

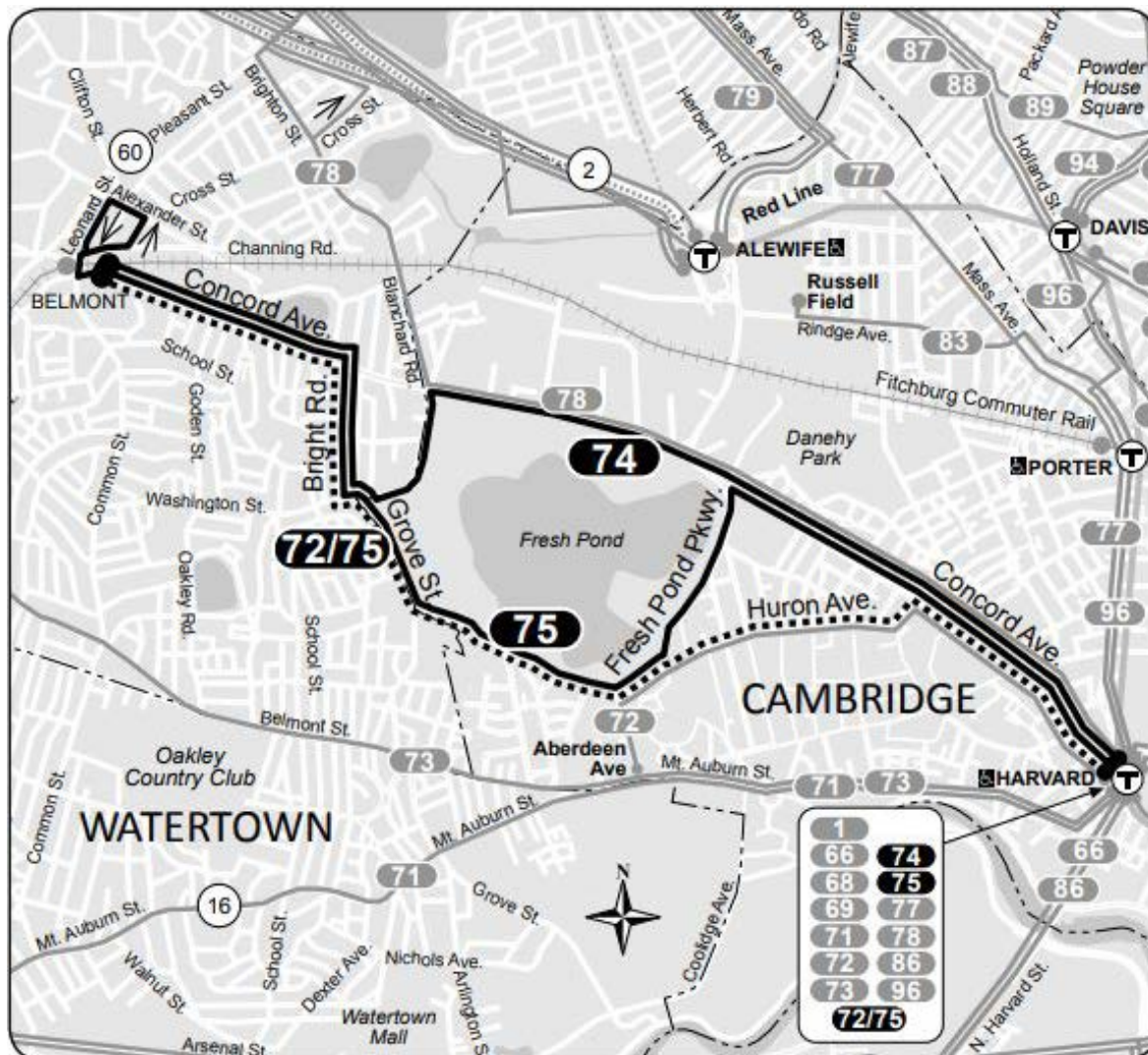
# Route 74

## Belmont Center – Harvard via Concord Avenue

### Route Overview

Route 74 Belmont Center – Harvard via Concord Avenue is a Local route that operates between Belmont Center and Harvard Station. It operates almost entirely along Concord Avenue with a deviation along the west side of Fresh Pond via Bright Road and Blanchard Road. This route is similar to Route 75 Belmont Center-Harvard Station, which travels between Belmont Center and Harvard Station along the southern edge of Fresh Pond (see Figure 1).

