

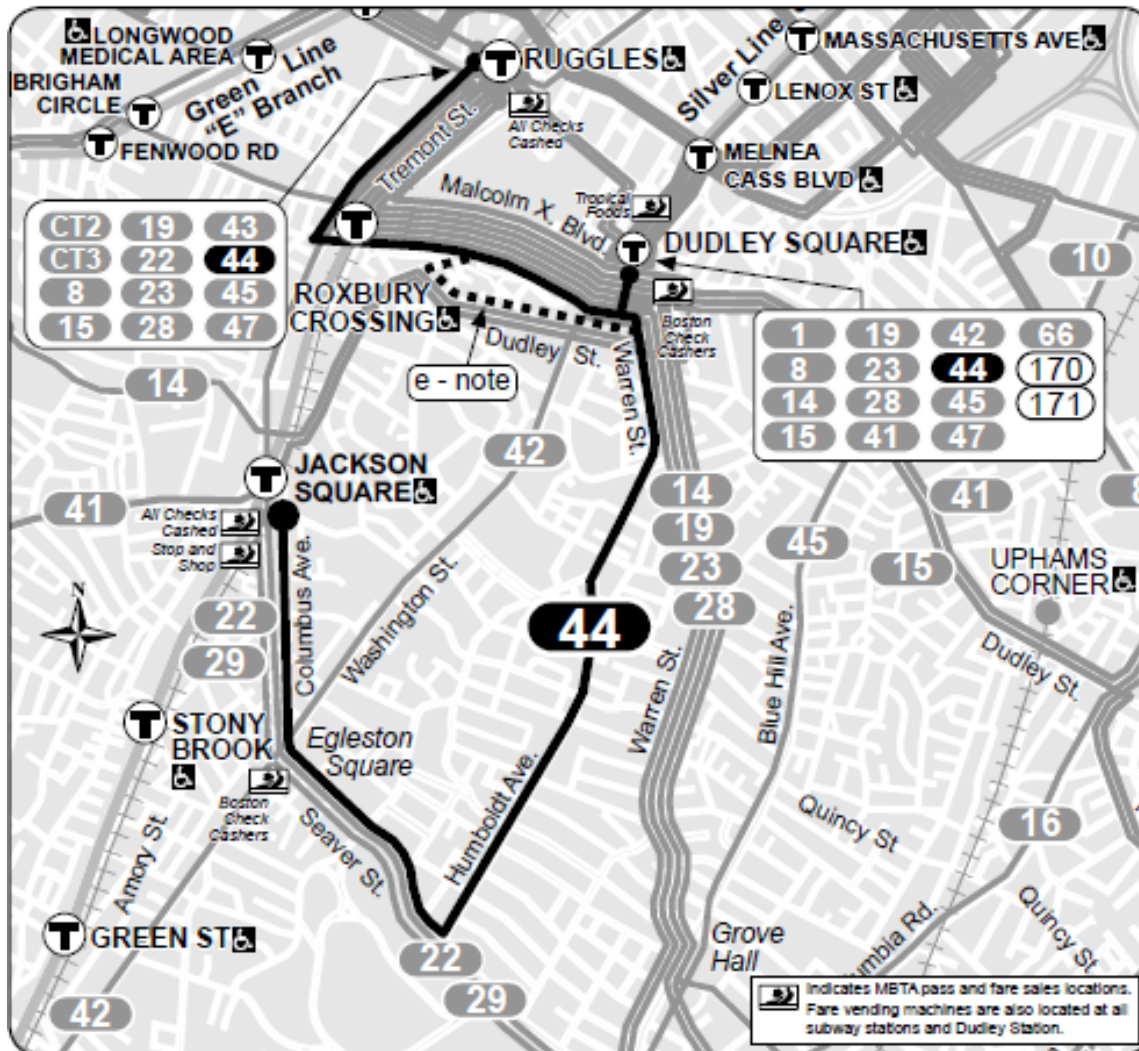
# Route 44

## Jackson Square Station – Ruggles Station

### Route Overview

Route 44 Jackson Square Station – Ruggles Station is a Local route that operates between Jackson Square Station and Ruggles Station in a very circuitous manner via Columbus Avenue, Seaver Street, Humboldt Avenue, Warren Street, Dudley Station, Malcolm X Boulevard, and Tremont Street (see Figure 1). Its main purpose is to provide service to people who live along Humboldt Avenue.

