

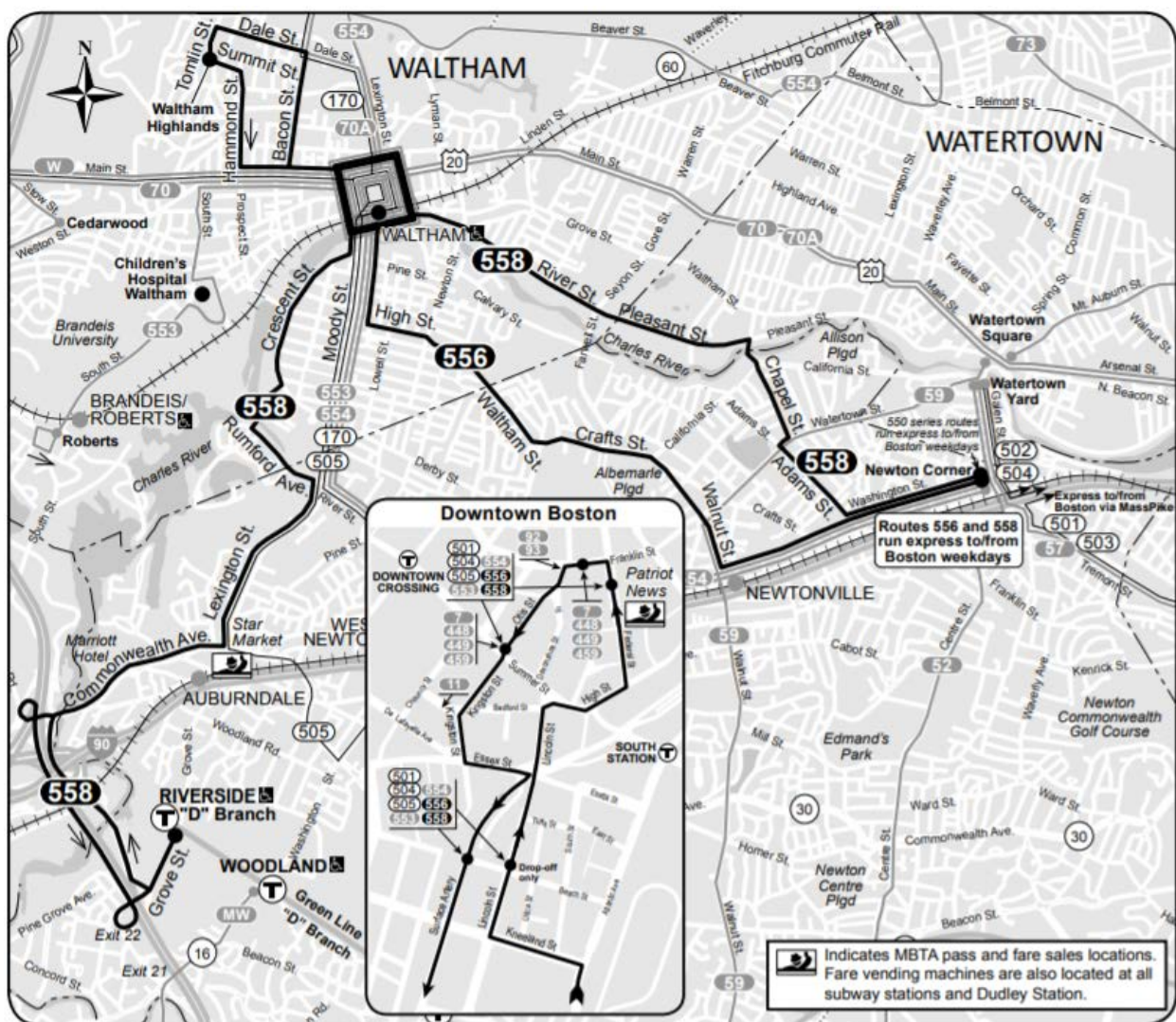
Route 558

Riverside – Downtown Boston

Route Overview

Route 558 is a commuter route that provides service between Riverside Station on the Green Line’s D Branch and Newton Corner via Waltham Center with some service continuing express to Downtown Boston (see Figure 1).

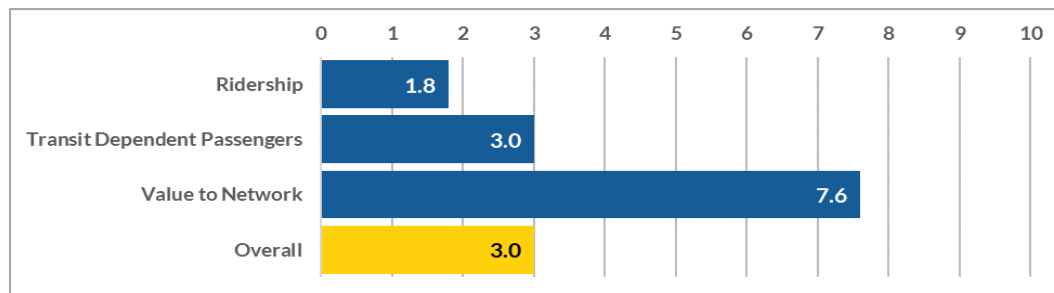
Figure 1 | Service Map



Network Importance

Route 558 has relatively low importance within the MBTA Network (see Figure 2). On a relative scale of 0 to 10, the routes rate 1.8 in terms of ridership, 3.0 in terms of transit dependent ridership, and 7.6 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). The combined routes' overall score, which gives a 70% weighting to overall ridership and a 15% weight to both other measures, is 3.0.