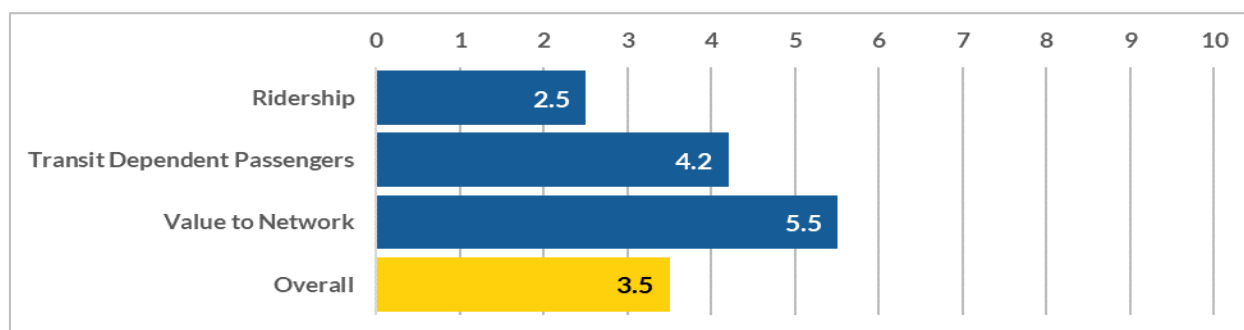
Figure 1 | Route 74 Service Map



## Network Importance

Route 74 is a somewhat important route within the overall system (see Figure 2). On a scale of 0 to 10, the route rates 2.5 in terms of ridership, 4.2 in terms of transit dependent ridership, and 5.5 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 destination, 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 3.5.

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



## Service Overview

### Schedule

Route 74 operates Monday through Saturday. It does not operate on Sundays, but service along the inner and outer ends of Route 74’s alignment is provided by a hybrid of Route 72 Huron Avenue-Harvard Station and 75 Belmont Center-Harvard Station that is called “Route 72/75”, and by Route 78 Arlmont Village-Harvard Station (see Figure 1).

On weekdays, Route 74 operates from 5:20 AM to 1:10 AM, with infrequent service throughout the day – headways range from 25 to 90 minutes (see Table 1). Most but not all trips alternate with Route 75 trips and thus average headways along Concord Avenue are half of those. However, due to the different alignments around Fresh Pond, intervals between buses along much of the route are irregular. In total, much of Route 74’s alignment is served by at least two routes, and some of it is served by three. However, the service choices that riders must make are complex, and overall headways are very irregular.

On Saturdays, Route 74 operates from 5:45 AM to 6:50 PM, and operates every 35 to 70 minutes. Routes 72 and 75 also operate on Saturdays, and so passengers are presented with similarly complex service options as on weekdays.

**Table 1 | Schedule Statistics**

SERVICE DAY	SPAN OF SERVICE	FREQUENCY (RANGE)	FREQUENCY (AVERAGE)	DAILY TRIPS (INBOUND/OUTBOUND)
<b>Monday-Friday</b>	<b>5:20 AM to 1:10 AM</b>			<b>23/24</b>
Sunrise	5:20 AM to 5:59 AM	25 - 40	30	2/1
Early AM	6:00 AM to 6:59 AM	25 - 65	50	1/2
AM Peak	7:00 AM to 8:59 AM	20 - 75	40	3/3
Midday Base	9:00 AM to 1:29 PM	30 - 75	70	4/4
Midday School	1:30 PM to 3:59 PM	65 - 70	70	2/2
PM Peak	4:00 PM to 6:29 PM	25 - 70	45	2/4
Evening	6:30 PM to 9:59 PM	25 - 90	60	4/4
Late Evening	10:00 PM to 11:59 PM	40 - 90	40	3/2
Night	12:00 AM to 1:10 AM	40	40	2/2
<b>Saturday</b>	<b>5:45 AM to 6:50 PM</b>	<b>35 - 75</b>	<b>55</b>	<b>14/13</b>
<b>Sunday</b>	-	-	-	-

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

Route 74 does not operate on Sundays. However, all of its alignment is served by either Route 72/75 or Route 78. Route 72 operates every 40 minutes for most of the day on Sundays and Route 78 operates hourly.

