

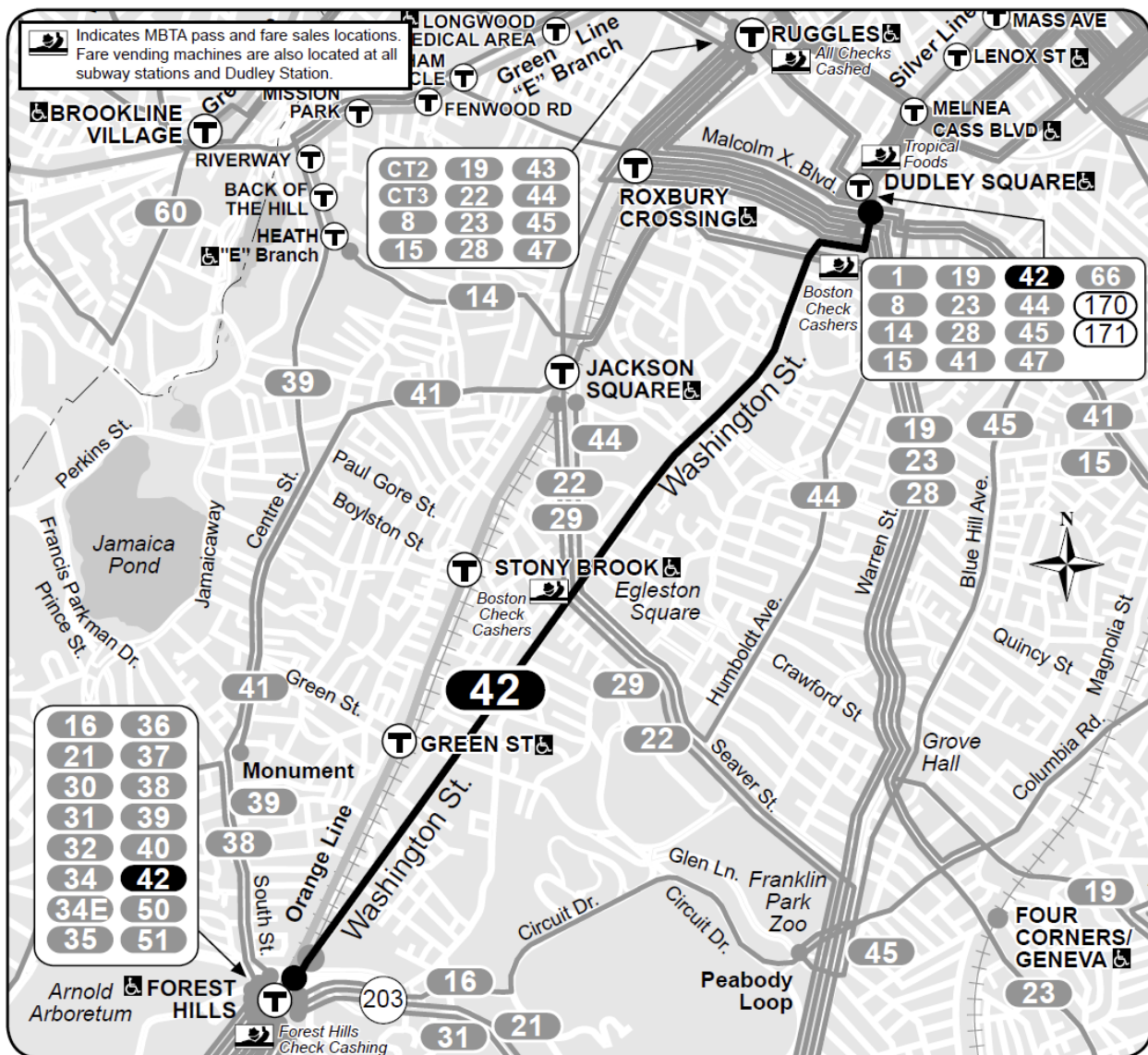
Route 42

Forest Hills Station – Dudley Station

Route Overview

Route 42 Forest Hills Station – Dudley Station is a Local route that operates between Forest Hills Station and Dudley Station via Washington Street (see Figure 1).

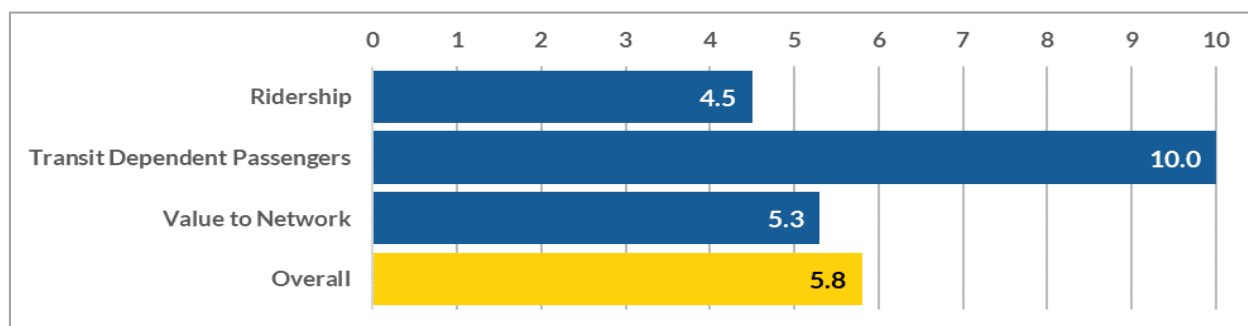
Figure 1 | Service Map



Network Importance

Route 42 is moderately important within the bus network (see Figure 2). On a relative scale of 0 to 10, the route rates 4.5 in terms of ridership, 10 in terms of transit dependent ridership, and 5.3 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 5.8.

