

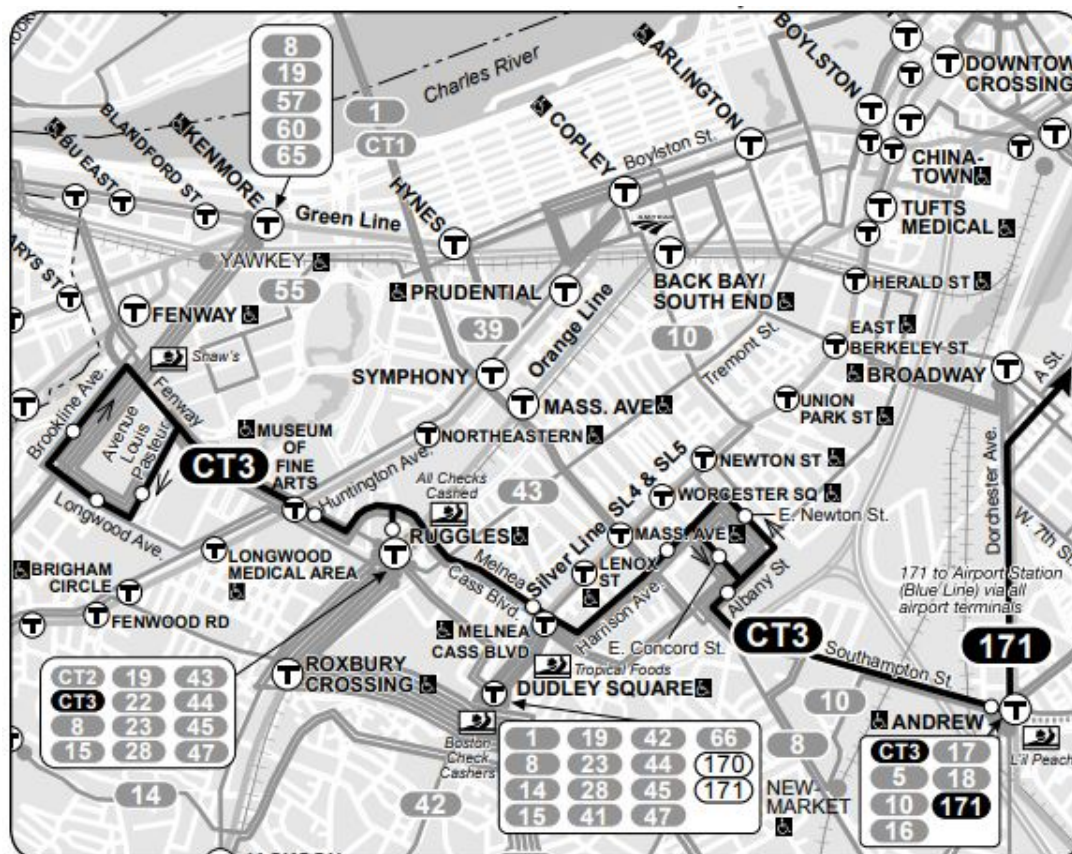
Route 171

Dudley Square – Logan Airport

Route Overview

Route 171 Dudley Square – Logan Airport is a supplemental route that provides early morning service from Dudley Square to Logan Airport via Andrew Station on weekdays, Saturdays, and Sundays. This route is fed at Dudley Square by the high-ridership routes of Route 28 Mattapan – Ruggles and Route 15 Fields Corner - Ruggles.

Figure 1 | Service Map

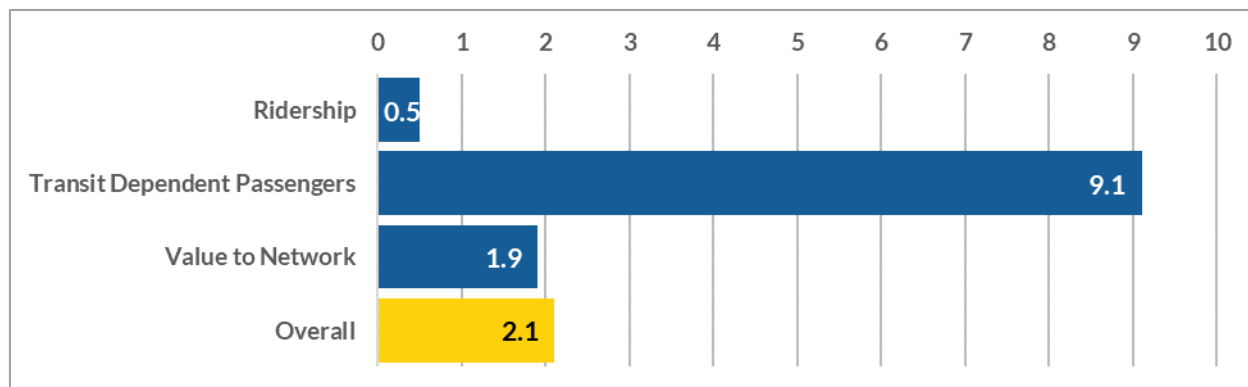


Network Importance

Route 171 is of comparatively low importance within the MBTA bus network (see Figure 2). On a relative scale of 0 to 10, Route 171 rates 0.5 in terms of ridership, 9.1 in terms of transit dependent ridership, and 1.9 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% weighting to overall ridership and a 15% weight to both other measures, is 2.1.