Route 74 meets the span of service standards for Local bus routes for weekdays and Saturdays. However, it fails to meet many frequency standards:

- Weekday service frequencies fall short during all periods. Peak service operates every 27 to 65 minutes, compared to the standard of 30 minutes.
- Weekday off peak service operates every 25 to 90 minutes compared to the standard of every 60 minutes.
- Saturday service operates every 35 to 75 minutes compared to the standard of every 60 minutes. (However, Saturday frequencies average every 55 minutes.)

### Service Patterns

All Route 74 trips operate consistently along the same alignment (see Table 2).

**Table 2 | Service Patterns**

PATTERN	ORIGIN	DESTINATION	UNIQUE FEATURE	TRIPS PER WKD	TRIPS PER SAT	TRIPS PER SUN
<b>INBOUND</b>				<b>23</b>	<b>14</b>	<b>-</b>
74.0	Alexander Avenue at Leonard Street	Eliot Street at Bennett Street	Via Concord Avenue	23	14	-
<b>OUTBOUND</b>				<b>24</b>	<b>13</b>	<b>-</b>
74.0	Harvard Station	Alexander Avenue at Leonard Street	Via Concord Avenue	24	13	-

## Ridership

Route 74 carries 800 riders on weekdays and 330 riders on Saturdays. The low ridership numbers reflect duplication with Routes 72, 75, and 78 more so than low demand. For example, on weekdays, Route 72 carries 970 riders per weekday and Route 75 carries 500. In total, Routes 74, 72, and 75 carry 2,300 weekday riders between Belmont Center and Harvard Station in the Concord Avenue and Huron Avenue corridors. Route 78 carries another 840 riders who both board and alight along Concord Avenue.

### Ridership by Stop

The large majority of all Route 74 passengers travel to and from Harvard Station. On weekday inbound trips (see Figure 3):

- Belmont Center, which is the first stop, has the second highest number of boardings with about 50.
- Stops between Belmont Center and Bright Avenue at Blanchard Street, which is where Route 74 splits off from Route 75, serve 140 boardings and five alightings.
- There are no boardings or alightings along Blanchard Road, which is the only area uniquely served by Route 74.
- Stops on Concord Avenue between Blanchard Road and Fresh Pond Parkway, which is where Route 74 and Route 75 rejoin, have 85 boardings and 10 alightings.
- Stops between Fresh Pond Parkway and Harvard Station have 105 boardings and 55 alightings.
- 290 passengers, or 74% of all riders, alight at Harvard Station.

### Ridership by Trip

Weekday ridership by trip is highest in the inbound direction between 7:30 AM and 8:30 AM, with maximum loads of 40 to 45 riders, and around 5:30 PM in the outbound direction with maximum loads of about 30 riders (see Figure 4 and Figure 5).

- Inbound ridership has two peaks – one in the AM Peak with up to 50 passengers per trip and a second lower peak between 2:00 PM and 5:00 PM with up to 29 passengers per trip.
- Ridership on early morning and other midday trips is below 20 passengers per trip.
- Ridership on evening trips (after 6:00 PM) averages fewer than 10 passengers.
- Outbound trips have a small AM peak, with up to 29 passengers, and a PM peak, with up to 33 passengers.
- Ridership after 12:00 AM in both directions averages fewer than five passengers per trip.