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



Service Overview

Schedule

Route 42 provides frequent on weekdays from the beginning of service through the end of the AM peak and in the Midday School period, and infrequent service at other times and on weekends (see Table 1). On weekdays, service operates from 5:00 AM to 12:54 AM:

- Every 15 minutes during the Sunrise period.
- Every six to 15 minutes during the Early AM period.
- Every 12 to 20 minutes during the AM Peak period.
- Every 20 minutes during the Midday Base period.
- Every nine to 30 minutes during the Midday School period, but with average frequencies of 15 minutes.
- Every 30 minutes from the beginning of the PM Peak until the end of weekday service at 12:45 AM.

On Saturdays, service operates from 5:15 AM to 12:24 AM, every 20 minutes for most of the day and every 35 minutes through the evening. On Sundays, service operates from 6:00 AM to 12:28 AM, mostly every 50 minutes.

Route 42 meets the MBTA's span of service and frequency standards on all days and at all times.

Table 1 | Schedule Statistics

SERVICE DAY	SPAN OF SERVICE	FREQUENCY (RANGE)	FREQUENCY (AVERAGE)	DAILY TRIPS (INBOUND/OUTBOUND)
Monday-Friday	5:00 AM to 12:45 AM			59/59
Sunrise	5:00 AM to 5:59 AM	15	15	4/3
Early AM	6:00 AM to 6:59 AM	6 - 15	12	6/4
AM Peak	7:00 AM to 8:59 AM	12 - 20	14	9/10
Midday Base	9:00 AM to 1:29 PM	20 - 21	20	13/14
Midday School	1:30 PM to 3:59 PM	9 - 30	15	10/9
PM Peak	4:00 PM to 6:29 PM	30	30	5/6
Evening	6:30 PM to 9:59 PM	30 - 36	33	6/7
Late Evening	10:00 PM to 11:59 PM	30	30	4/4
Night	12:00 AM to 12:45 AM	30	30	2/2
Saturday	5:15 AM to 12:24 AM	18 - 35	22	52/52
Sunday	6:00 AM to 12:28 AM	45 - 50	49	23/23

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

Service Patterns

All Route 42 service operates consistently between Forest Hills Station and Dudley Station as shown in Figure 1.

Table 2 | Service Patterns

PATTERN	ORIGIN	DESTINATION	UNIQUE FEATURE	TRIPS PER WKD	TRIPS PER SAT	TRIPS PER SUN
INBOUND				59	52	23
42.1	Forest Hills Station	Dudley Station	Primary service pattern	59	52	23
OUTBOUND				59	52	23
42.1	Dudley Station	Forest Hills Station	Primary service pattern	59	52	23

Ridership

Route 42 carries 2,560 passengers on weekdays, 1,390 on Saturdays, and 840 on Sundays.

Ridership by Stop

Most passengers travel to and from Forest Hills Station and Dudley Station. On weekday inbound trips (see Figure 3):

- 650 passengers, or 51% of all inbound riders, board at Forest Hills Station.
- 120 passengers board and 120 alight at the five stops along Washington Street between Forest Hills Station and Glen Road.

- 195 passengers board and 205 alight at the four stops along Washington Street between Glen Road and West Walnut Park.
- 240 passengers board and 115 alight at the six stops along Washington Street between West Walnut Park and Dale Street.
- 45 passengers board and 65 alight at the three stops along Washington Street between Dale Street and Dudley Station.
- 740 passengers, or 59% all inbound riders, alight at Dudley Station.

Outbound patterns are similar, but in the reverse. Weekend patterns are also similar, but with lower volumes.

Ridership by Trip

Route 42's weekday ridership is moderate throughout most of the day. On inbound trips (see Figure 4):

- Before 6:00 AM, trips carry fewer than 20 passengers.
- Between 6:00 AM and 4:30 PM, most trips carry 20 to 30 passengers.
- Between 4:30 PM and close to 6:00 PM, ridership generally ranges from 30 to 40 passengers per trip.
- After 6:00 PM, it steadily declines to fewer than 10 riders per trip by 10:30 PM.

On outbound trips (see Figure 5):

- From the start of service to 2:00 PM, most trips carry 20 to 30 passengers, although a few carry over 30.
- Between 2:00 PM and 6:30 PM, most trips carry 30 to 40 passengers.
- After 6:30 PM, ridership per trip declines from 20 passengers per trip to fewer than 10 after 11:00 PM.

On Saturdays and Sundays, ridership per trip is lower, with most trips carrying between 10 and 20 passengers (see Figure 6 through Figure 9).

