

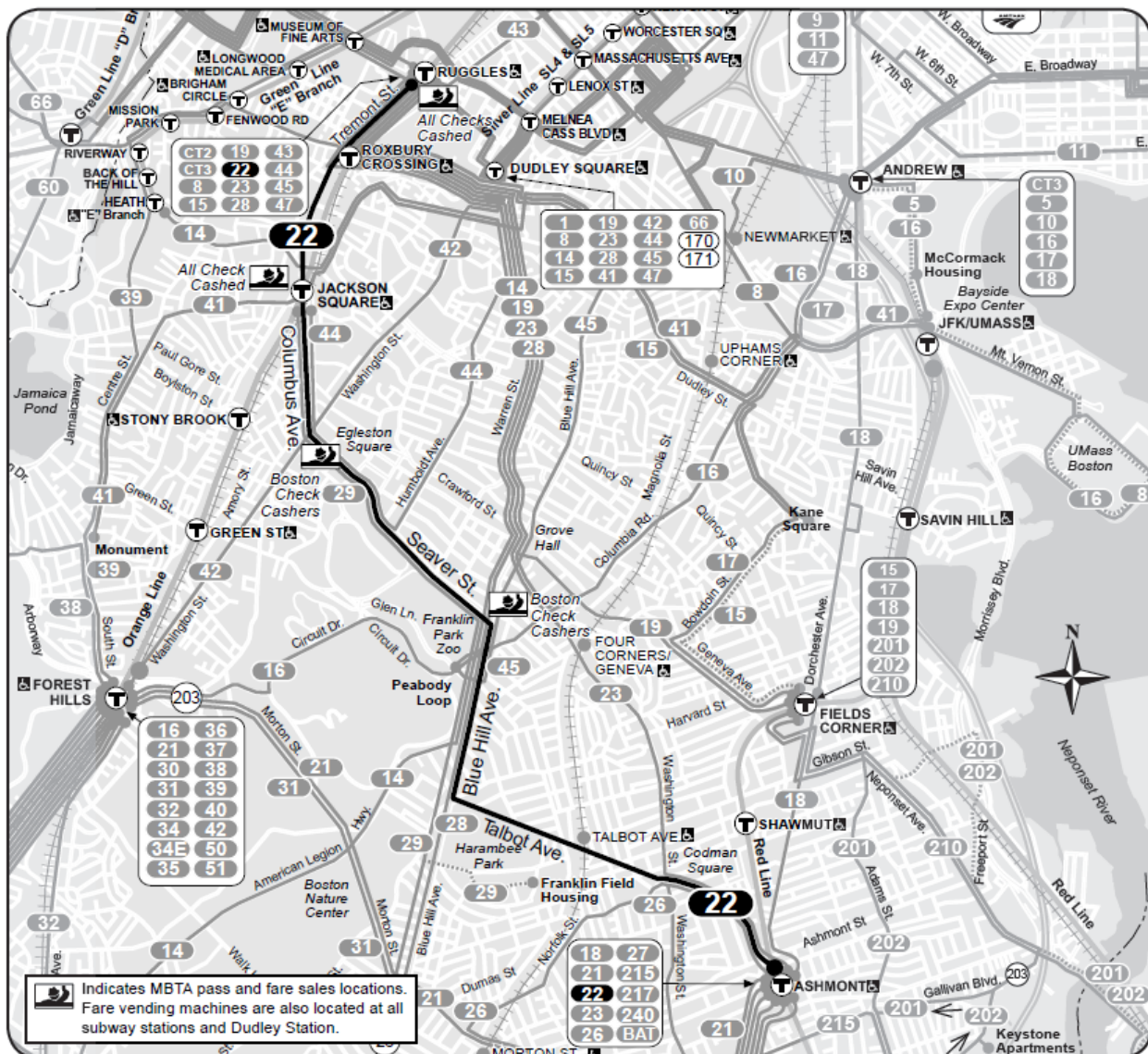
# Route 22

## Ashmont Station – Ruggles Station

### Route Overview

Route 22 Ashmont Station – Ruggles Station is a Key Bus route that operates between Ashmont Station and Ruggles Station. It operates primarily via Talbot Avenue, Blue Hill Avenue, Seaver Street, Columbus Avenue, and Tremont Street, and serves Jackson Square Station and Roxbury Crossing Station on the Orange Line.

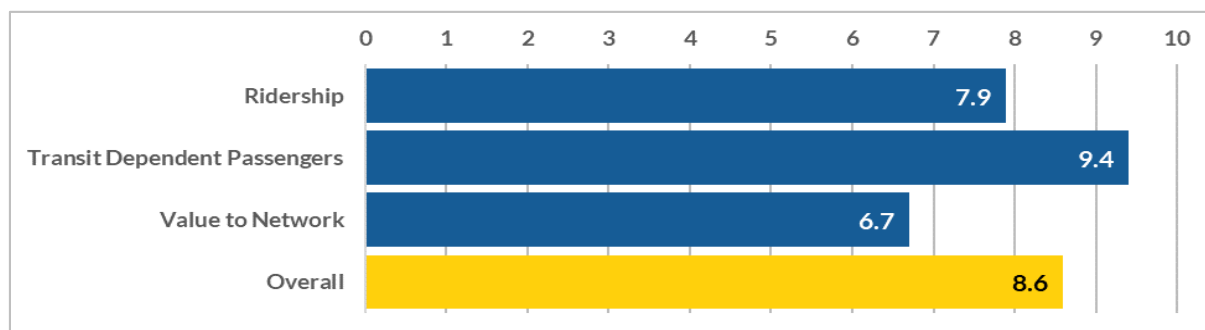
Figure 1 | Service Map



## Network Importance

Route 22 is one of the MBTA's most important bus routes (see Figure 2). On a relative scale of 0 to 10, it rates 7.9 in terms of ridership, 9.4 in terms of transit dependent ridership, and 6.7 in terms of its value to the network (which reflects the number of people who are uniquely served, the number of jobs and other important destinations, and the number of transferring passengers). Its overall score, which gives a 70% weight to overall ridership and a 15% weight to both other measures, is 8.6.