Figure 3 | Weekday Inbound Ridership by Stop Map

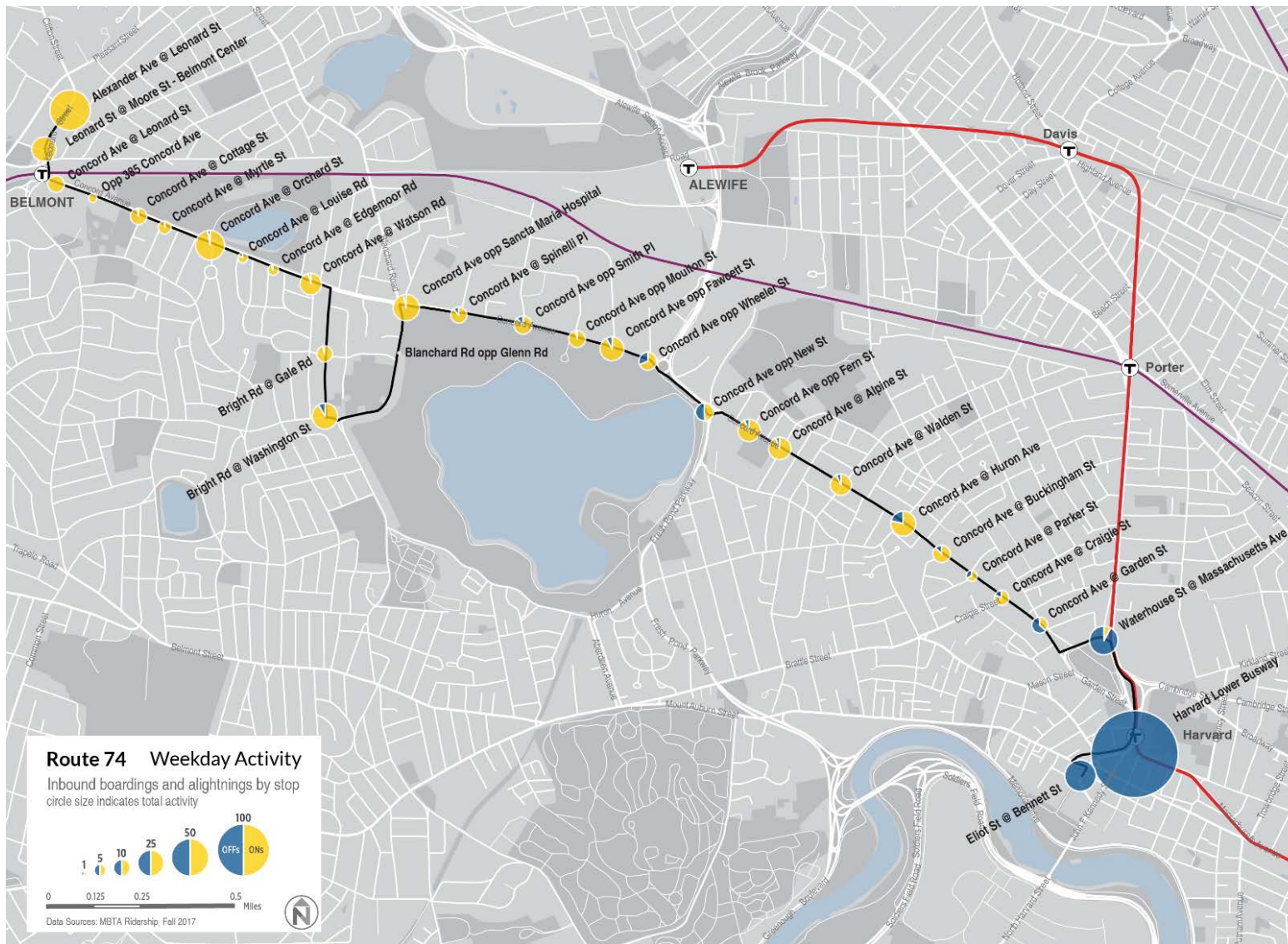


Figure 4 | Weekday Ridership by Trip: Inbound

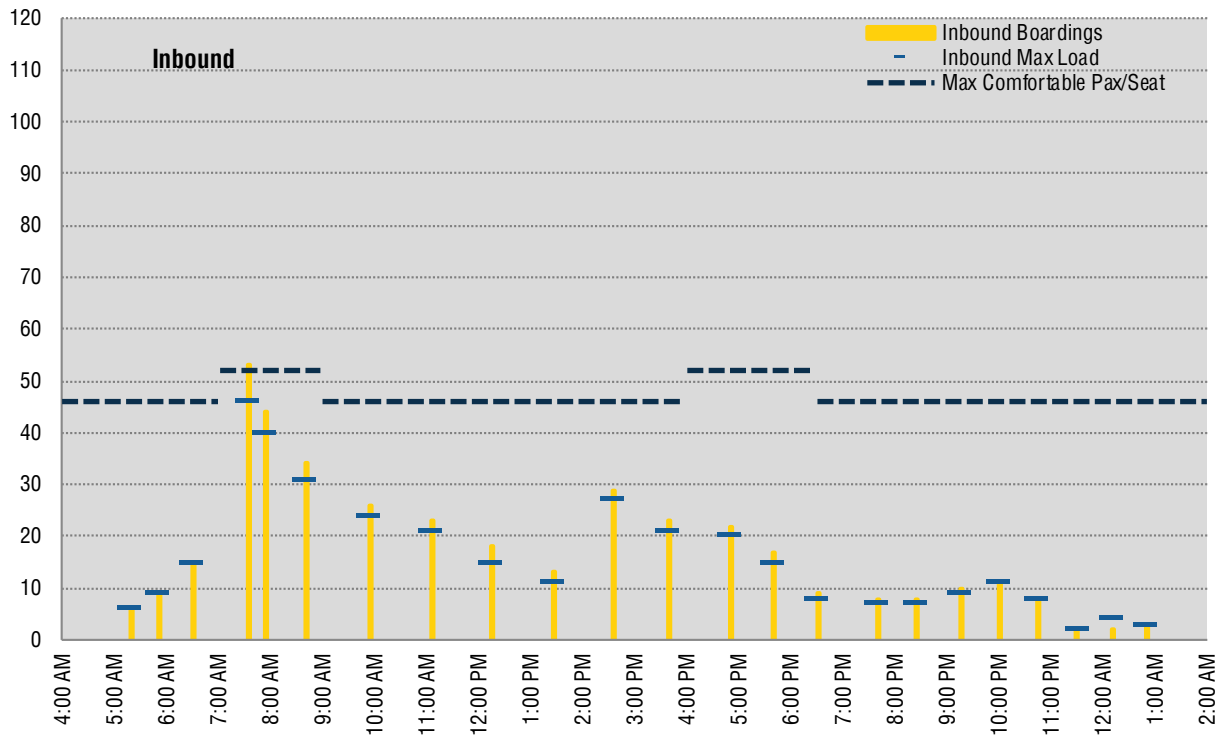


Figure 5 | Weekday Ridership by Trip: Outbound

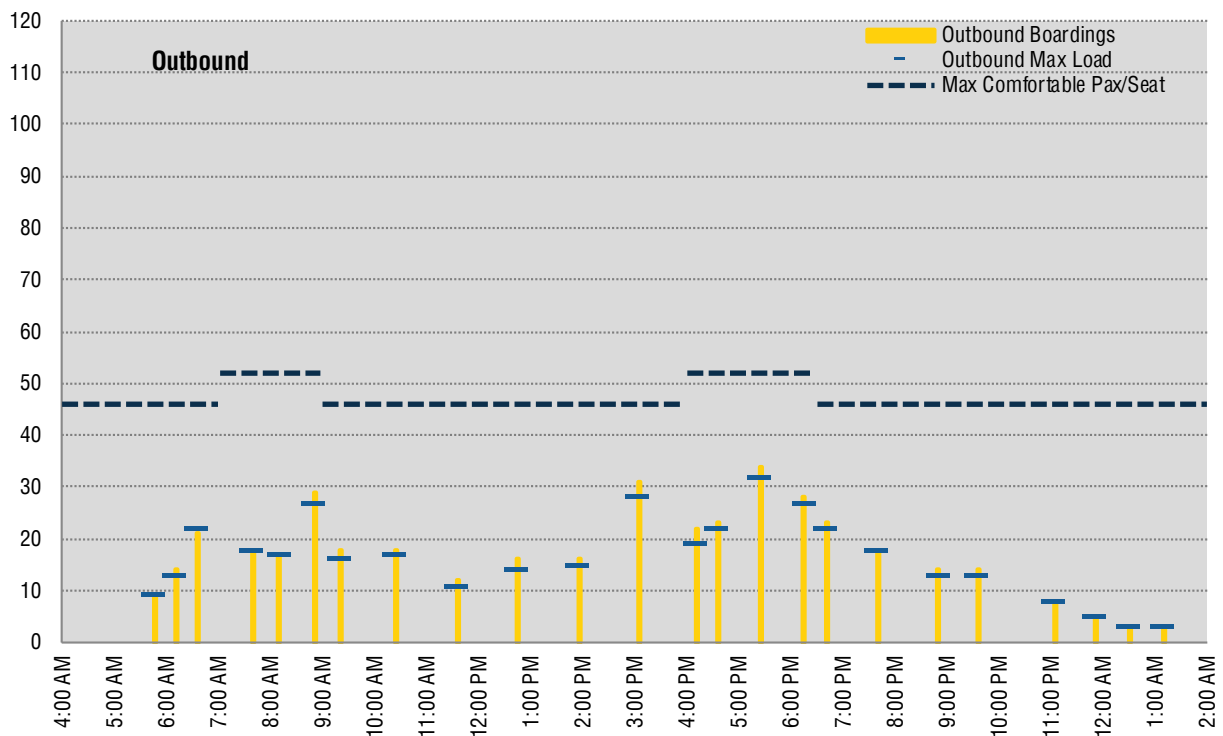


Figure 6 | Saturday Ridership by Trip: Inbound