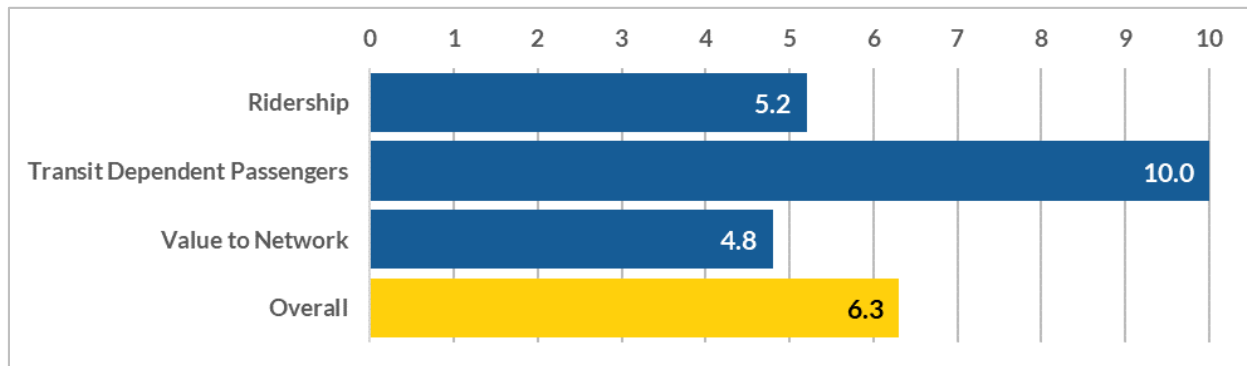
Figure 1 | Service Map



## Network Importance

Route 44 is an important route in the MBTA's bus network (see Figure 2). On a relative scale of 0 to 10, the route rates 5.2 in terms of ridership, 10.0 in terms of transit dependent ridership, and 4.8 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 6.3.

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



## Service Overview

### Schedule

Route 44 provides fairly frequent service for most of the day on weekdays and Saturdays and infrequent service on Sundays. On weekdays, it operates from 5:10 AM to 1:19 AM with the following service frequencies (see Table 1):

- Every 16 to 25 minutes from the beginning of service through 6:00 AM.
- Every 16 to 19 minutes from 6:00 AM to approximately 10:00 AM.
- Approximately every 30 minutes from approximately 10:00 AM to 1:30 PM.
- Every 13 to 18 minutes from approximately 1:30 PM to 8:00 PM.
- Approximately every 30 minutes through the end of service.

On Saturdays, service operates from 5:25 AM to 1:16 AM. Before 9:00 AM it operates every 30 minutes. Between 9:00 AM and 7:00 PM, service operates every 17 to 20 minutes. After 7:00 PM through the end of service, it operates every 35 minutes.

On Sundays, service operates from 6:15 AM to 12:50 AM with somewhat irregular frequencies of every 45 to 60 minutes.

Route 44 meets or exceeds the MBTA span of service and frequency standards for Local routes on all days.

**Table 1 | Schedule Statistics**

SERVICE DAY	SPAN OF SERVICE	FREQUENCY (RANGE)	FREQUENCY (AVERAGE)	DAILY TRIPS (INBOUND/OUTBOUND)
<b>Monday-Friday</b>	<b>5:10 AM to 1:19 AM</b>			<b>54/54</b>
Sunrise	5:10 AM to 5:59 AM	16 - 26	23	3/2
Early AM	6:00 AM to 6:59 AM	16 - 26	16	3/3
AM Peak	7:00 AM to 8:59 AM	16 - 18	17	8/7
Midday Base	9:00 AM to 1:29 PM	18 - 30	27	10/10
Midday School	1:30 PM to 3:59 PM	1 - 30	19	7/9
PM Peak	4:00 PM to 6:29 PM	13 - 18	17	9/8
Evening	6:30 PM to 9:59 PM	13 - 33	23	10/9
Late Evening	10:00 PM to 11:59 PM	28 - 30	30	4/4
Night	12:00 AM to 12:19 AM	30 - 42	37	2/2
<b>Saturday</b>	<b>5:25 AM to 1:16 AM</b>	<b>15 - 43</b>	<b>23</b>	<b>50/50</b>
<b>Sunday</b>	<b>6:15 AM to 12:50 AM</b>	<b>45 - 60</b>	<b>50</b>	<b>23/23</b>

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

### Service Patterns

On weekdays, all inbound trips and most outbound trips operate Pattern 44.1, which serves the full length of Route 44’s alignment (Table 2). Exceptions include:

- Pattern 44.2 operates on one outbound midday trip between Boston Latin Academy and Jackson Square Station.
- The last 10 weekday outbound trips operate Pattern 44.3, which operates via Dudley Street and John Elliot Square (shown in the dotted line in Figure 1). These trips are intended to provide service to Dudley Street after Route 41 Centre & Eliot Streets-JFK/UMass Station has stopped operating. Inbound Pattern 44.3 trips are paired with outbound Pattern 44.3 trips, but travel the same alignment as the primary inbound service pattern (Pattern 44.1), and appear the same on customer-facing schedules.

All trips on weekends run Pattern 44.3, with outbound trips operating via Dudley Street.

**Table 2 | Service Patterns**

PATTERN	ORIGIN	DESTINATION	UNIQUE FEATURE	TRIPS PER WKD	TRIPS PER SAT	TRIPS PER SUN
<b>INBOUND</b>				<b>56</b>	<b>50</b>	<b>23</b>
44.1	Jackson Square Station	Ruggles Station	Primary pattern	47	-	-
44.3	Jackson Square Station	Ruggles Station	Same as primary pattern, paired with outbound Pattern 44.3 trips	9	50	23

PATTERN	ORIGIN	DESTINATION	UNIQUE FEATURE	TRIPS PER WKD	TRIPS PER SAT	TRIPS PER SUN
<b>OUTBOUND</b>				<b>54</b>	<b>50</b>	<b>23</b>
44.1	Ruggles Station	Jackson Square Station	Primary pattern	43	-	-
44.2	Boston Latin Academy	Jackson Square Station	PM school trip from Boston Latin Academy to Jackson Square Station	1	-	-
44.3	Ruggles Station	Jackson Square Station	Via John Elliot Square	10	50	23

## Ridership

Route 44 carries approximately 3,450 passengers on weekdays, 1,780 passengers on Saturdays, and 840 passengers on Sundays.