Figure 2 | Relative Importance within MBTA Bus Network (on a scale of 0 to 10)



## Service Patterns

### Schedule

Route 22 provides frequent service for most of the day seven days a week (see Table 1)

Table 1 | Schedule Statistics

SERVICEDAY	SPAN OF SERVICE	FREQUENCY (RANGE)	FREQUENCY (AVERAGE)	DAILY TRIPS (INBOUND/OUTBOUND)
<b>Monday-Friday</b>	<b>4:55 AM to 1:31 AM</b>			<b>95/93</b>
Sunrise	4:55 AM to 5:59 AM	15 - 20	17	4/2
Early AM	6:00 AM to 6:59 AM	3 - 18	8	9/6
AM Peak	7:00 AM to 8:59 AM	6 - 14	10	13/13
Midday Base	9:00 AM to 1:29 PM	12 - 15	14	19/19
Midday School	1:30 PM to 3:59 PM	2 - 15	10	11/15
PM Peak	4:00 PM to 6:29 PM	9 - 11	10	16/15
Evening	6:30 PM to 9:59 PM	10 - 18	15	14/14
Late Evening	10:00 PM to 11:59 PM	14 - 21	20	6/6
Night	12:00 AM to 1:31 AM	20 - 21	21	3/3
<b>Saturday</b>	<b>5:00 AM to 1:23 AM</b>	<b>10 - 30</b>	<b>15</b>	<b>81/78</b>
<b>Sunday</b>	<b>6:08 AM to 1:23 AM</b>	<b>15 - 30</b>	<b>20</b>	<b>59/59</b>

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

On weekdays, service operates from 4:55 AM to 1:31 AM with the following service frequencies:

- Every 15 to 20 minutes from the beginning of service through 6:00 AM.
- Every three to 16 minutes from 6:00 AM to 10:00 PM.
- Every 16 to 21 minutes from 10:00 PM to the end of service.

On Saturdays, service operates from 5:00 AM to 1:23 AM. For most of the day, it operates every 10 to 15 minutes, and every 20 to 25 minutes after about 8:00 PM. On Sundays, service operates from 6:08 AM to 1:23 AM. For most of the day, it operates every 12 to 20 minutes.

Route 22 exceeds the MBTA span of service and frequency standards for Key Bus routes during all service periods except weekday evenings, when service operates every 21 minutes, slightly less than the standard of every 20 minutes.

### Service Patterns

On weekdays, all inbound trips and all but three outbound trips operate Pattern 22.0, which serves the full length of Route 22’s alignment between Ashmont Station and Ruggles Station (see Table 2). Three additional service patterns operate afternoon outbound service to provide school trips:

- Pattern 22.1 operates one trip from Madison Park High School to Ruggles Station, then continues along the primary alignment to Ashmont Station.
- Pattern 22.2 operates one trip from Boston Latin School to Ruggles Station, then continues along the primary alignment to Ashmont Station. A morning trip was added in Fall 2018.
- Pattern 22.3 operates one trip from Boston Latin Academy to Ruggles Station, then continues along the primary alignment to Ashmont Station.

All weekend service is provided with Pattern 22.0.

Table 2 | Service Patterns

PATTERN	ORIGIN	DESTINATION	UNIQUE FEATURE	TRIPS PER WKD	TRIPS PER SAT	TRIPS PER SUN
<b>INBOUND</b>				<b>95</b>	<b>81</b>	<b>59</b>
22.0	Ashmont Station	Ruggles Station	Regular route	95	81	59
<b>OUTBOUND</b>				<b>93</b>	<b>78</b>	<b>59</b>
22.0	Ruggles Station	Ashmont Station	Regular route	90	78	59
22.1	Madison Park High School	Ashmont Station	School trip	1	-	-
22.2	Boston Latin School	Ashmont Station	School trip	1	-	-

PATTERN	ORIGIN	DESTINATION	UNIQUE FEATURE	TRIPS PER WKD	TRIPS PER SAT	TRIPS PER SUN
22.3	Boston Latin Academy	Ashmont Station	School trip	1	-	-

## Ridership

Route 22 carries approximately 8,020 passengers on weekdays, 5,140 on Saturdays, and 3,890 on Sundays. In terms of weekday ridership, it is the MBTA's 11<sup>th</sup> highest ridership route.