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



Service Patterns

Schedule

Route 171 operates two trips on each day of service solely in the outbound direction – from Dudley Square to Logan Airport. These trips leave Dudley Square at 3:50 AM and 4:20 AM (see Table 1). As a supplemental route, Route 171 is not subject to any Span of Service or Frequency Standards within the MBTA’s 2017 Service Delivery Policy.

Table 1 | Schedule Statistics

SERVICE DAY	SPAN OF SERVICE	FREQUENCY (RANGE)	FREQUENCY (AVERAGE)	DAILY TRIPS (INBOUND/OUTBOUND)
Monday-Friday	3:50 AM to 5:00 AM			0/2
Sunrise	3:50 AM to 5:00 AM	2 trips	-	0/2
Early AM	-	-	-	-
AM Peak	-	-	-	-
Midday Base	-	-	-	-
Midday School	-	-	-	-
PM Peak	-	-	-	-
Evening	-	-	-	-
Late Evening	-	-	-	-
Night	-	-	-	-
Saturday	3:50 AM to 5:00 AM	2 trips	-	0/2
Sunday	3:50 AM to 5:00 AM	2 trips	-	0/2

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

Service Patterns

Route 171 has a single service pattern (see Table 2). Departing from Dudley Square, Route 171 travels down Washington Street to Harrison Avenue where it serves Boston University School of Medicine before accessing Massachusetts Avenue. From there the bus connects to Southamptton Street and serves Andrew Station, travels north along Dorchester Avenue, through Fort Point and the Seaport District, and connects to Logan Airport by way of the Ted Williams Tunnel.

Table 2 | Service Patterns

PATTERN	ORIGIN	DESTINATION	UNIQUE FEATURE	TRIPS PER WKD	TRIPS PER SAT	TRIPS PER SUN
INBOUND				-	-	-
-	-	-	-	-	-	-
OUTBOUND				2	2	2
171.0	Dudley Square	Logan Airport	Via Andrew Station	2	2	2

Ridership

Route 171 serves 36 riders per weekday, 22 riders per Saturday, and 23 riders per Sunday.

Ridership by Stop

Ridership activity along Route 171 is highest at either terminus and at Andrew Station (see Figure 3). On weekdays:

- About 30 passengers board at Dudley Station.
- Zero boardings or alightings at the three stops after Dudley Station.
- Zero boardings and five alightings at the two BU Medical Center stops.
- Zero boardings and two alightings each at the two stops after BU Medical Center.
- Zero boardings and two alightings at Southamptton Street at Newmarket Street.
- Six boardings and one alights at Andrew Station.
- Zero boarding and seven alightings (primarily at Terminal E) at Logan Airport.

Saturday and Sunday ridership patterns mirror those of weekdays, but at lesser volumes.

Ridership by Trip

On weekdays, Route 171's first AM outbound trip carries 15 passengers, and its second AM outbound trip carries 21 passengers (see Figure 4). On Saturday, the first trip carries 10 passengers while the second carries 14 passengers (see Figure 5). Sunday trips host 11 and 12 passengers, respectively (see Figure 6).