### Ridership by Stop

The highest ridership stops on Route 44, by far, are Jackson Square Station, Dudley Station, and Ruggles Station. On weekday inbound trips from Jackson Square Station to Ruggles Station (see Figure 3):

- 660 passengers, or 37% of all riders, board at Jackson Square Station, which is the highest ridership stop on the route.
- 260 passengers board and 240 passengers alight at the seven stops along Columbus Avenue and Seaver Street. The 240 alightings represent “opportunistic” riders who are also served by Route 29 Mattapan Station-Jackson Square Station and use Route 44 when it is the first bus.
- 630 passengers board and 470 alight at the 10 stops along Humboldt Avenue. These passengers are uniquely served by Route 44.
- 70 passengers board and 80 alight at the four stops along Walnut Avenue and Warren Street between Humboldt Avenue and Dudley Station. The 70 passengers who board are also served by four other routes (Routes 14 Roslindale Square-Heath Street Station, Route 19 Fields Corner Station-Kenmore Station, Route 23 Ashmont Station-Ruggles Station, and Route 28 Mattapan Station-Ruggles Station).
- 130 passengers board and 450 alight at Dudley Station, which is the highest ridership stop on the route. The boarding passengers are also opportunistic passengers also served by the four routes listed above.

Figure 3 | Weekday Inbound Ridership by Stop Map



- 50 passengers board and 140 alight at the five stops between Dudley Station and Ruggles Station along Malcolm X Boulevard and Tremont Street. The 50 passengers who board are also served by six other routes that operate along this segment.
- 440 passengers, or 24% of all passengers, alight at Ruggles Station.

Overall, Route 44 provides unique service to those traveling to and from Humboldt Avenue, and up to 61% of weekday riders use the route for this purpose. The other 39% are also served by other routes.

Outbound patterns are essentially the reverse of inbound patterns. One exception, however, is that outbound service after 8:00 PM operates between Dudley Station and the western end of Malcolm X Boulevard via Dudley Street. Total ridership on the 10 trips that serve Dudley Street is one boarding and three alightings.

Weekend patterns are also similar but with lower passenger volumes.

### **Ridership by Trip**

As described above, Route 44 is designed primarily to provide service to those who live along Humboldt Avenue. For those who live at the north end of Humboldt Avenue, the fastest way to downtown and other employment areas is inbound in the AM peak to Dudley Station or Ruggles Station and the reverse in the PM. For those who live along the southern end of the route, it is faster to travel outbound in the AM to Jackson Square Station and the reverse in the PM.

On weekdays, ridership per trip patterns generally reflect this, with high ridership in both peaks in both directions (see Figure 4 and Figure 5). One anomaly, however, is that outbound ridership in the morning is high (40 to 55 passengers) for only a short span of between 6:30 AM and 7:30 AM. Inbound ridership, on the other hand, is high (at or near 40 passengers) from about 6:00 AM until after 9:00 AM. Midday ridership averages 30-plus passengers per trip inbound and 20 to 25 passengers outbound until about 1:00 PM. It then increases to over 40 passengers per trip in each direction until the end of the PM peak. After that time, ridership per trip steadily declines to five or fewer passengers on the last trips. Maximum loads on all trips are much lower than the maximum load standards, and even during peak periods, most trips run with empty seats.

On Saturdays, ridership is relatively consistent at 20 to 30 passengers per trip between 8:00 AM and 7:00 PM (see Figure 6 and Figure 7). Ridership before and after those times is lower.

On Sundays, inbound ridership is relatively consistent at around 20 passengers per trip between 6:30 AM and 7:00 PM (see Figure 8). The first trip at 5:35 AM also carries 20 passengers. Outbound ridership is much more concentrated in the middle of the day and with lower ridership earlier and later (see Figure 9).