Figure 3 | Weekday Inbound Ridership by Stop Map

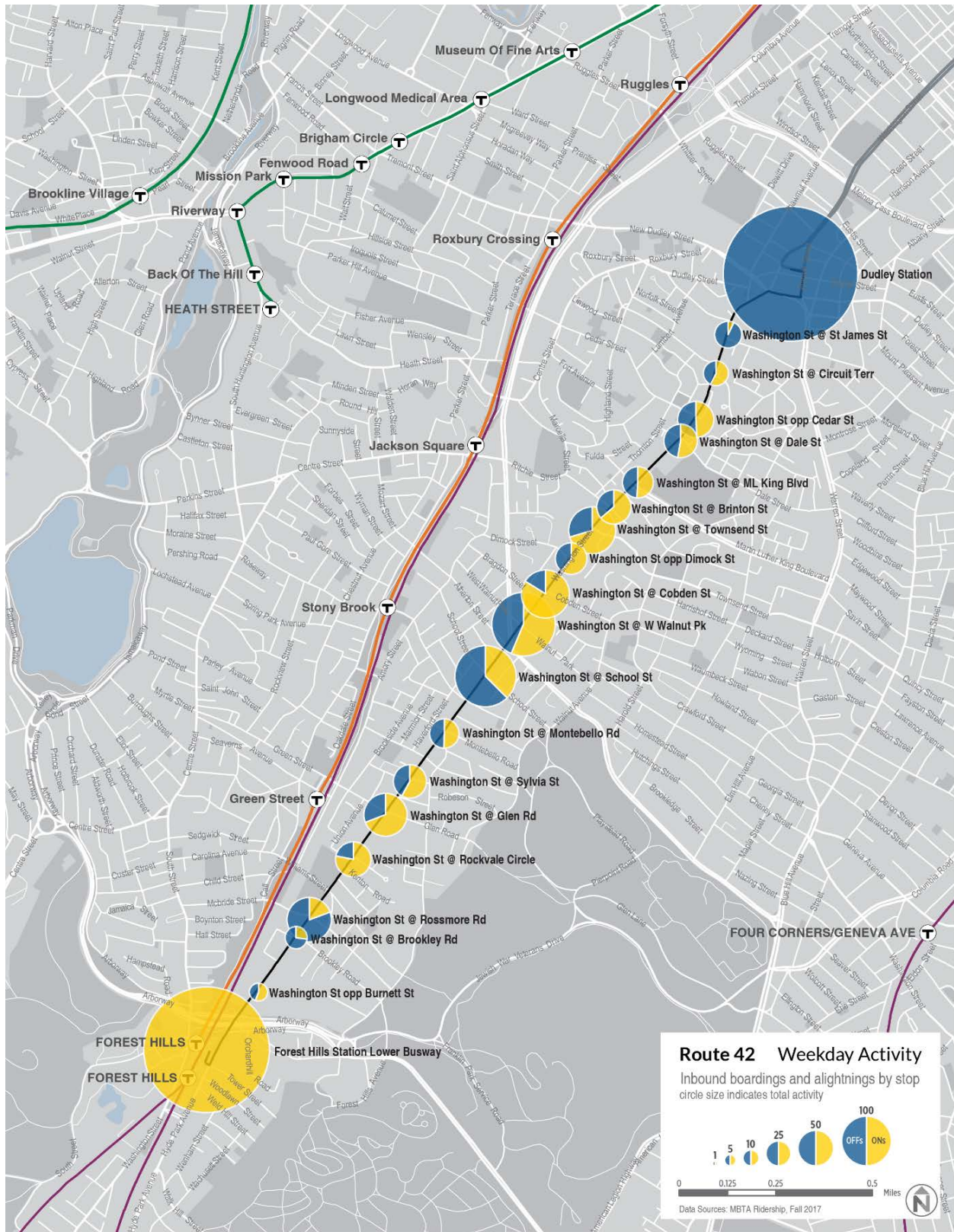


Figure 4 | Weekday Ridership by Trip: Inbound

