Av & Ogontz Av Loop	0	2	0	0
230095	Cheltenham Av & Andrews Av	Erie Av & Broad St – XH FS	Serves Wayne and Clarissa	0	1	0	0
Northbound							
230099	Erie Av & Broad St – XH FS	Cheltenham Av & Ogontz Av Loop	Primary Pattern		65	43	34
230098	Erie Av & Broad St – XH FS	Cheltenham Av & Ogontz Av Loop	Serves Wayne Av and Clarissa St	1	3	0	0

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

RIDERSHIP

In Fall 2019, Route XH carried 6,147 passengers on weekdays, 2,922 on Saturdays, and 2,063 on Sundays (see Table 3).

Table 3 | Fall 2019 Ridership and Productivity

	Weekdays	Saturdays	Sundays
Daily Ridership	6,147	2,922	2,063
Rank	31	35	38
Passengers per Revenue Vehicle Hour	68.8	54.1	50.5
Rank	13	16	17

Transfer Patterns

Many route XH trips involve a transfer to or from the Broad Street Line. The largest transfer volumes are to and from:

- The Broad Street Line (19.1% of all trips)
- Route 33 Penn's Landing to 23rd-Venango (6.1%)
- Route 65 Germantown-Cheltenham to 69th Street Transportation Center (4.6%)
- Route H Broad-Erie to Cheltenham-Ogontz (4.5%)
- Route 23 Center City to Chestnut Hill (4.3%)

Weekend transfer patterns are similar but at a lower rate.

Ridership by Stop

Route XH carries people to and from Erie Station on the Broad Street Line (BSL). It also provides local service along Wissahickon Avenue, Greene Street, Walnut Lane, and Washington Lane (see Figure 3). High ridership stops on northbound trips include:

- 803 board at Erie Avenue and Broad Street (12.4% of all riders)
- 476 board and 29 alight at Erie Avenue and 15th Street (7.8%)
- 304 board and 67 alight at Hunting Park Avenue and Wissahickon Avenue (5.7%)
- 256 riders board and 250 alight at Greene Street and Cheltenham Avenue (7.8% of all riders)
- 85 riders board and 146 alight at Washington Lane and Chew Avenue (3.6%)
- 115 board and 174 alight at Washington Lane and Stenton Avenue (4.5%)

Southbound patterns generally mirror eastbound patterns and weekend ridership patterns are also similar but with lower volumes.

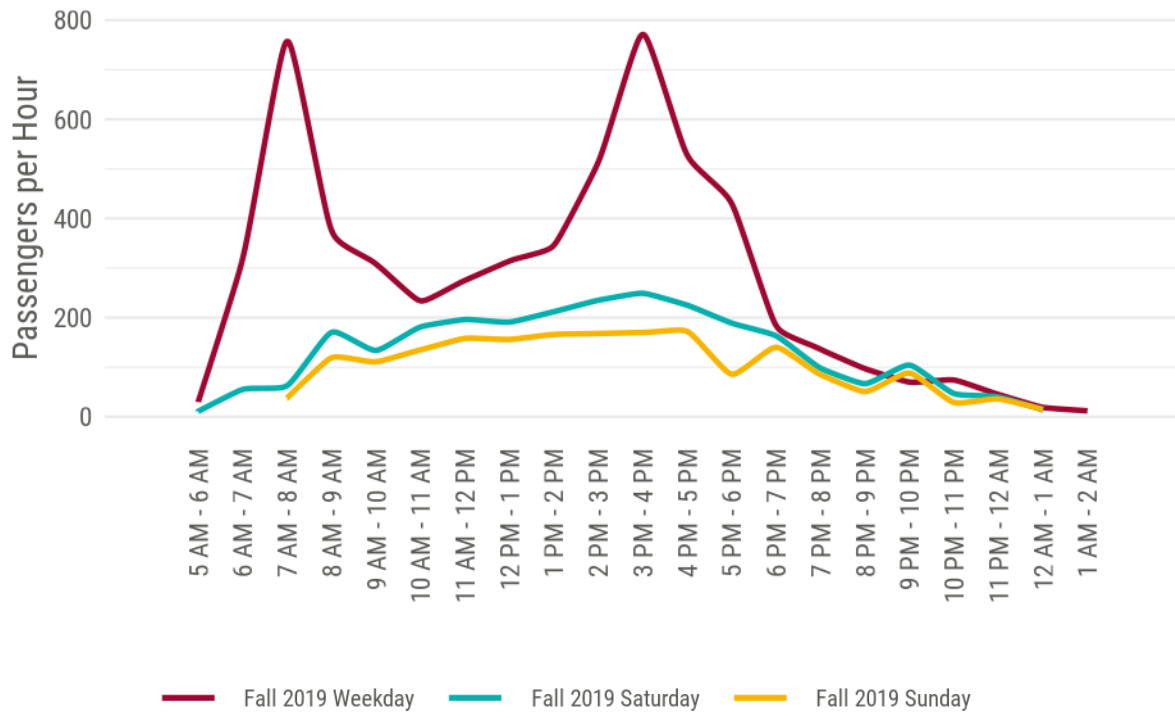
Figure 2 | Weekday Northbound Ridership by Stop