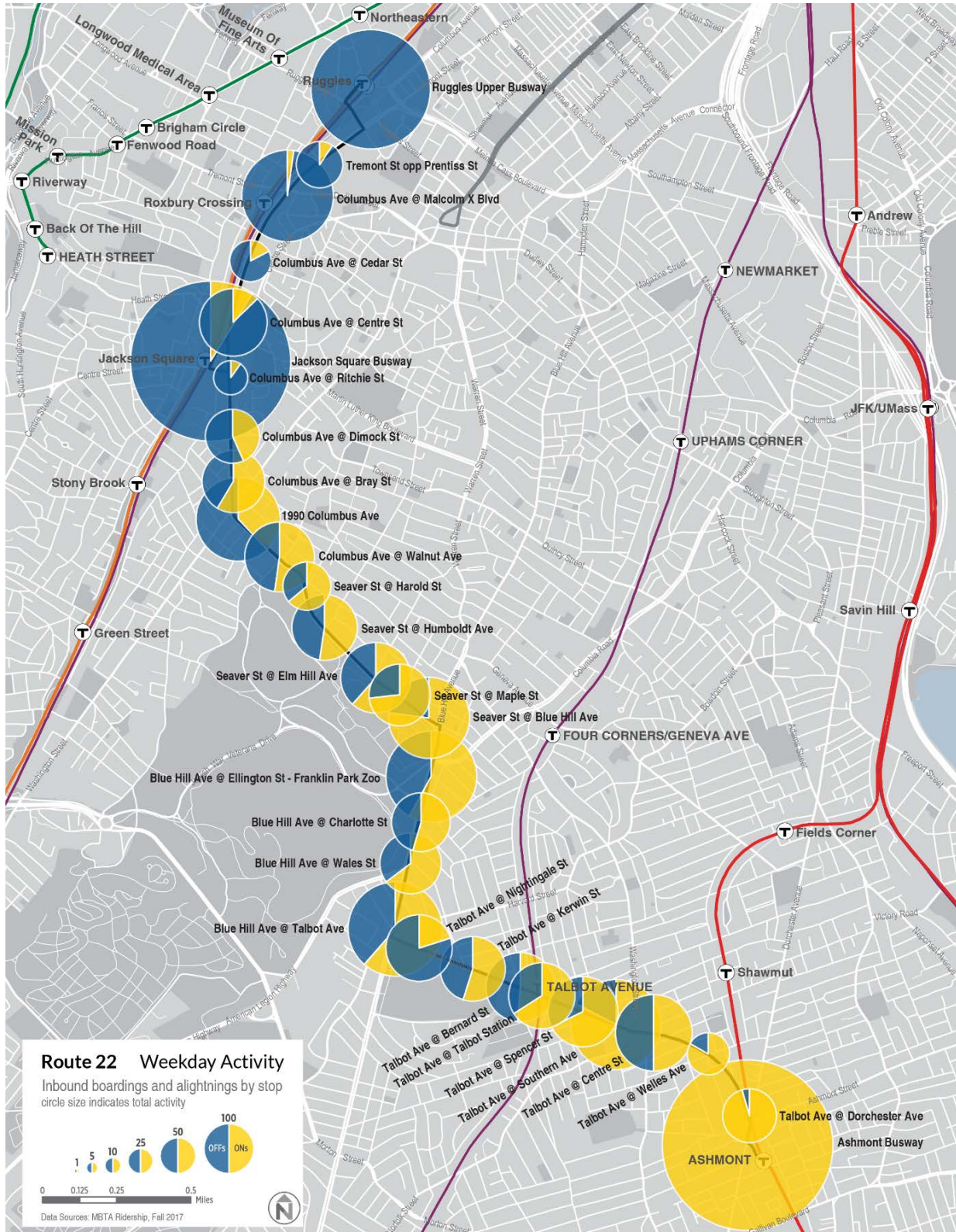
### Ridership by Stop

Route 22's ridership is highest at the four Red Line and Orange Line stations that it serves, which are Ashmont Station, Jackson Square Station, Roxbury Crossing Station, and Ruggles Station. Ridership at other stops, although much lower than at these stations, is still high. On weekday inbound trips (see Figure 3):

- 1,200 passengers a day board at Ashmont Station. This is the highest ridership stop on the route.
- 300 passengers board and 140 passengers alight at the three stops along Talbot Avenue between Ashmont Station and Washington Street.
- 280 passengers board and 60 alight at Talbot Avenue at Southern Avenue in Dorchester Center.
- 490 passengers board and 450 passengers alight at the five stops along Talbot Avenue between Washington Street and Blue Hill Avenue.
- 230 passengers board and 140 passengers alight at Blue Hill Avenue at Talbot Avenue, the first stop on the major Blue Hill Avenue transit corridor shared with Routes 28 Mattapan Station-Ruggles Station and 29 Mattapan Station-Jackson Square Station.
- 380 passengers board and 260 alight at the three stops along Blue Hill Avenue between Talbot Avenue and Seaver Street.
- 210 passengers board and 60 alight at Seaver Street at Blue Hill Avenue.
- 400 passengers board and 240 alight at the four stops along Seaver Street between Blue Hill Avenue and Columbus Avenue.
- 310 passengers board and 340 alight at the three stops along Columbus Avenue between Walnut Avenue and Bray Street.
- 60 passengers board and 110 alight at the two stops along Columbus Avenue between Bray Street and Jackson Square Station.

- 90 passengers board and 970 passengers alight at Jackson Square Station on the Orange Line. This is the second highest ridership stop on the route.
- 40 passengers board and 230 passengers alight at the two stops along Columbus Avenue between Jackson Square Station and Roxbury Crossing Station.

Figure 3 | Weekday Inbound Ridership by Stop Map



- 10 passengers board and 340 alight at Columbus Avenue at Malcolm X Boulevard adjacent to Roxbury Crossing Station.
- 10 passengers board and 80 alight at Tremont Street opposite Prentiss Street.
- About 600 passengers alight at Ruggles Station.

Outbound ridership patterns are essentially the inverse of inbound patterns. Weekend patterns are also similar but with significantly lower passenger volumes.

### **Ridership by Trip**

On weekdays in both directions, ridership is highest in the late afternoon between 2:30 PM and 4:00 PM, when trips carry over 60 passengers (see Figure 4 and Figure 5). AM and PM peak ridership is also high. During the AM peak, inbound trips carry over 50 passengers per trip, and outbound trips carry approximately 40 passengers. In the PM peak, trips in both directions generally carry over 50 passengers. Some trips come close to maximum load standards, but none exceed them. When there are service disruptions, these trips can become overcrowded.