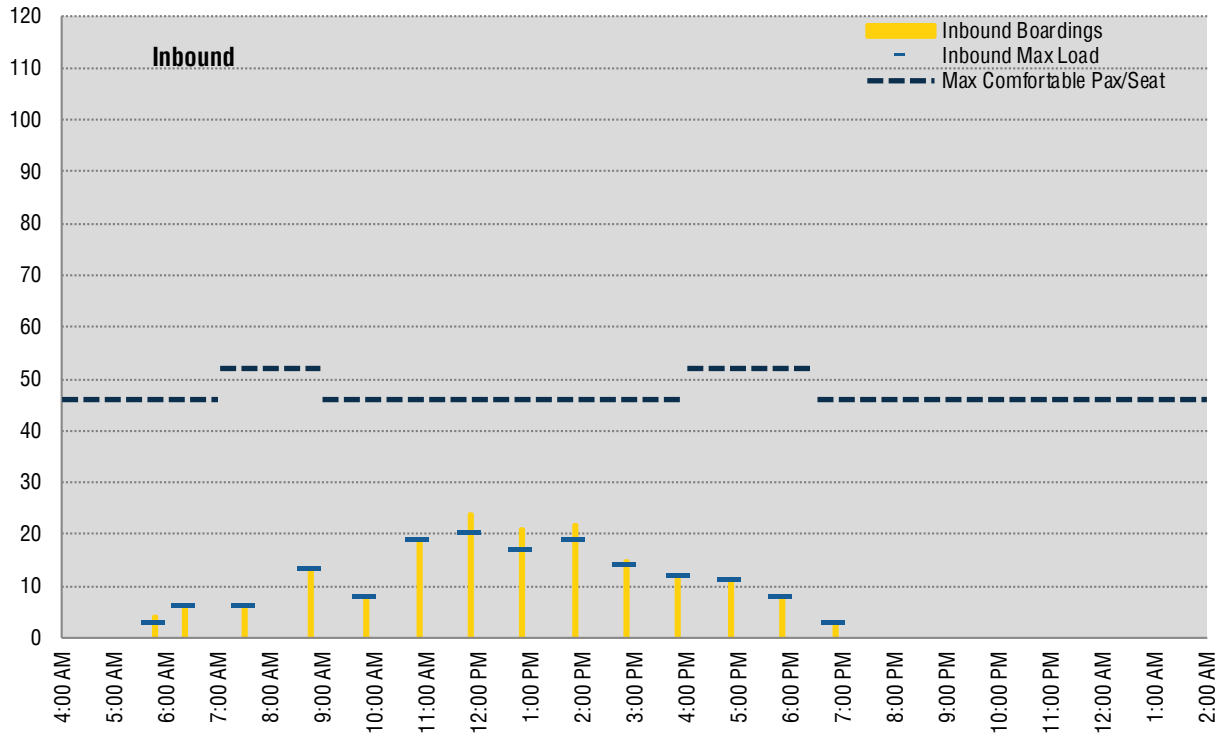
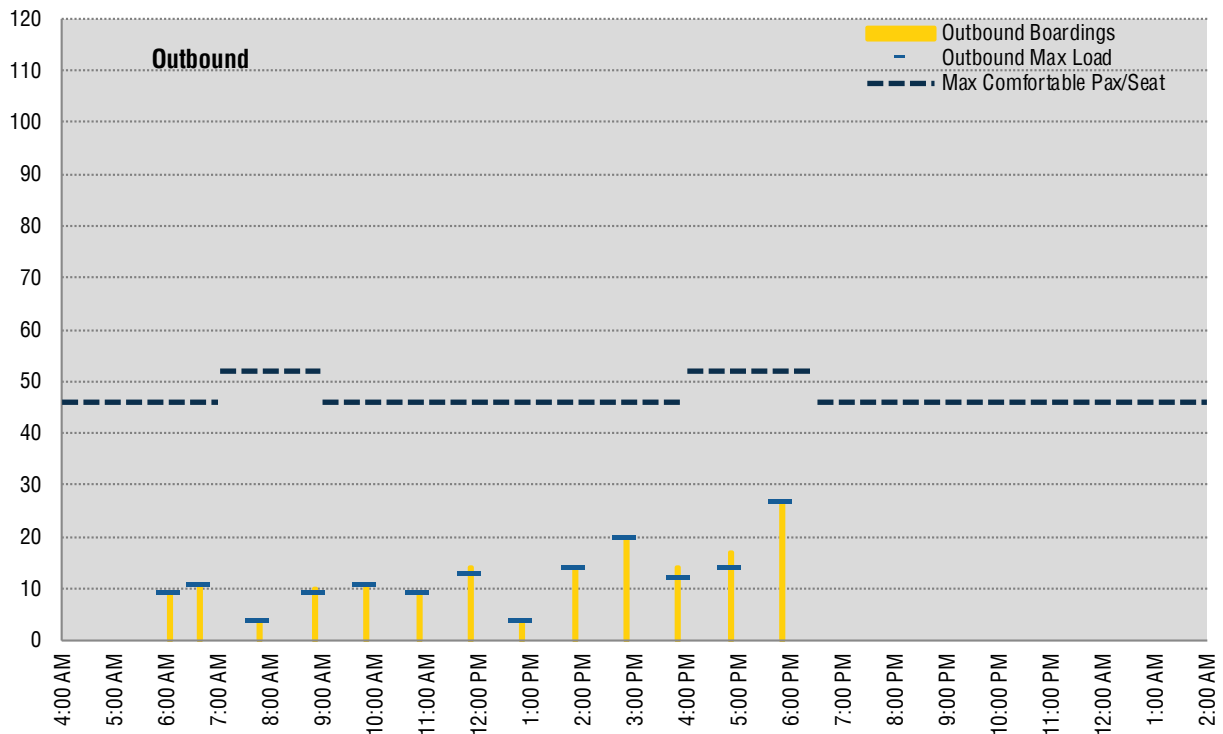


Figure 7 | Saturday Ridership by Trip: Outbound



Saturday ridership by trip ranges from two passengers before 6:00 AM to between 10 and 20 passengers during the midday (see Figure 6 and Figure 7). One exception is the last outbound trip at 6:50 PM, which carries 27 passengers and indicates demand for later service. (After 6:20 PM, service is provided by Route 72/75. See the Route 72 profile for information on that service.)

### 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 74, 97% of weekday passenger minutes are in comfortable conditions, which is 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>	97%	100%	-

## Reliability and Speed

### Reliability

Route 74's weekday overall reliability of 75% meets the MBTA's target of 75%, and Saturday's overall reliability of 84% exceeds it (see Table 4).