Figure 4 | Weekday Ridership by Trip: Inbound

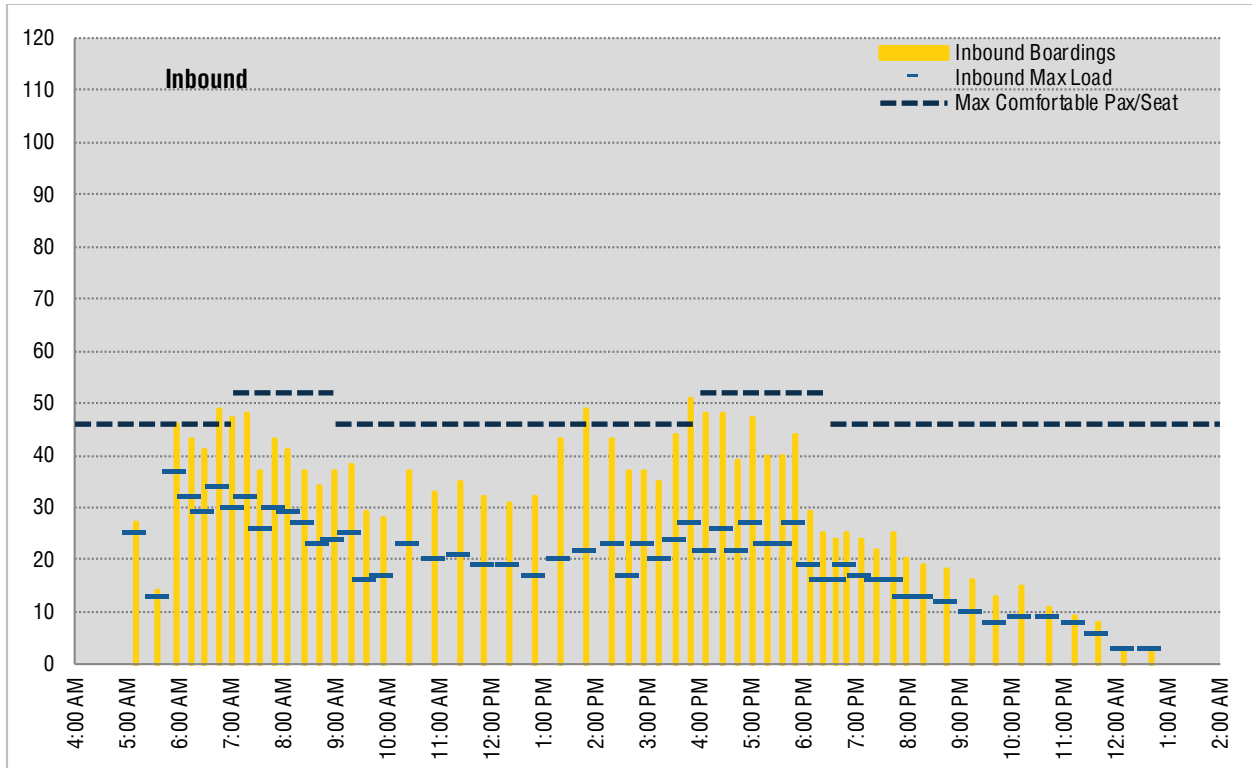


Figure 5 | Weekday Ridership by Trip: Outbound

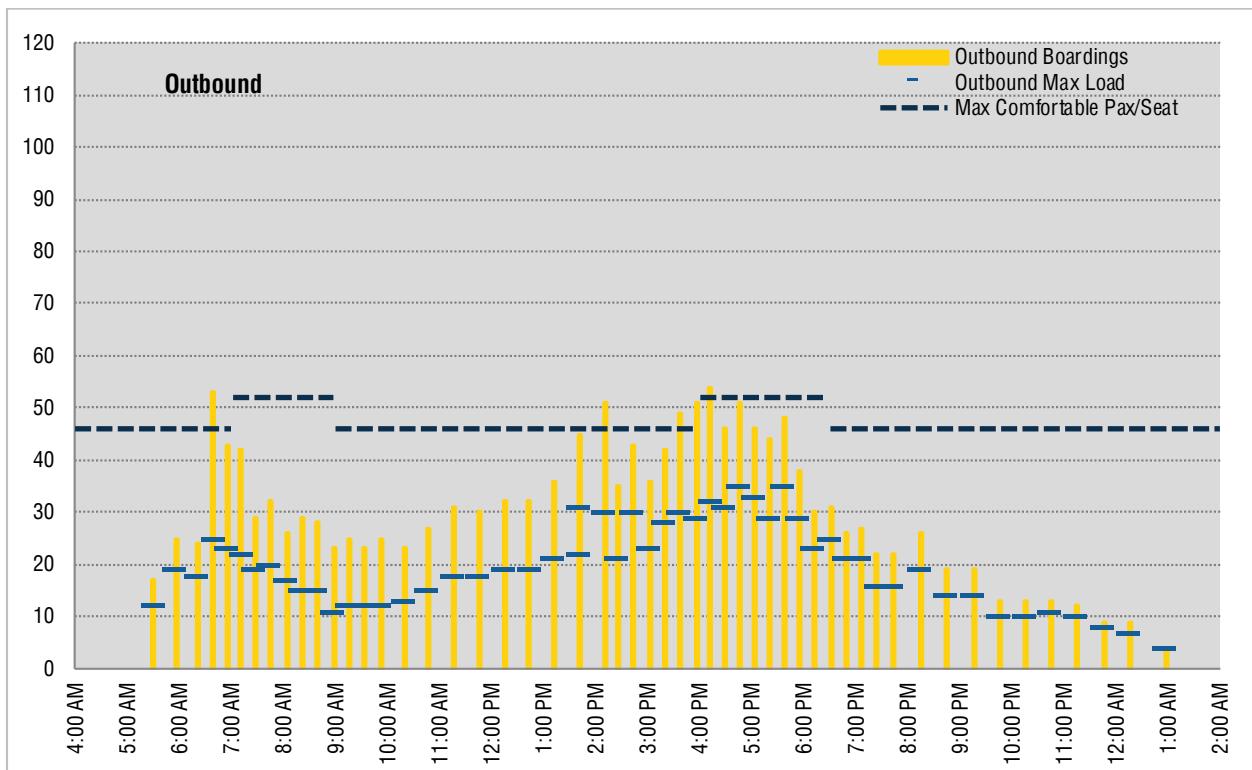