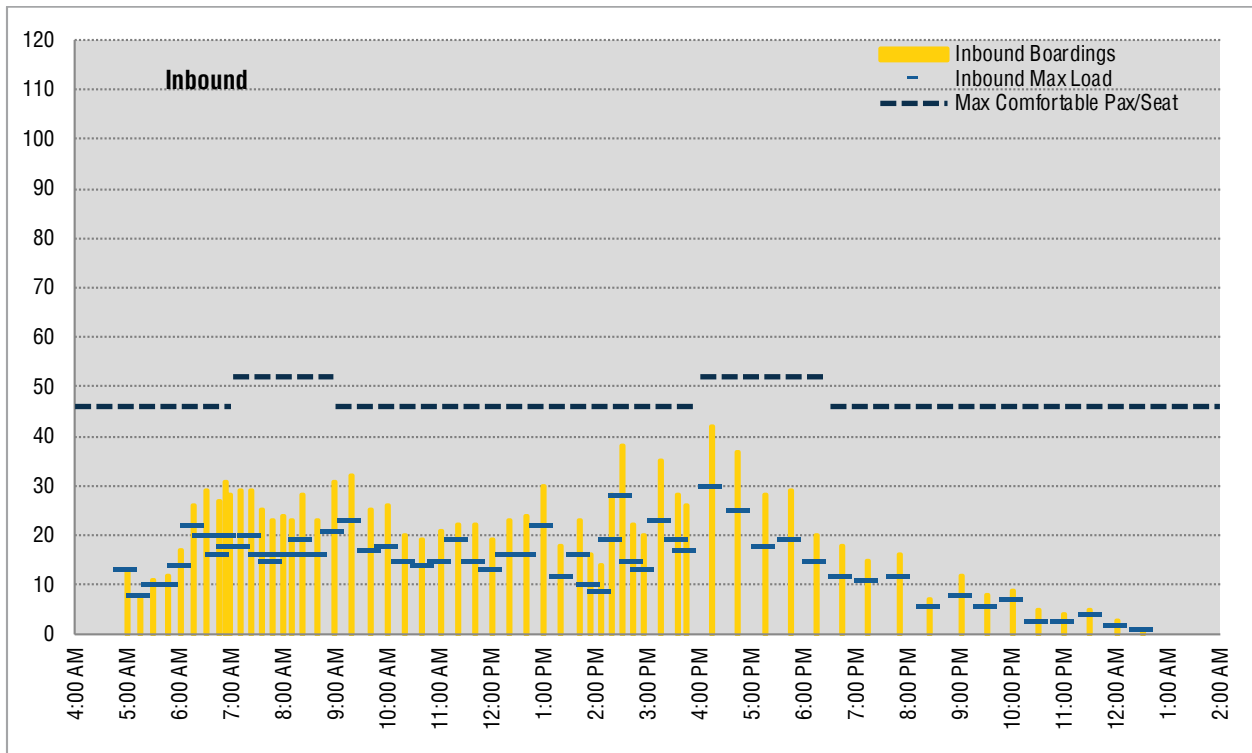


Figure 5 | Weekday Ridership by Trip: Outbound

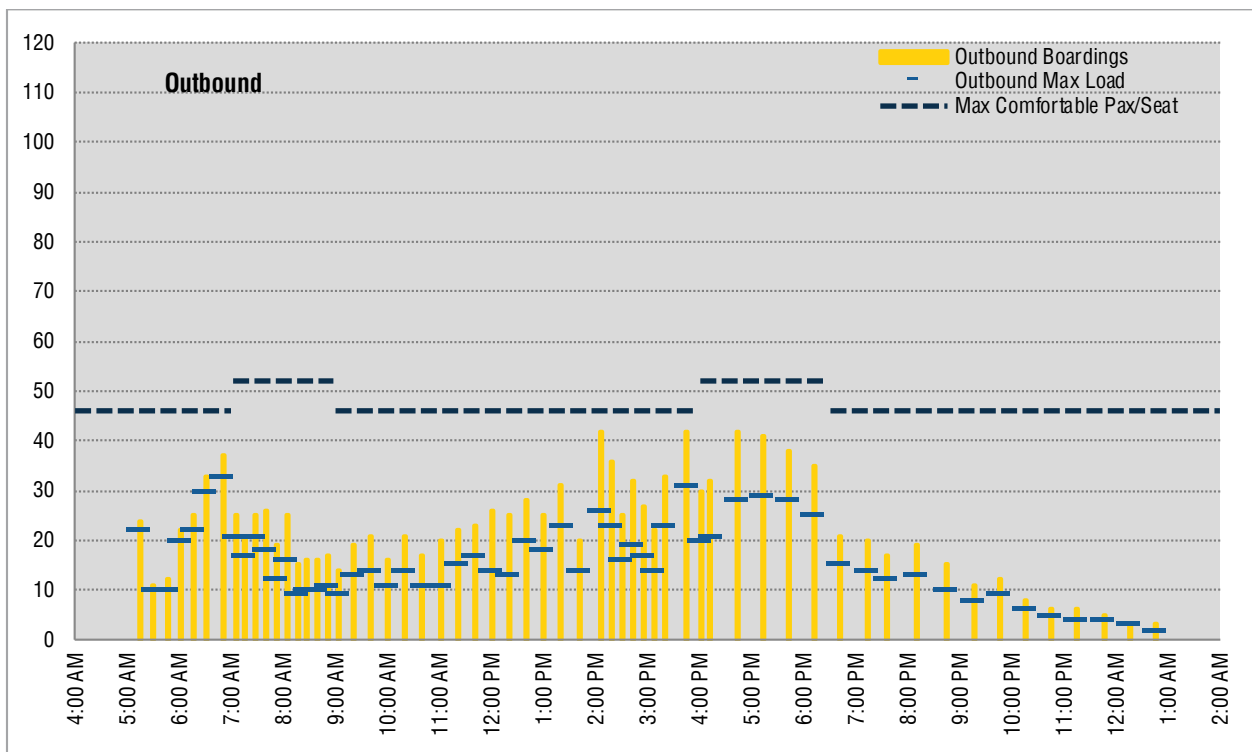