In the evening, inbound ridership declines steadily from about 40 passengers at 7:00 PM to fewer than 10 on the last trip at 12:50 AM. Outbound ridership is higher and stays at or above 50 passengers per trip until 8:30 PM. It then declines steadily to 10 passengers on the last trip at 12:43 AM.

On Saturdays, inbound trips generally carry 35 to 50 passengers per trip and outbound trips generally carry 30 to 50 passengers per trip. Ridership is lower early and late (see Figure 6 and Figure 7).

On Sundays, ridership per trip is higher than on Saturdays, with trips in both direction carrying from 40 to over 50 passengers between 9:00 AM and 9:00 PM. Ridership is lower early and late (see Figure 8 and Figure 9).

Figure 4 | Weekday Ridership by Trip: Inbound

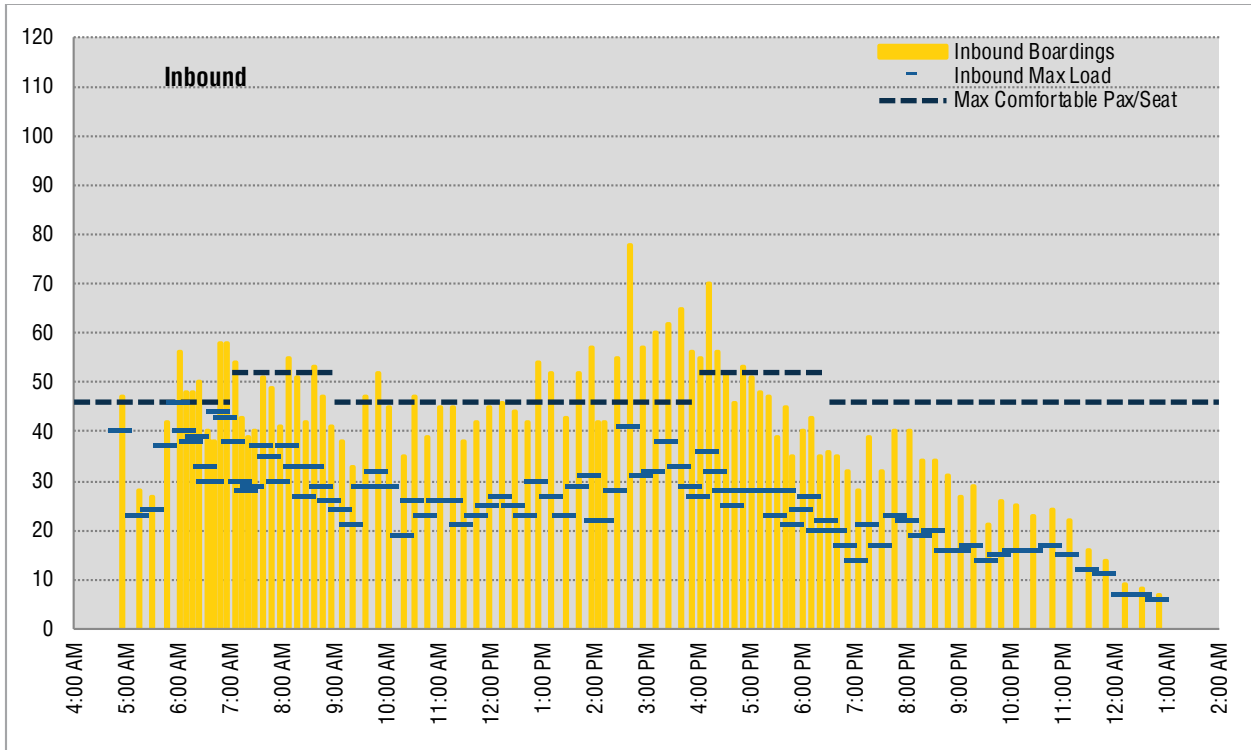