Figure 6 | Saturday Ridership by Trip: Inbound

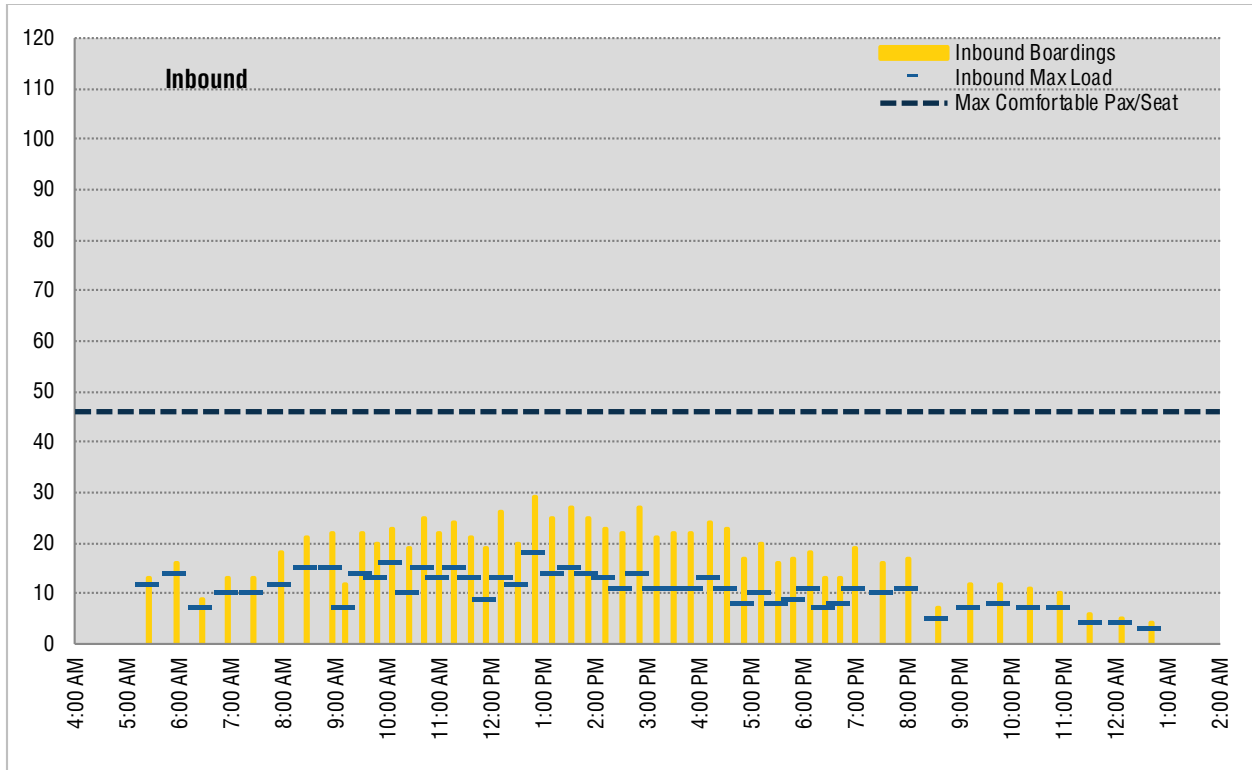


Figure 7 | Saturday Ridership by Trip: Outbound