Figure 6 | Saturday Ridership by Trip: Inbound

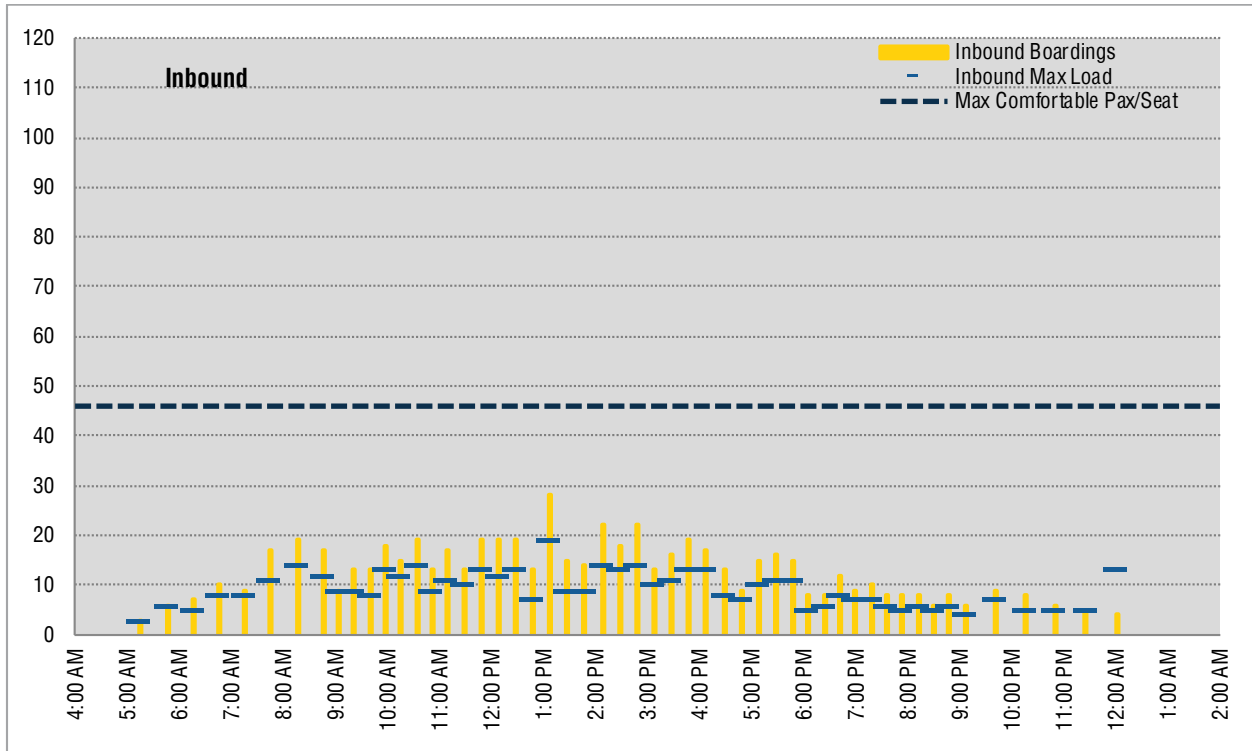


Figure 7 | Saturday Ridership by Trip: Outbound

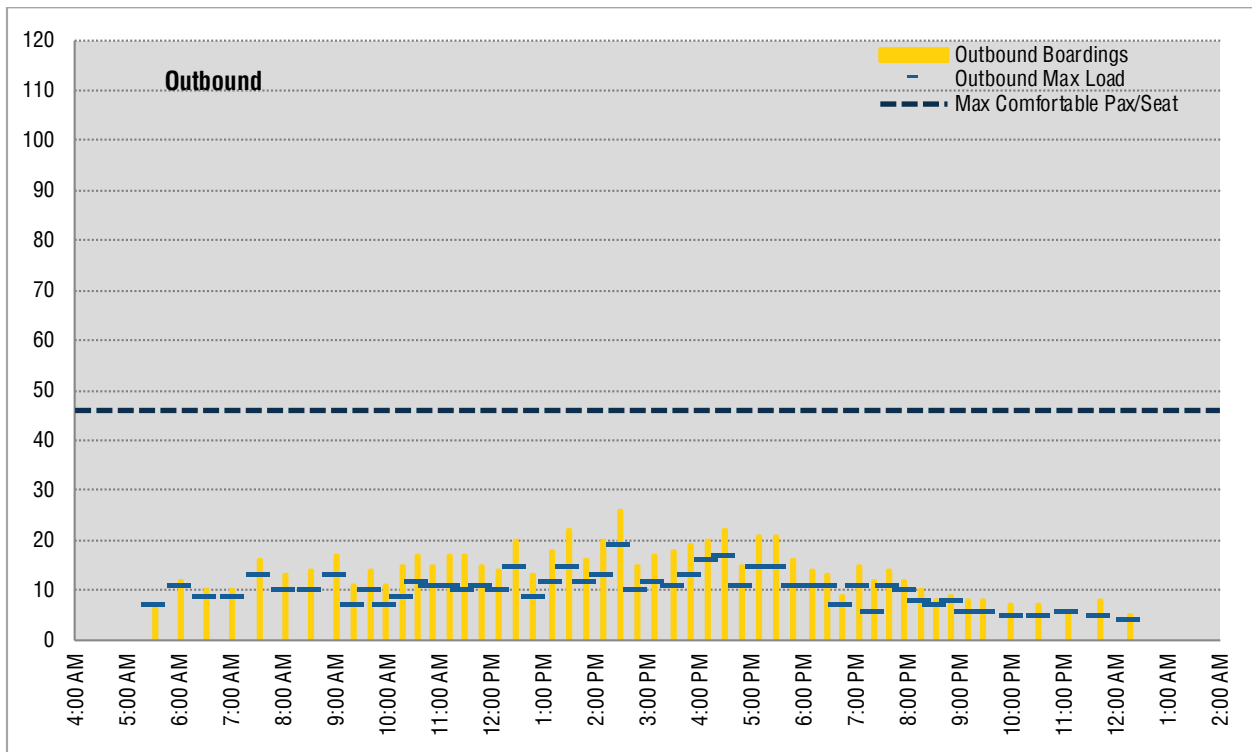