Figure 5 | Weekday Ridership by Trip: Outbound

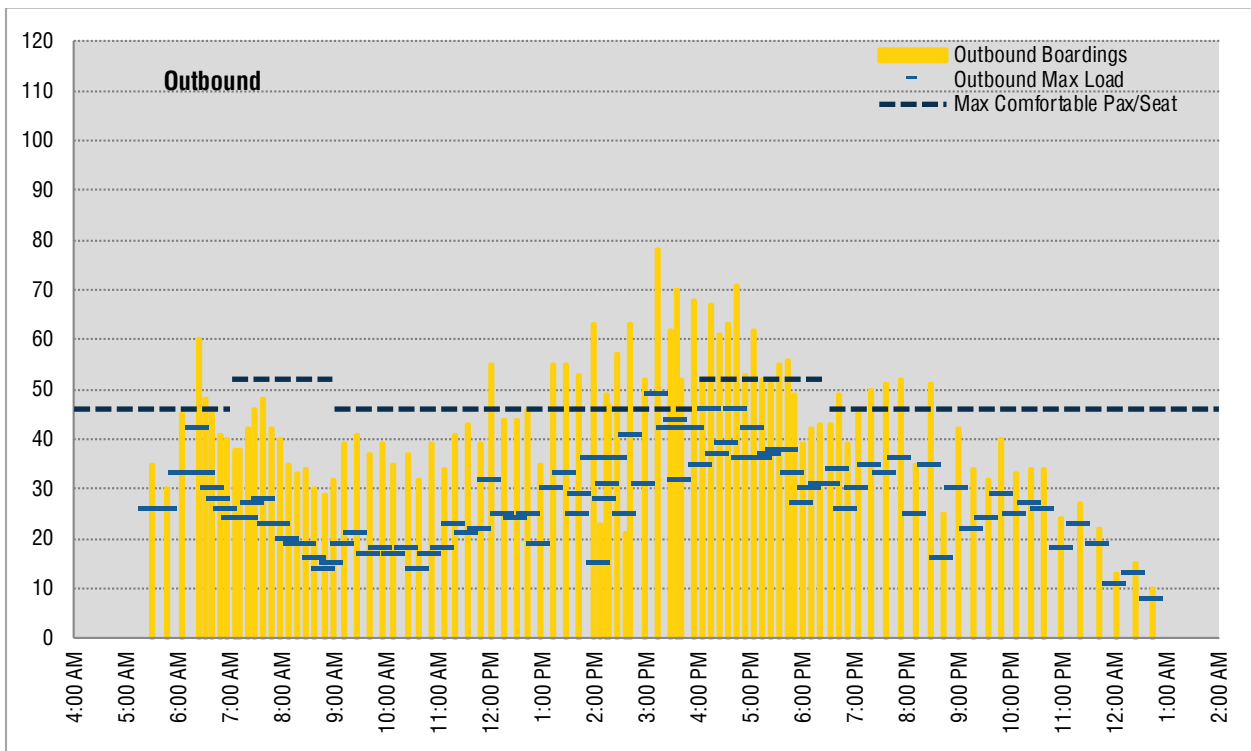




Figure 6 | Saturday Ridership by Trip: Inbound

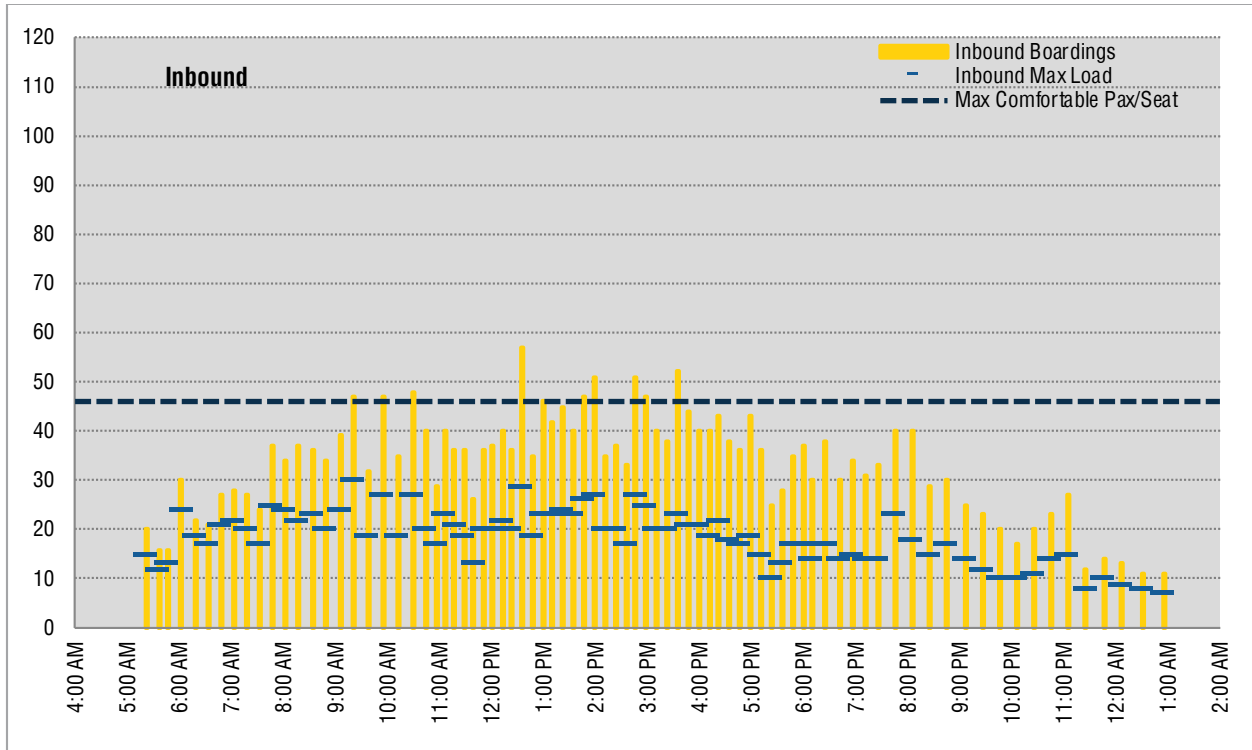


Figure 7 | Saturday Ridership by Trip: Outbound

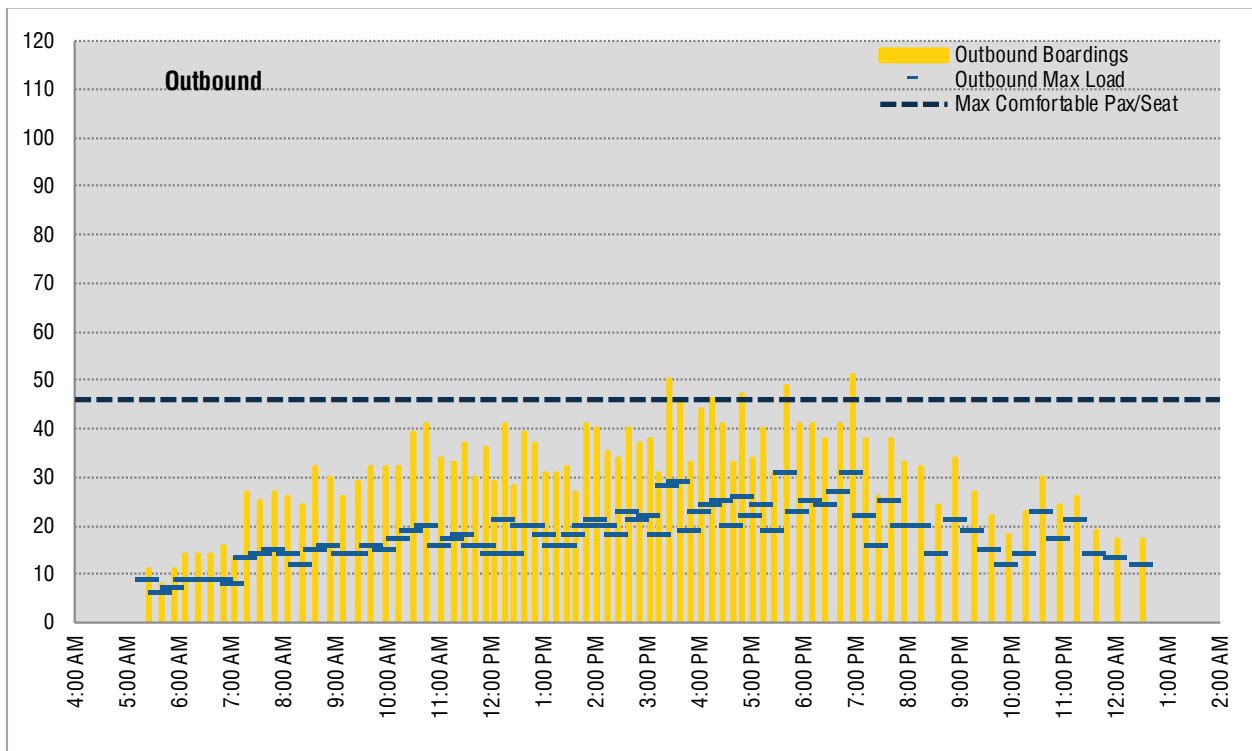


Figure 8 | Sunday Ridership by Trip: Inbound

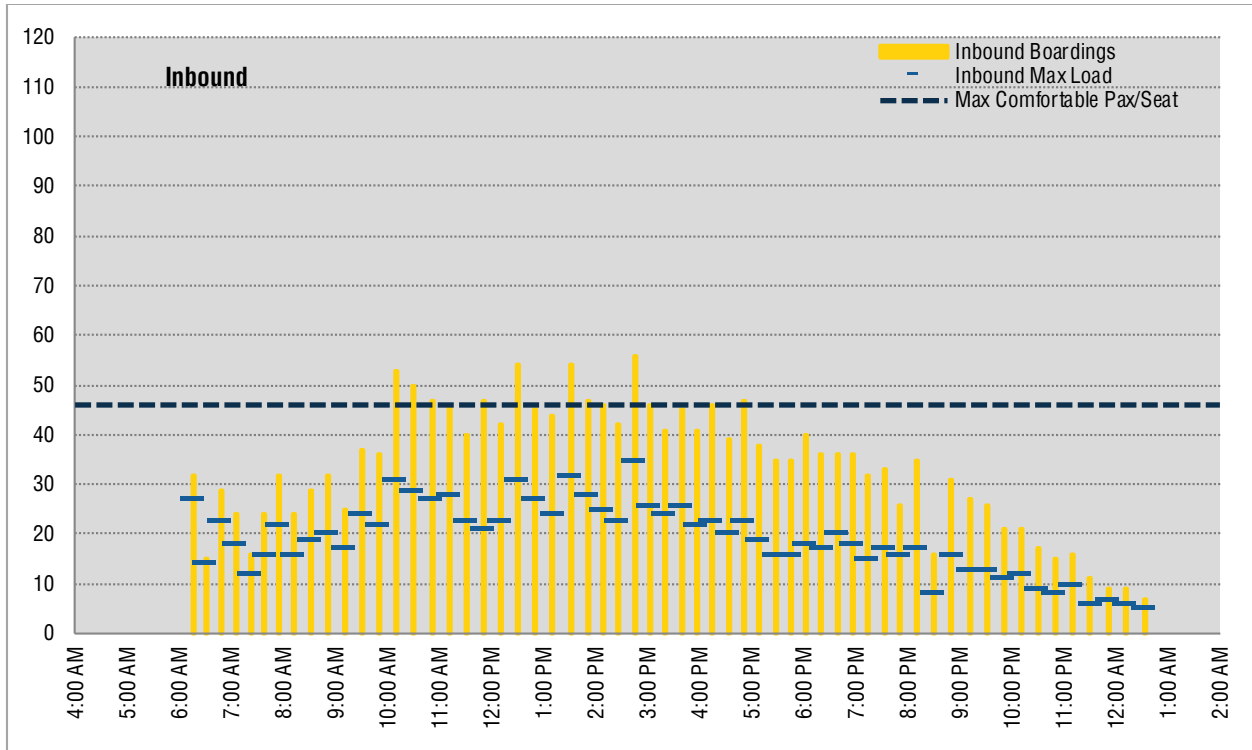
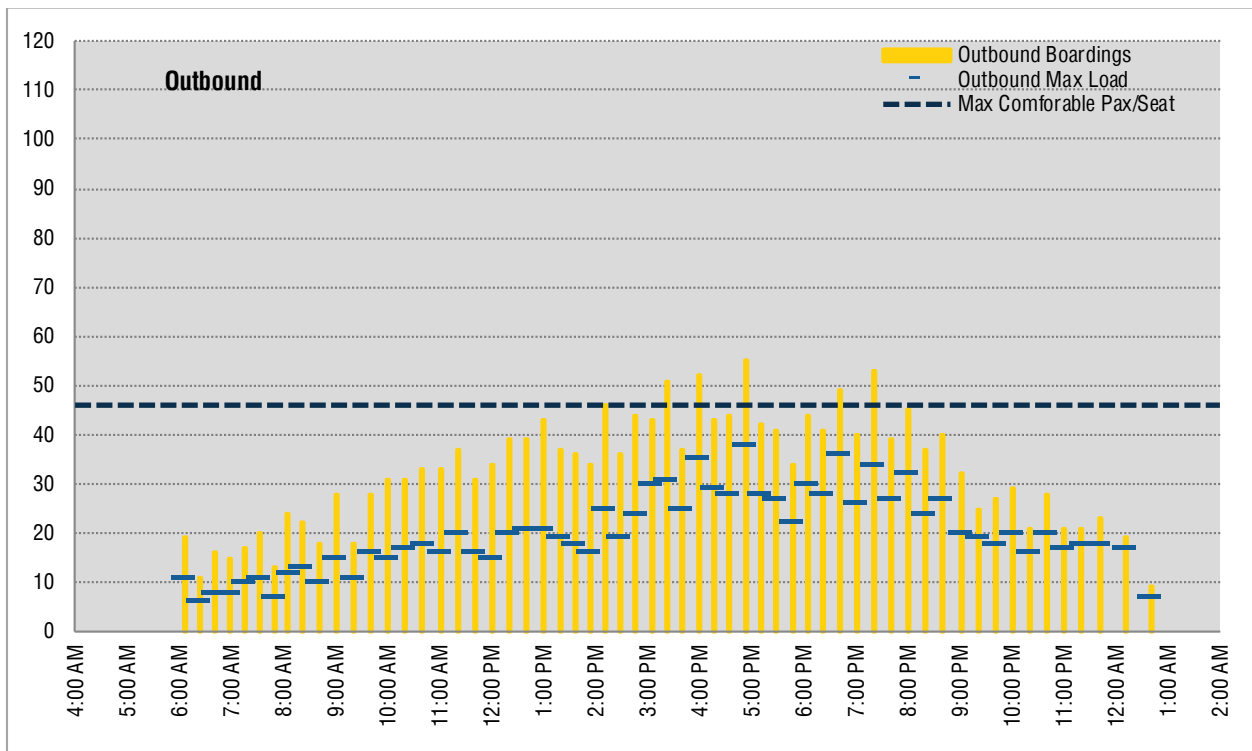