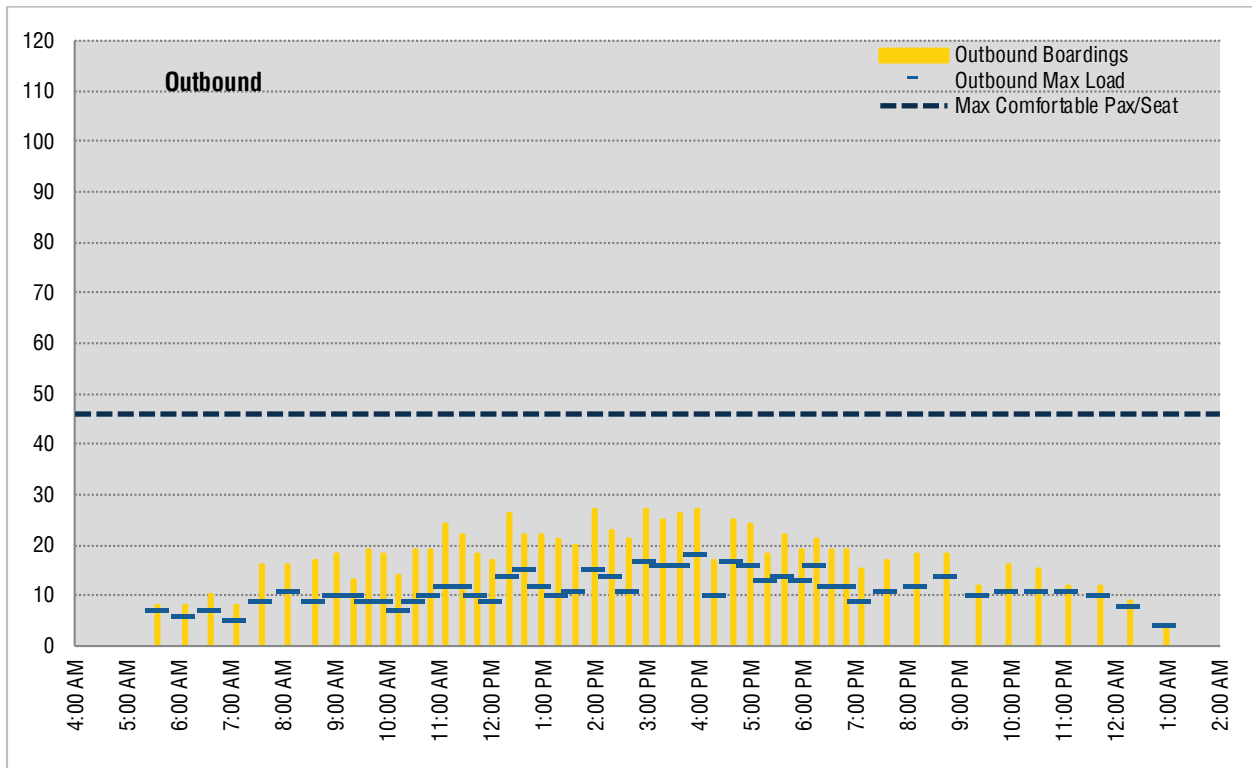




Figure 8 | Sunday Ridership by Trip: Inbound

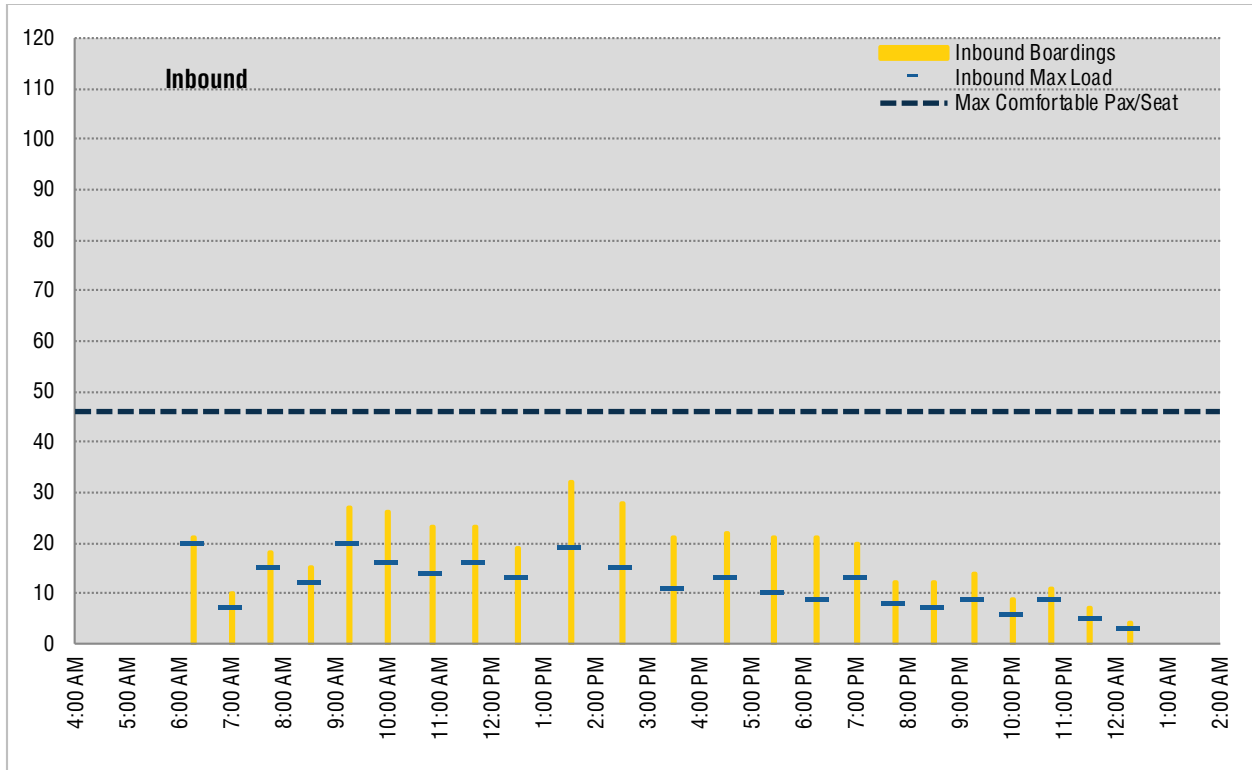
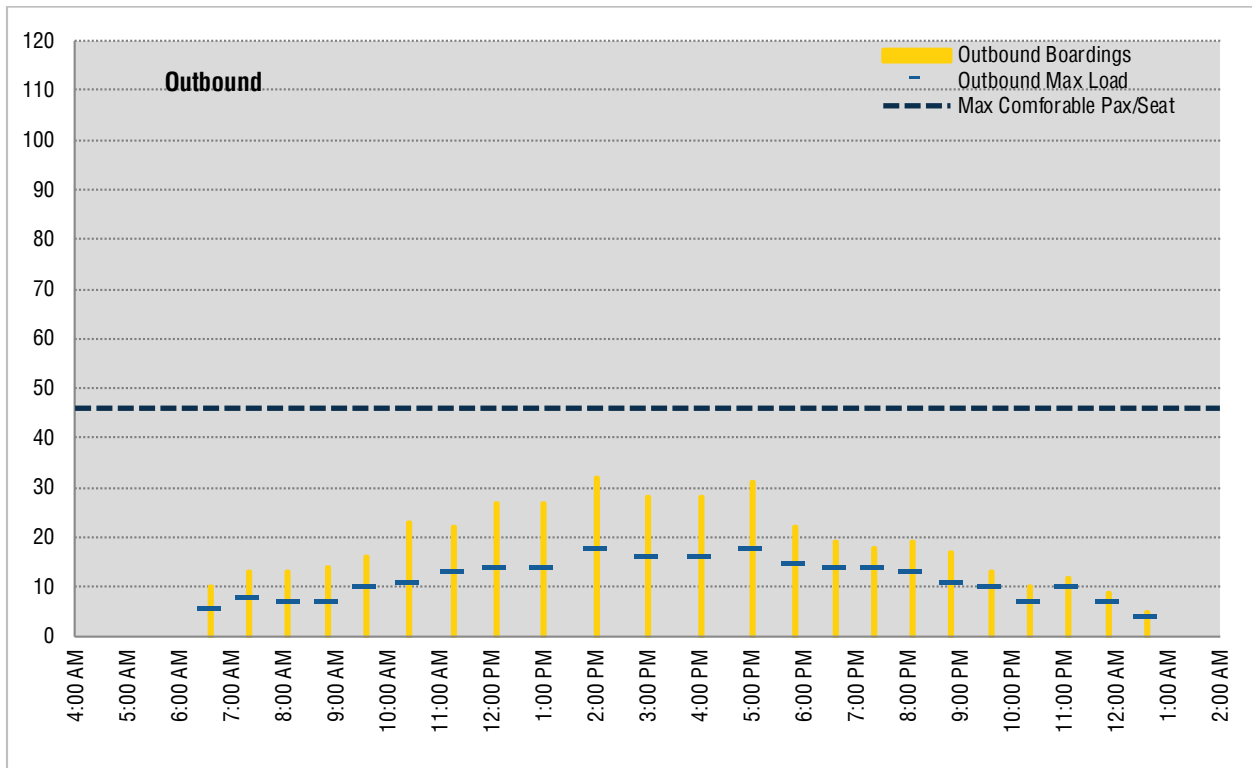