Ridership by Time of Day

Ridership by Hour

On weekdays, Fall 2019 ridership had sharp peaks in the AM and PM rush, with ridership approaching 800 passengers per hour (see Figure 3). Midday ridership by hour is about half of that during peak periods. Ridership drops after 6:00 PM and evening, late night, and overnight ridership is under 200 passengers per hour.

Saturday and Sunday ridership did not exhibit sharp peaks and gradually increased until around 3:00 PM or 4:00 PM and then gradually decreased.

Figure 3 | Ridership by Hour: Pre-Pandemic; Fall 2019


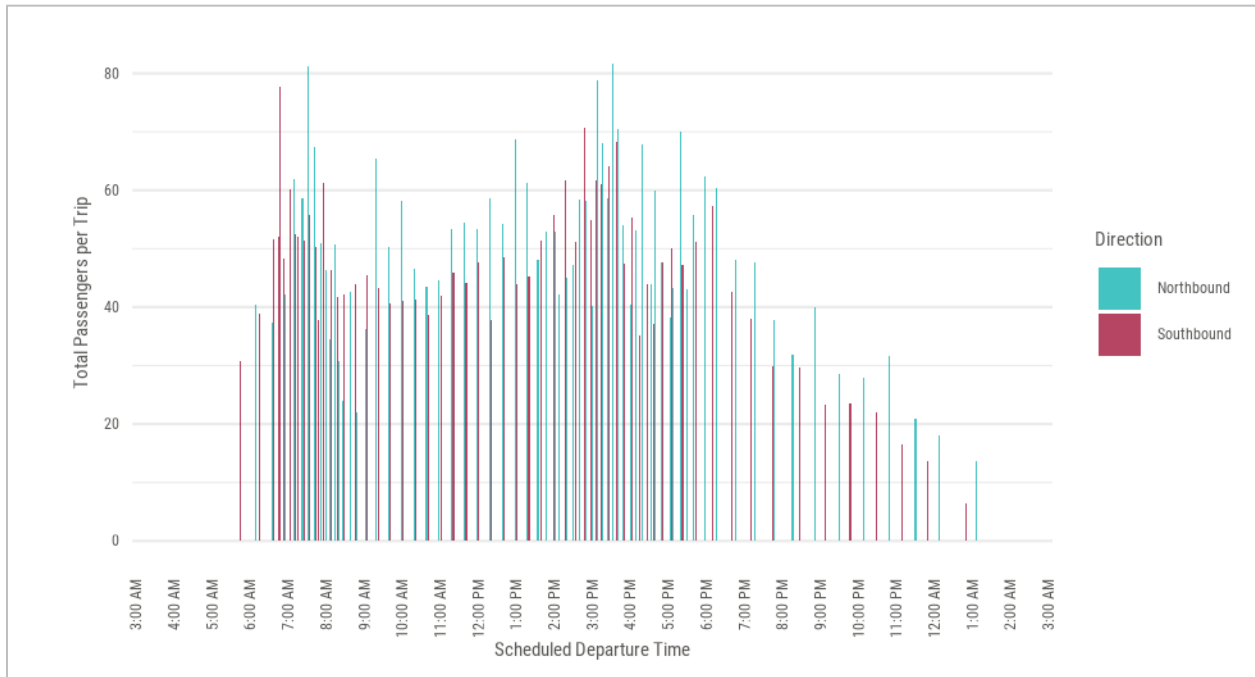
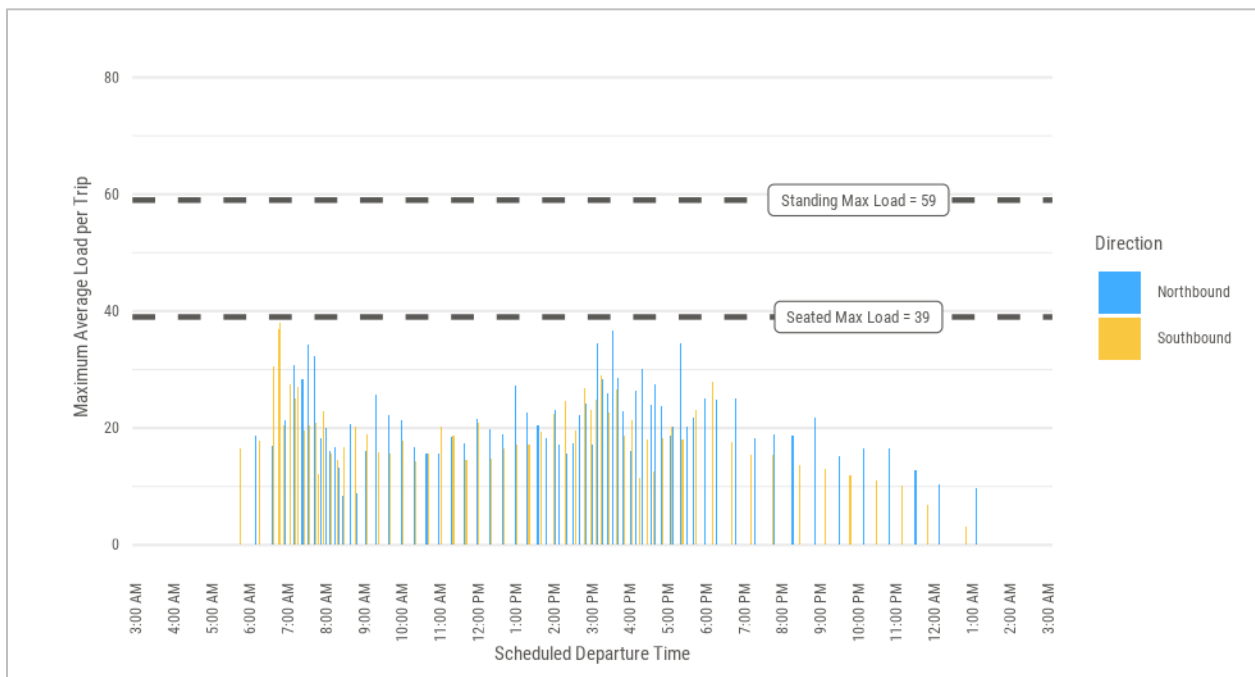
Ridership and Maximum Loads by Trip