Figure 9 | Sunday Ridership by Trip: Outbound



## Passenger Comfort

The MBTA desires that passengers travel in relatively comfortable conditions. At the same time, the MBTA’s definition of comfort reflects the very high volume environment in which the MBTA operates, and that some passengers may have to stand for a portion of their trip. More specifically, at least 92% of passengers’ travel times should be in comfortable conditions, and ideally, at least 96% of travel times should be in comfortable conditions. Comfortable conditions are considered to be 140% or less of seated capacity during high volume periods and 125% or less during other periods.

On Route 22, 94.4% of passenger minutes are in comfortable conditions. This is above the minimum standard of 92% but below the target of 96% (see Table 3).

Table 3 | Passenger Time Spent Traveling in Comfortable Conditions

	WEEKDAYS	SATURDAYS	SUNDAYS
<b>Minimum Standard</b>	92%	92%	92%
<b>Target</b>	96%	96%	96%
<b>Actual</b>	94.4%	99.8%	98.7%

## Reliability and Speed

### Reliability

Route 22’s overall reliability is 75% on weekdays, 75% on Saturdays, and 77% on Sundays (see Table 4). On all days, reliability meets or exceeds the minimum standard of 75% for Key Bus routes, but below the target of 80%. Dropped trips are a problem, with 2.0% of trips not operated in Fall 2017.

Table 4 | Reliability

SERVICE DAY	ORIGIN/MID-ROUTE ON-TIME PERFORMANCE	DESTINATION ON-TIME PERFORMANCE	OVERALL RELIABILITY	DROPPED TRIPS
<b>Monday-Friday</b>	73%	93%	75%	2.0%
<b>Saturday</b>	75%	76%	75%	-
<b>Sunday</b>	75%	94%	77%	-

### Running Times

For much of the day, actual running times are one to eight minutes longer than scheduled (see Figure 10). During the AM and PM peak periods and in the evening, this is the primary cause of poor on-time performance. The exception is outbound between approximately 9:00 AM and 1:00 PM, when trips generally operate two to five minutes ahead of schedule. The MBTA adjusted Route 22’s schedule in Fall 2017 to better reflect actual running times.