Figure 9 | Sunday Ridership by Trip: Outbound



## 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 44, 99% of passenger minutes are in comfortable conditions, which is very high and above 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>	99.0%	100.0%	100.0%

## Reliability and Speed

### Reliability

Route 44's overall reliability is 67% on weekdays, 60% on Saturdays, and 67% on Sundays (see Table 4). On all days, this is below the minimum standard of 70%. An average of 1.4% of trips were not run in the Fall of 2017.

Table 4 | Reliability

SERVICE DAY	ORIGIN/MID-ROUTE ON-TIME PERFORMANCE	DESTINATION ON-TIME PERFORMANCE	OVERALL RELIABILITY	DROPPED TRIPS
<b>Monday-Friday</b>	65%	80%	67%	1.4%
<b>Saturday</b>	59%	64%	60%	-
<b>Sunday</b>	67%	70%	67%	-

### Running Times

Inbound trips perform on time between 5:30 AM and 6:00 AM and between 6:30 AM and 7:30 AM (see Figure 10). For the rest of the day, trips operate between five minutes shorter and four minutes longer than scheduled. Most trips after 5:00 PM run two to four minutes early. Outbound trips, on the other hand, have consistently longer running times throughout the day, with most trips running three to eight minutes longer than scheduled (see Figure 11). Since the completion of this document, the MBTA has adjusted schedules to better reflect actual running times.