In Fall 2019, weekday ridership per trip was high throughout most of the day (see Figure 4):

- During the AM and PM peak, most trips carry between 40 and over 80 total passengers. The first southbound trip of the day had high ridership, indicating unmet demand for service beginning earlier in the day.
- Midday trips generally carry between 40 and 60 passengers per trip. Some trips have between 60 and 70 passengers per trip.
- In the evening, ridership ramps down from approximately 60 passengers per trip to between 20 and 30 around 10:00 PM and continues to decline to under 20 after midnight.

Maximum loads throughout the day are consistently lower than the total passengers served on trips because of turnover on the route. While no trips reach the seated capacity (see Figure 5), some peak period trips approach the seated maximum load.

On Saturdays, there are between 26 and 50 passengers per trip between 9:00 AM and 6:00 PM. After 6:00 PM, ridership decreases to between 20 and 35 passengers per trip. Most trips on Sundays serve between 20 and approximately 40 passengers.

Figure 4 | Weekday Ridership by Trip

Figure 5 | Weekday Maximum Loads by Trip


ON-TIME PERFORMANCE

In Fall 2019, Route XH's on-time performance was 75% on weekdays, 82% on Saturdays, and 80% on Sundays (see Table 4), with off-schedule performance more frequently attributed to late service than early service.