Figure 8 | Sunday Ridership by Trip: Inbound

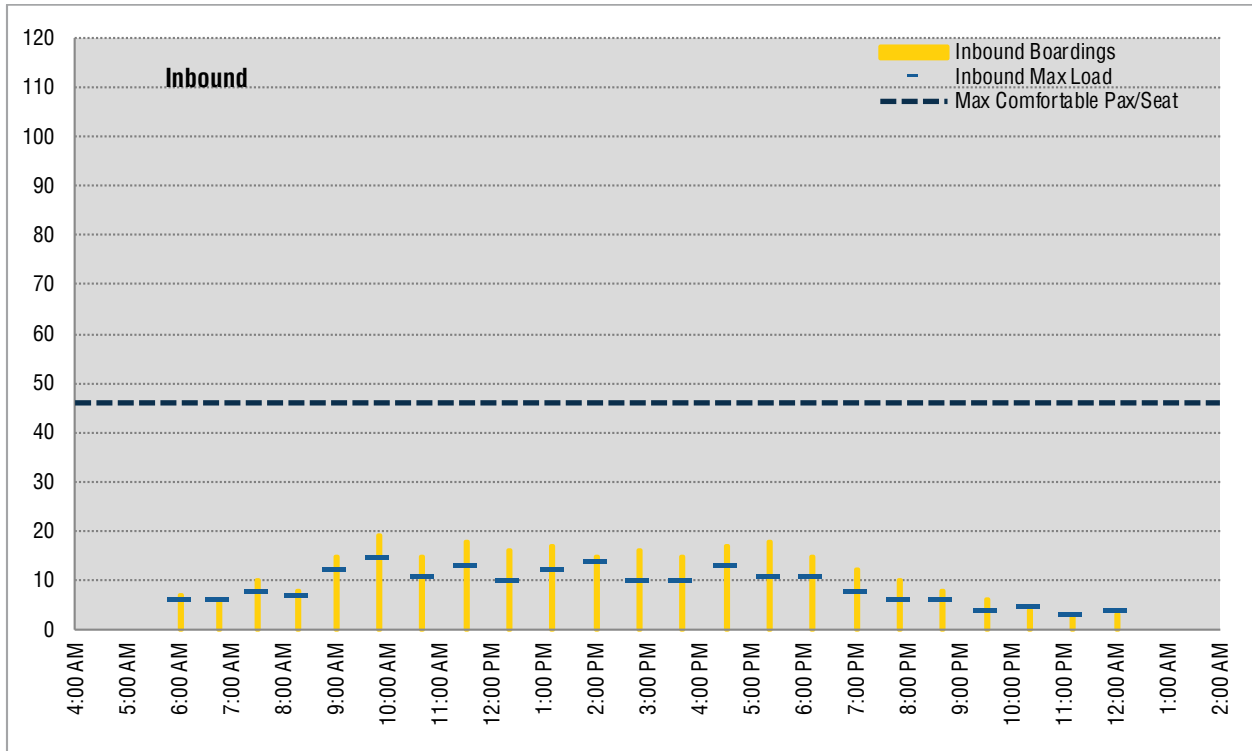
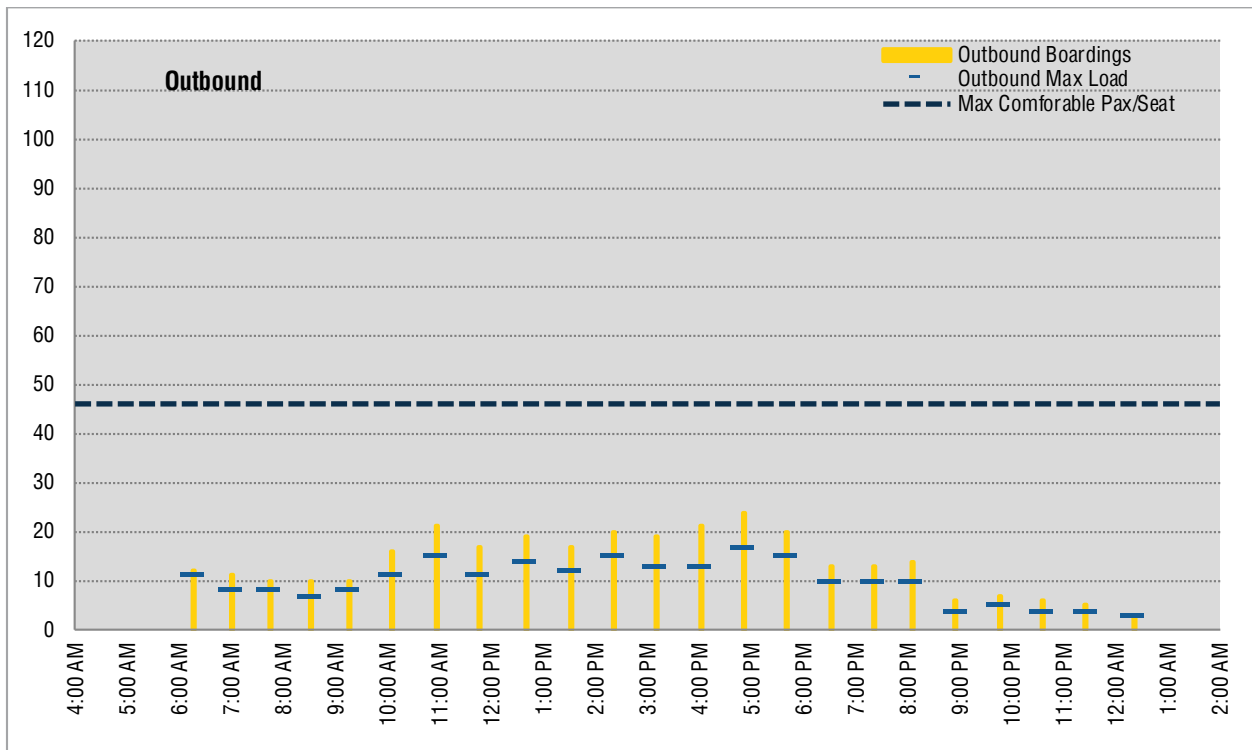