Figure 10 | Scheduled & Median Travel Time by Trip: Route 22 Inbound

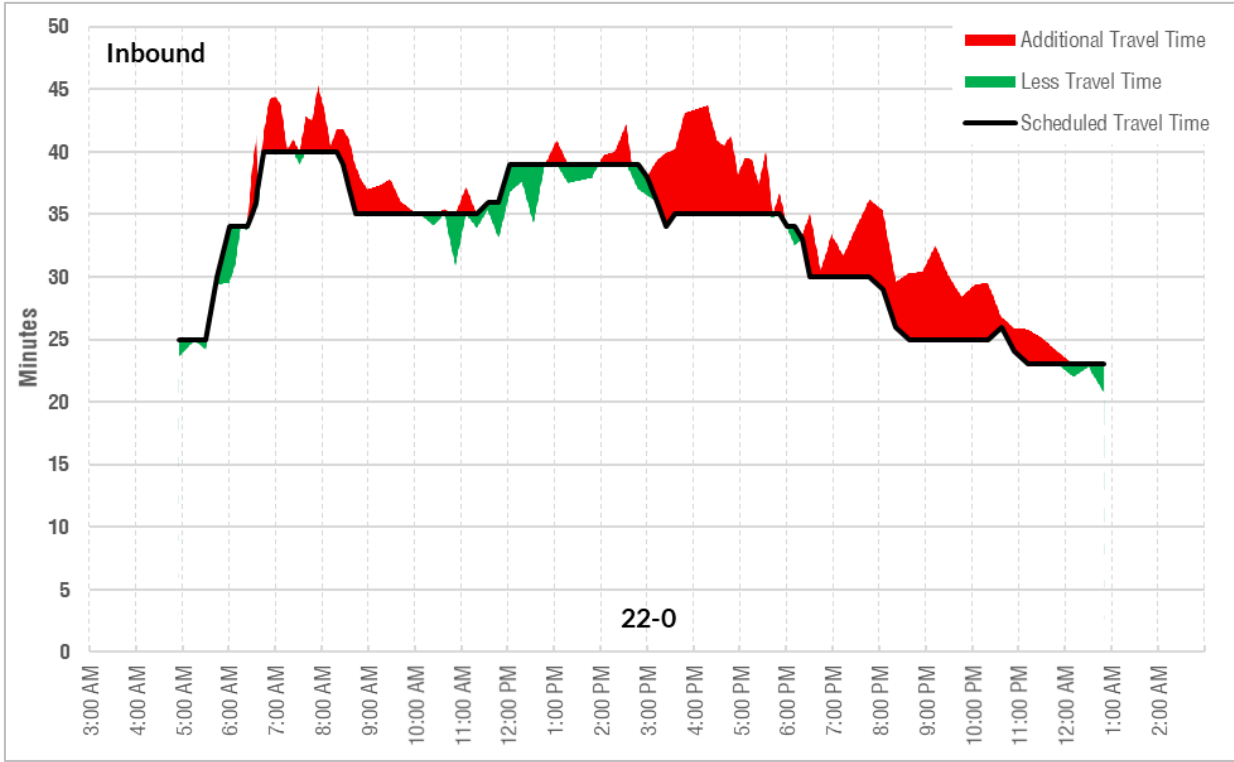
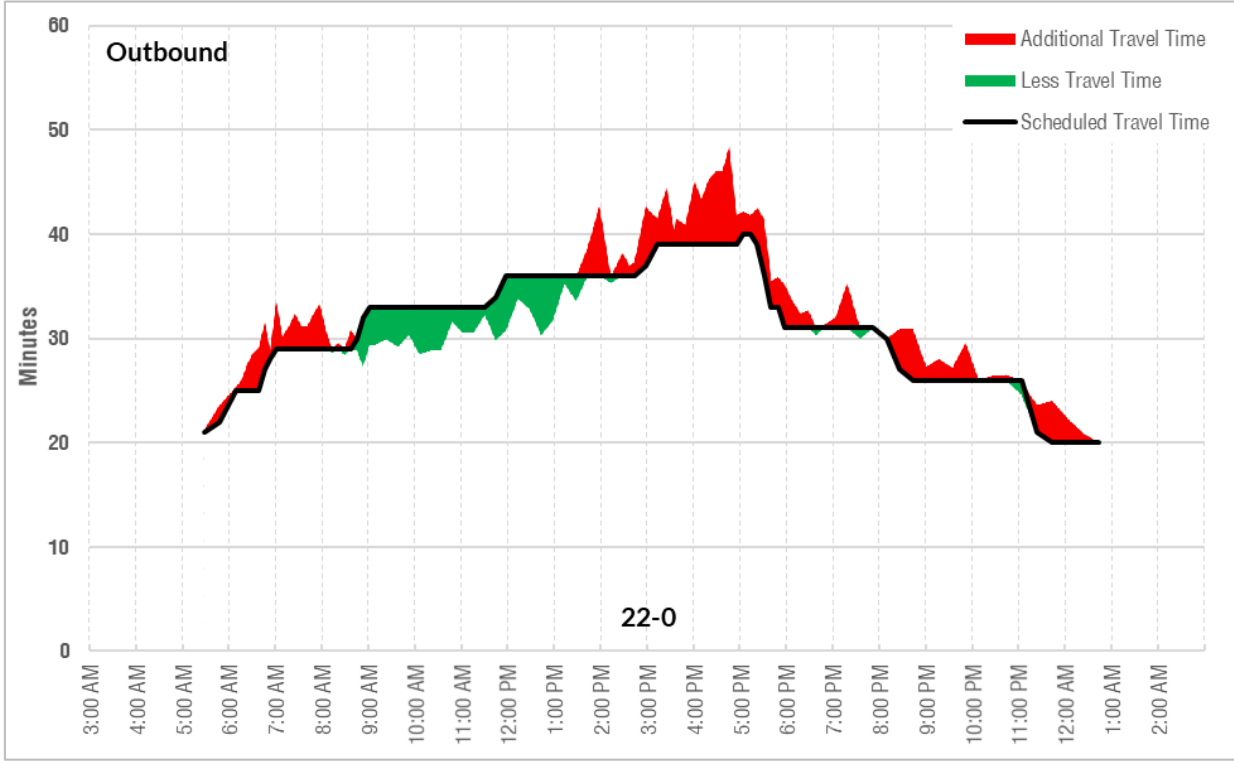


Figure 11 | Scheduled & Median Travel Time by Trip: Route 22 Outbound



## Stop Spacing

Route 22 has an average of six stops per mile, which is at the high end of the MBTA's guideline of four to seven stops per mile for Key Bus routes. Stop consolidation to reduce the number of stops could make service faster while still providing convenient access.

## Summary

Route 22 provides direct connections between Ashmont Station and Ruggles Station, with very high ridership activity along the entire route. Overall, it performs reasonably well, and better than most Key Bus routes, especially in terms of on-time performance. However, performance could be better as the route's schedule does not match actual running times, and the route is slow along much of its length.