Table 4 | On-Time Performance

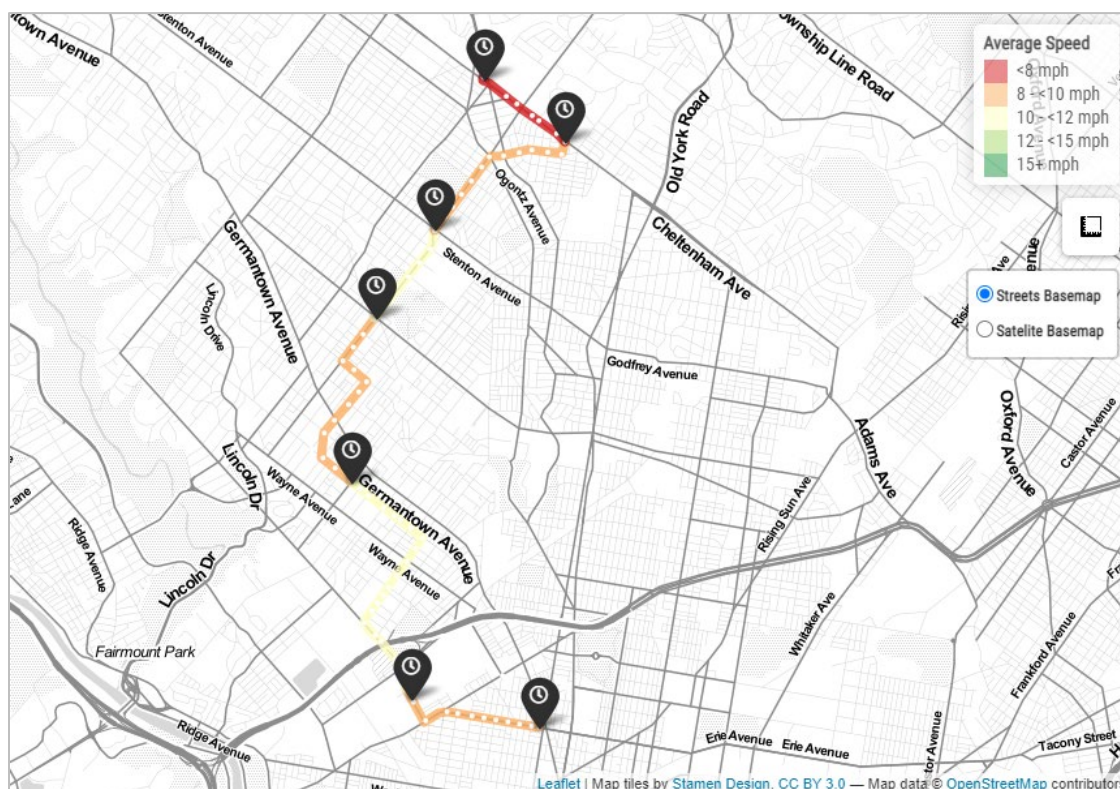
Goal	Early	On Time	Late	Missed Trips
	(>2 Mins Early)	(<2 Mins Early to 6 Mins Late)	(>6 Mins Late))	
Goal		80%		
Fall 2019 Actual				
Weekday	7.1%	74.6%	18.4%	0.0%
Saturday	4.8%	82.2%	13.1%	0.0%
Sunday	6.3%	79.9%	13.8%	0.0%