Figure 9 | Sunday Ridership by Trip: Outbound



Passenger Comfort

On Route 42, 99.8% 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	99.8%	99.9%	100%

Reliability and Speed

Reliability

Route 42's overall reliability is 63% on weekdays, 60% on Saturdays, and 71% on Sundays (see Table 4). Weekday and Saturday overall reliability levels are below the minimum standard of 70%, while Sunday reliability is slightly above this standard.

Table 4 | Reliability

SERVICE DAY	ORIGIN/MID-ROUTE ON-TIME PERFORMANCE	DESTINATION ON-TIME PERFORMANCE	OVERALL RELIABILITY	DROPPED TRIPS
Monday-Friday	63%	63%	63%	0.5 %
Saturday	60%	59%	60%	-
Sunday	70%	75%	71%	-

Running Times

Actual inbound running times are two to eight minutes longer than scheduled for most of the day, with the largest differences in the AM peak (see Figure 10). Outbound trips between 6:00 AM and 5:30 PM and after 6:30 PM run up to five minutes longer than scheduled (see Figure 11).

Stop Spacing

Route 42 has an average of eight stops per mile, which is above the MBTA's guideline of four to seven stops per mile. Stop consolidation would speed service, reduce the difference between actual running times and scheduled times, and improve on-time performance.