Figure 10 | Scheduled & Median Travel Time by Trip: Route 44 Inbound

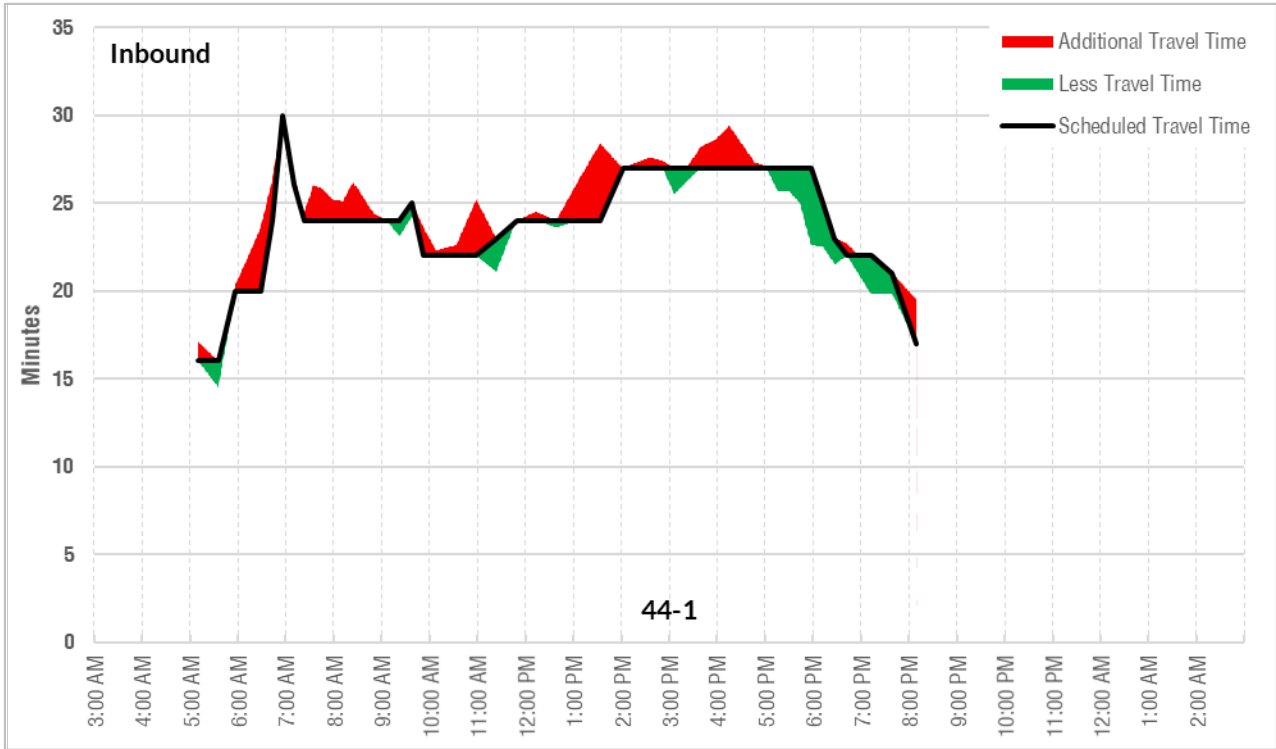
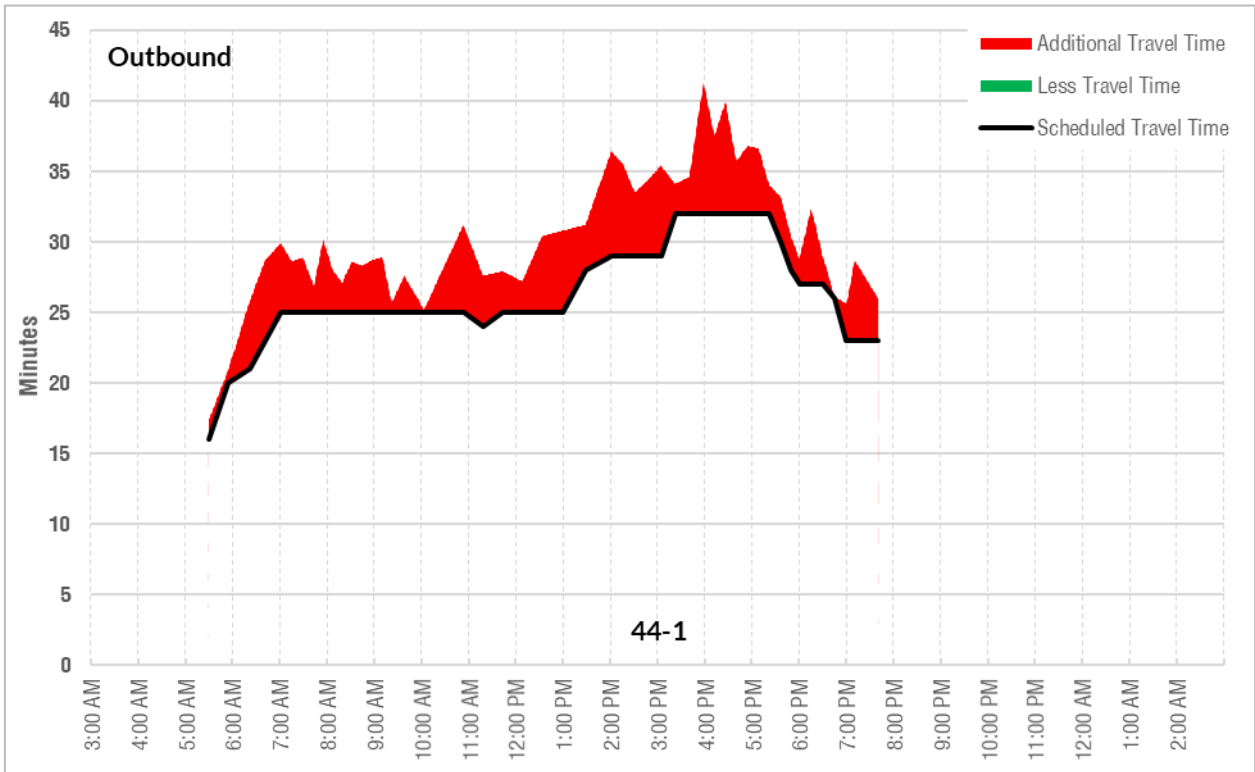


Figure 11 | Scheduled & Median Travel Time by Trip: Route 44 Outbound



## Stop Spacing

Route 44 has an average of nearly eight stops per mile, which is higher than the MBTA's guideline of four to seven stops per mile. Stop consolidation to reduce the number of stops could make service faster while still providing convenient access.

## Summary

Route 44 provides circuitous service that is designed to connect the southern end of Humboldt Avenue with the Orange Line at Jackson Square Station and the northern half of Humboldt Avenue with the Silver Line at Dudley Station and the Orange Line at Ruggles Station. In spite of its circuitous alignment, it does a good job at providing these connections.

However, the route does have some weaknesses. First, on-time performance is poor. Second, as evidenced by light loads, more service is provided than needed to meet demand. Third, evening outbound service via Elliot Square is used by only a handful of passengers.