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

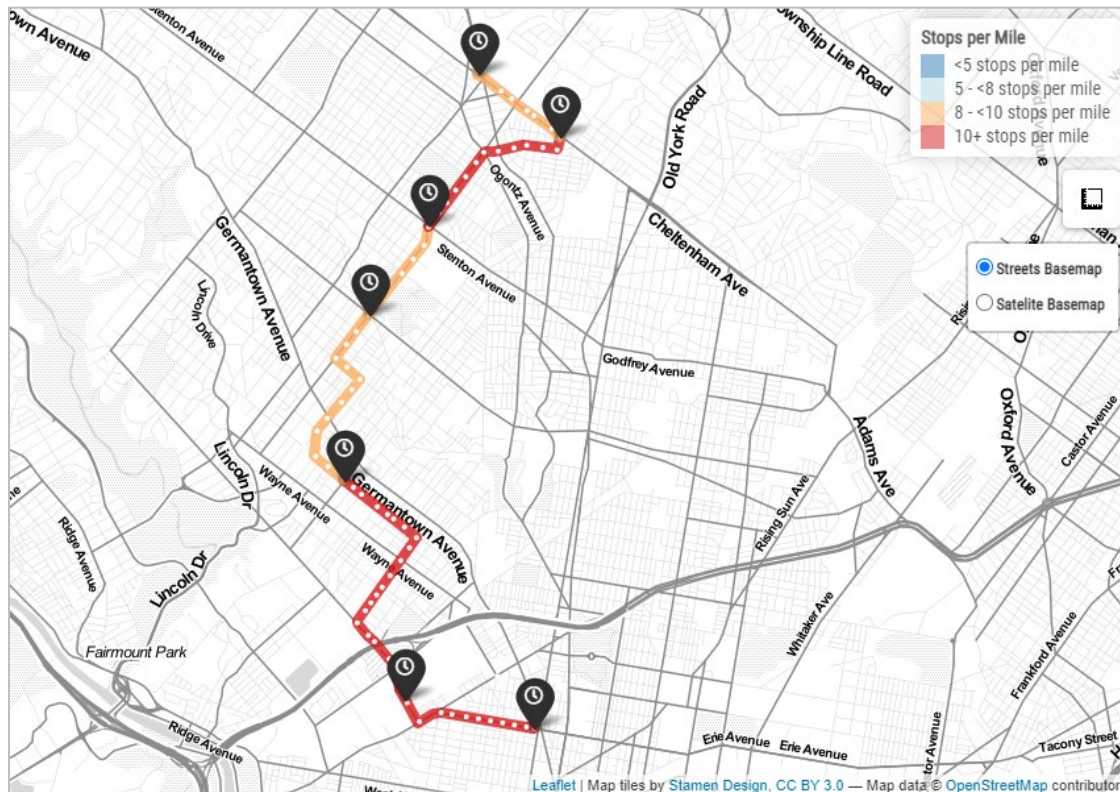
AVERAGE SPEEDS AND STOP SPACING

On weekdays, Route XH has speeds of less than 12 mph for nearly the entire alignment. The slowest segments are along Cheltenham Avenue and Erie Avenue (see Figure 6).

Figure 6 | Average Speeds: PM Peak Northbound



Route XH has an average of 9.4 stops per mile. Several segments, especially along Erie Avenue, Wissahickon Avenue and Manheim Street have stops spaced even more closely. These areas have 11 stops per mile (see Figure 7).

Figure 7 | Stop Spacing by Route Segment


RIDER CHARACTERISTICS

In most respects Route XH's service area is typical of SEPTA's service area (see Table 5). The exception, however, is with race. Route XH services a significantly greater share of Black riders and smaller share of White passengers than the regional service area.

Table 5 | Rider Characteristics

	Route XH Riders	Systemwide Average
Median Household Income	\$29,993	\$32,713
Share in Poverty	34%	30%
Ethnicity		
White	19%	38%
Black	73%	46%
Hispanic	6%	10%
Other	2.4%	7%
Without a Vehicle	41%	37%
Seniors	17%	15%
With a Disability	3%	2%

SERVICE IMPROVEMENT OPPORTUNITIES

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

- **Begin Operating Service Earlier:** Route XH's first few trips of the day have high ridership, indicating that there exists unmet demand for service beginning earlier in the day. Consider extending Route XH's service span so that it begins operating at 5 AM.
- **Capitalize on planned roadway improvement projects.** The Pennsylvania Department of Transportation has a Highway Safety Improvement Project for the portion of Washington Lane between Stenton Avenue and Ogontz Avenue. While the project is focused on making intersection improvements, there may be opportunities for stop bump-outs and stop consolidation.
- **Streamline Service via Ogontz Avenue:** Streamlined service is more direct, easier to understand, and reduces the number of turns on a route. The northern end of Route XH service via Ogontz Avenue would make the route straighter, save about two minutes per trip, avoid one of the most congested segments on the route and eliminate a left turn on Cheltenham. Routes 16, 22 and 80 also serve Cheltenham Avenue. This streamlined alignment would eliminate service along Andrews Avenue and 74th Street. Riders do use this segment (roughly 203 daily riders – 3% of all passengers). However, 97 of those riders use the stop at 74th and Andrews, just less than one-tenth of a mile from Cheltenham Avenue. Otherwise, the longest distance riders would be from either Cheltenham Avenue or Ogontz Avenue is 0.2 miles away (Walnut Lane and 74th Street).
- **Simplify Service:** Route XH service could be made less complex by operating all service to and from the Cheltenham-Ogontz Loop: Several southbound trips begin at Cheltenham Avenue and Andrews Avenue.
- **Extend Route XH to West Philadelphia:** Today, trips between North Philadelphia and West Philadelphia rely on Route 65 or Route 1, which are not frequent during all periods. Route XH could become the backbone of a new crosstown route by extending it to Overbrook Station or 69th Street Transportation Center via Route 65's alignment, if layover space at either station could accommodate the routes. This new crosstown service could easily support frequent service. This change would result in a loss of service along Greene Street, but passengers could instead use nearby Route 53 or Route 23 for trips to the Broad Street Line.