Figure 3 | Weekday Inbound Ridership by Stop Map



Figure 4 | Weekday Ridership by Trip: Outbound

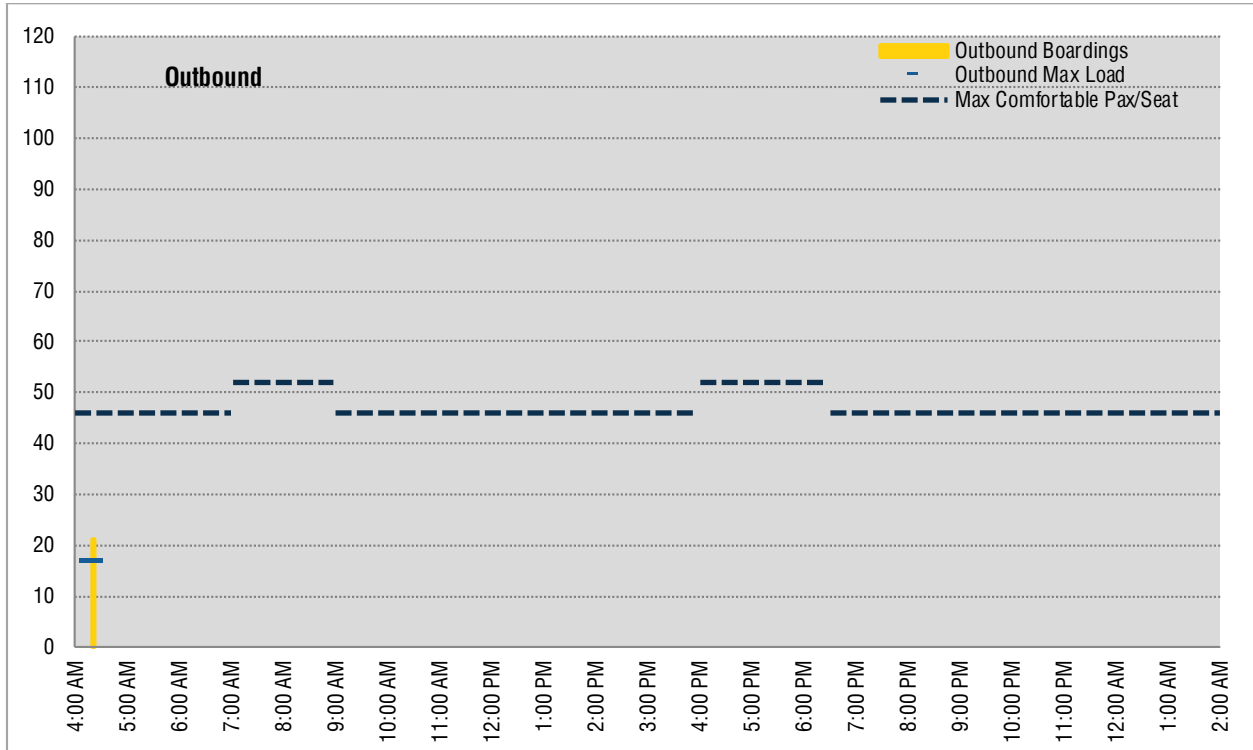


Figure 5 | Saturday Ridership by Trip: Outbound

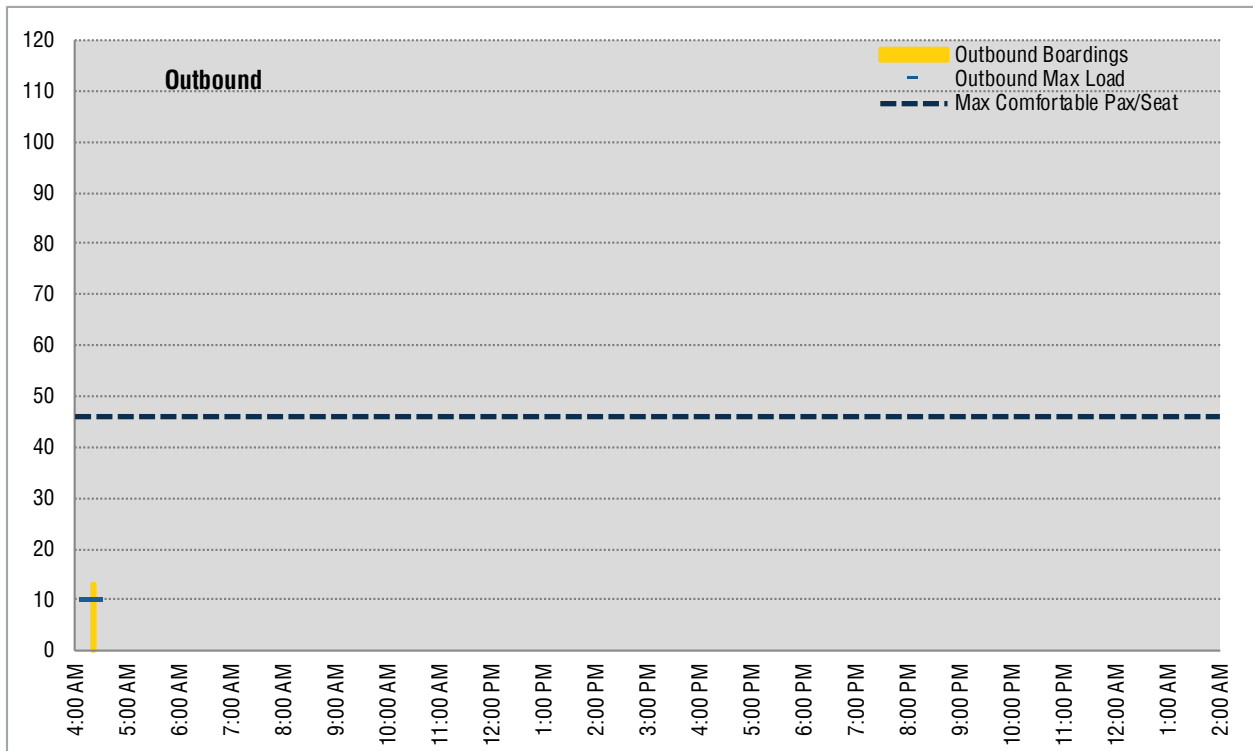
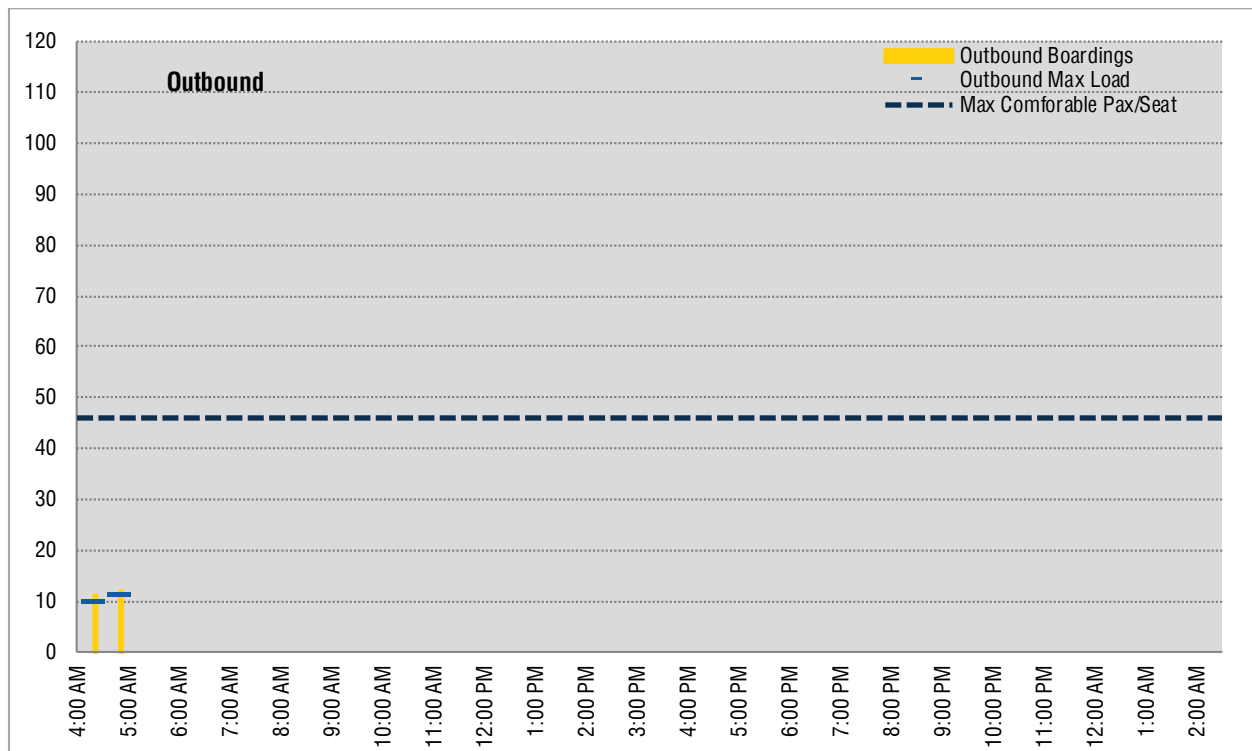


Figure 6 | Sunday Ridership by Trip: Outbound



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 171, 100% of passenger minutes are in comfortable conditions (see Table 3).

Table 3 | Passenger Time Spent Traveling in Comfortable Conditions

	WEEKDAYS	SATURDAYS	SUNDAYS
Minimum Standard	92%	92%	92%
Target	96%	96%	96%
Actual	100%	100%	100%

Reliability and Speed

Reliability

Reliability data for Route 171 is not available (see Table 4).

Stop Spacing

Route 171 stops range from one stop every 400 feet to one stop every 4.7 miles. Excluding the 4.7 mile segment between Andrew Station and Logan Airport along which no stops are made, Route 171 hosts an average stop spacing of 700 feet. This equates to roughly 7.5 stops per mile. Stops closer than 700 feet apart are concentrated around Dudley Station and the BU Medical Center, while Route 171's largest distances between stops occur around Andrew Station. This stop spacing is slightly higher than the MBTA's standard of four to seven stops per mile for routes serving urban areas, and it may contribute to slow service or on-time performance issues.

Summary

Route 171 provides early morning service from the transit hubs of Dudley Station and Andrew Station to Logan Airport. A high proportion of Route 171's riders are transit dependent, and likely use Route 171 to access their place of employment at Logan Airport.