Figure 10 | Scheduled & Median Travel Time by Trip: Route 42 Inbound

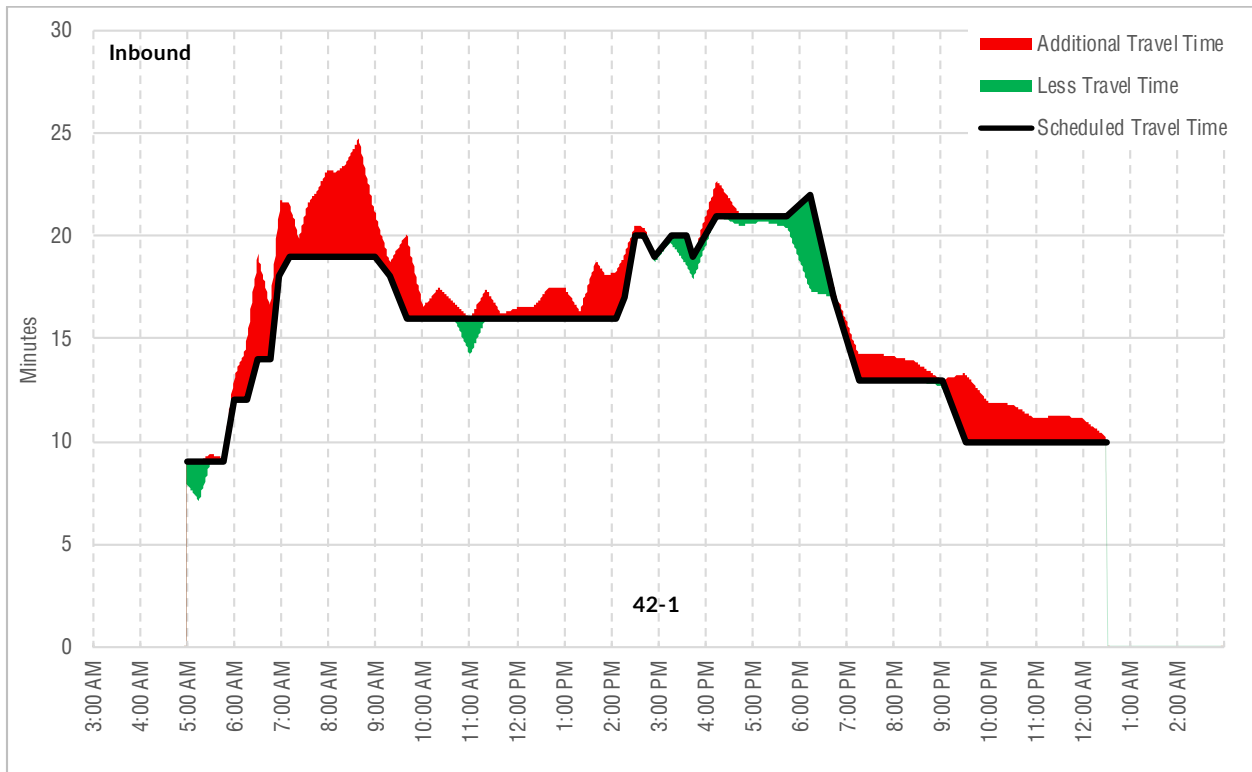
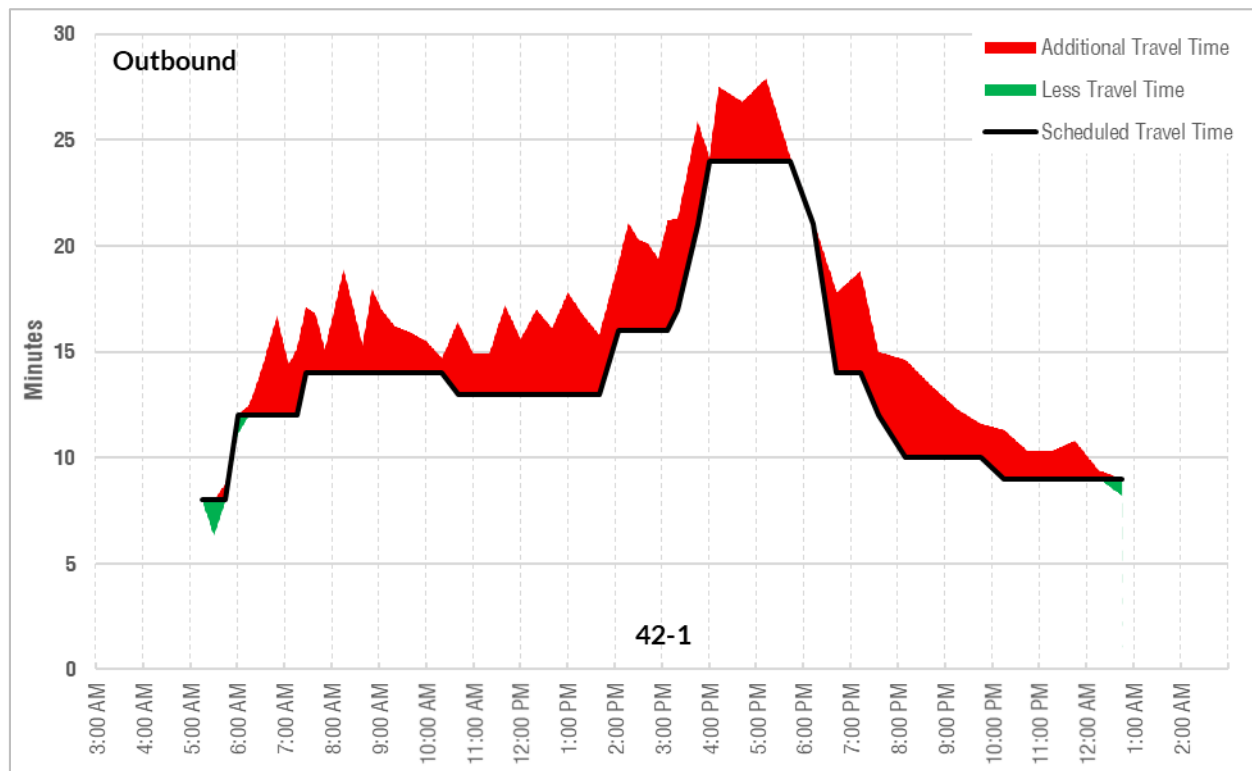


Figure 11 | Scheduled & Median Travel Time by Trip: Route 42 Outbound



Summary

Route 42 is a simple and straight-forward route that provides the only service along Washington Street between Forest Hills Station and Dudley Square. Its ridership is relatively modest, mostly because the Orange Line serves much of the same area. The route's only significant service issues are:

- Actual running times are longer than scheduled running times, which is the major cause of the route's below standard on-time performance.
- Stops are very closely spaced, which makes service slower than it could be and also contributes to on-time performance issues.

Service begins with frequent service, even though ridership per trip before 6:30 AM is low. Conversely, PM peak ridership is much higher, but most service only operates every 30 minutes.