Table 4 | Reliability

SERVICE DAY	ORIGIN/MID-ROUTE ON-TIME PERFORMANCE	DESTINATION ON-TIME PERFORMANCE	OVERALL RELIABILITY	DROPPED TRIPS
<b>Monday-Friday</b>	74%	81%	75%	0.1%
<b>Saturday</b>	84%	88%	85%	-
<b>Sunday</b>	-	-	-	-



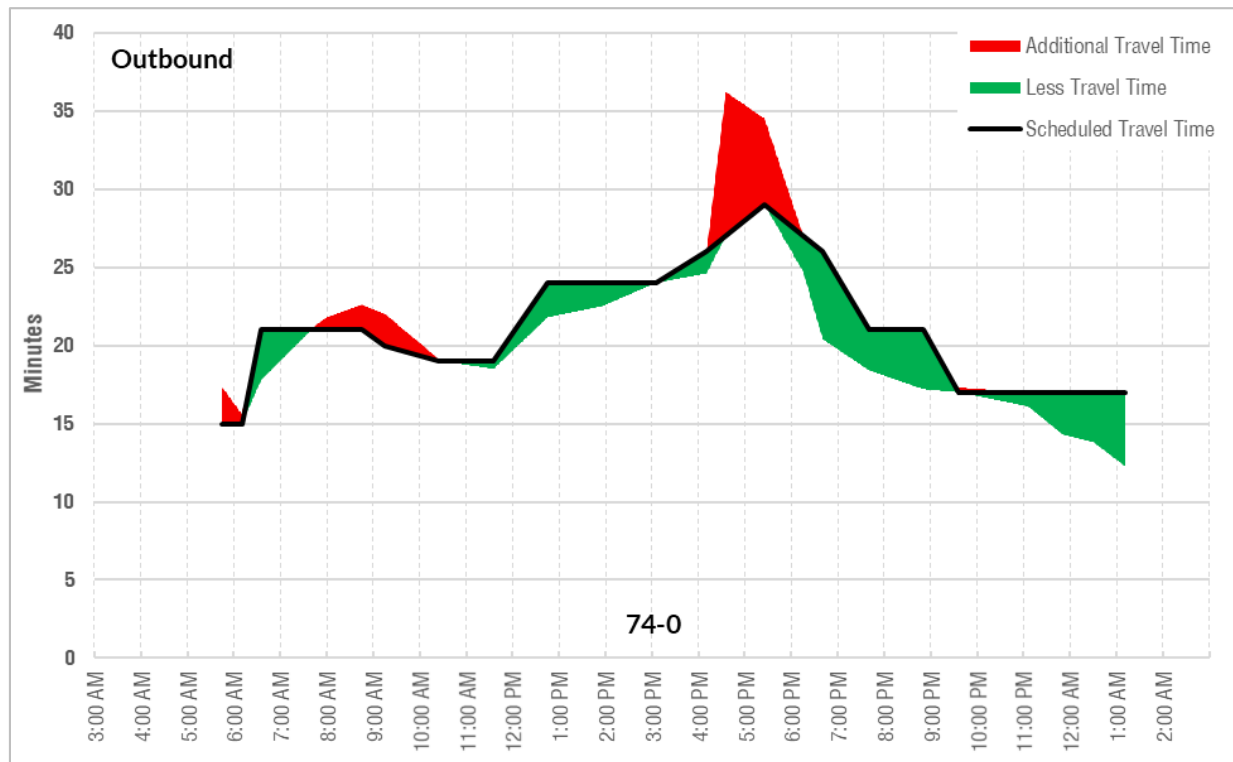
## Running Times

Actual inbound running times for most trips are longer than scheduled, with some differences as high as eight minutes (see Figure 8 and Figure 9). Running times are longer in the morning between 7:30 AM and 9:00 AM, and in the PM between 5:00 PM and 6:30 PM. Afternoon trips also have particularly long travel times. Outbound trips, on the other hand, generally run closer to scheduled times, except for the PM peak, when actual running times are as much as 10 minutes longer than scheduled.

Figure 8 | Scheduled & Median Travel Time by Trip: Route 74 Inbound



Figure 9 | Scheduled & Median Travel Time by Trip: Route 74 Outbound



### Stop Spacing

Although there are some exceptions, stop spacing on Route 74 is generally appropriate and consistent with the MBTA’s stop spacing guidelines.

### Summary

Route 74 is one of three routes that serve the Concord Avenue and Huron Avenue corridors between Belmont Center and Harvard Station in a complex and duplicative manner. Of these three, Route 74 has the second highest ridership and runs the most direct alignment between Belmont Center and Harvard Station. Route 74 is also relatively reliable.