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



Service Overview

Schedule

Route 558 operates only on weekdays and provides irregular and infrequent service. In the inbound direction:

- AM inbound service departs from Riverside at 6:25 AM, 7:35 AM, 8:00 AM, and 9:05 AM.
- There is then a gap in service until 1:15 PM, when six trips operate approximately 70 minutes apart until the last departure at 7:12 PM. The first three of these trips operate to Newton Corner, and the last three operate to downtown Boston.

In the outbound direction:

- AM outbound service begins at 7:00 AM with service from Newton Corner.
- The next two trips depart from downtown Boston at 7:05 AM and 8:10 AM.
- There is then a gap in service until 12:15 PM, with a departure from downtown Boston.
- Between 1:50 PM and 4:50 PM, three trips depart from Newton Corner approximately 70 minutes apart.
- The last three trips depart from downtown Boston at 4:50 PM, 5:14 PM, and 6:00 PM.

Table 1 | Schedule Statistics

SERVICE DAY	SPAN OF SERVICE	FREQUENCY (RANGE)	FREQUENCY (AVERAGE)	DAILY TRIPS (INBOUND/OUTBOUND)
Monday-Friday	6:25 AM to 7:51 PM			10/10
Sunrise	-	-	-	-
Early AM	6:25 AM to 6:59 AM	1 trip	-	1/0
AM Peak	7:00 AM to 8:59 AM	25 - 70	45	2/3
Midday Base	9:00 AM to 9:53 AM 12:15 PM to 1:29 PM	65 - 250	160	2/1
Midday School	1:30 PM to 3:59 PM	70 - 73	72	2/2
PM Peak	4:00 PM to 6:29 PM	72	72	2/4
Evening	6:30 PM to 7:51 PM	1 trip	-	1/0
Late Evening	-	-	-	-
Night	-	-	-	-
Saturday	-	-	-	-
Sunday	-	-	-	-

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

Route 558 meets the MBTA's span of service and frequency standards.

Service Patterns

Pattern 558.0 generally runs peak period trips, operating the full length of the route between Riverside Station and downtown Boston.

Pattern 558.7 generally runs trips on the shoulders of the peak and early afternoon operate between Riverside Station and Newton Corner.

However, there are exceptions, with the first AM peak inbound trip operating only to Newton Corner, and one midday round trip operating to and from downtown Boston.

Table 2 | Service Patterns

PATTERN	ORIGIN	DESTINATION	UNIQUE FEATURE	TRIPS per WKD	TRIPS per SAT	TRIPS per SUN
INBOUND				10	-	-
558.0	Riverside Station	Downtown Boston	Via Waltham Commuter Rail, and Newton Corner	6	-	-
558.7	Riverside Station	Newton Corner	Via Auburndale and Waltham Commuter Rail	4	-	-
OUTBOUND				10	-	-
558.0	Downtown Boston	Riverside Station	Via Newton Corner, Waltham Commuter Rail, and Auburndale	6	-	-
558.7	Newton Corner	Riverside Station	Via Waltham Commuter Rail and Auburndale	4	-	-

Ridership

Route 558 carries 400 passengers per weekday, which is average for commuter routes. The large majority of ridership is on the peak period trips, and midday ridership is low.

Ridership by Stop

Route 558's highest ridership stops are at Riverside Station on the Green Line D Branch, in Waltham Center, in the employment area along River and Pleasant Streets east of Central Square in Waltham, in the commercial district along Watertown Street in Newton, in Newton Center, and in Downtown Boston.

- 50 passengers board at Riverside Station. Many of these boardings are likely transfers from outbound Green Line service by passengers making trips from Newton and other locations along the Green Line. These passengers account for nearly 25% of inbound ridership.
- Ridership at the 12 stops between Riverside Station and Waltham's Central Square is low, at 20 total boardings and 20 alightings. Five of the 12 stops have no passenger activity.
- Fewer than 20 passengers board and 10 alight in Waltham Center at Waltham Station.
- 40 passengers board and 20 alight at the six stops along Pleasant Street between Seyon Street and Bridge Street.
- 20 passengers board in the commercial district in Newton near Adams Street and Watertown Street.
- 20 passenger's board and 30 alight at Newton Corner. All of the alightings are on trips that terminate at Newton Corner.
- 110 passengers, or over half of all inbound riders, alight at stops in downtown Boston.

Ridership by Trip

Ridership is highest inbound in the AM peak and outbound in the PM peak. There is also a smaller reverse direction peak driven by passengers using Route 588 outbound to the Green Line in the AM and inbound from the Green Line in the PM. On inbound trips (see Figure 4):

- The first trip at 6:25 AM carries only 16 passengers.
- The trips at 7:35 AM and 8:00 AM carry 46 and 37 passengers, respectively.
- The four trips between 9:05 AM and 3:35 PM carry only eight to 14 passengers.
- The trips at 4:48 PM and 6:05 PM carry 27 and 15 passengers.
- The last trip at 7:12 PM carries on four passengers.

Figure 3 | Weekday Inbound Ridership by Stop Map

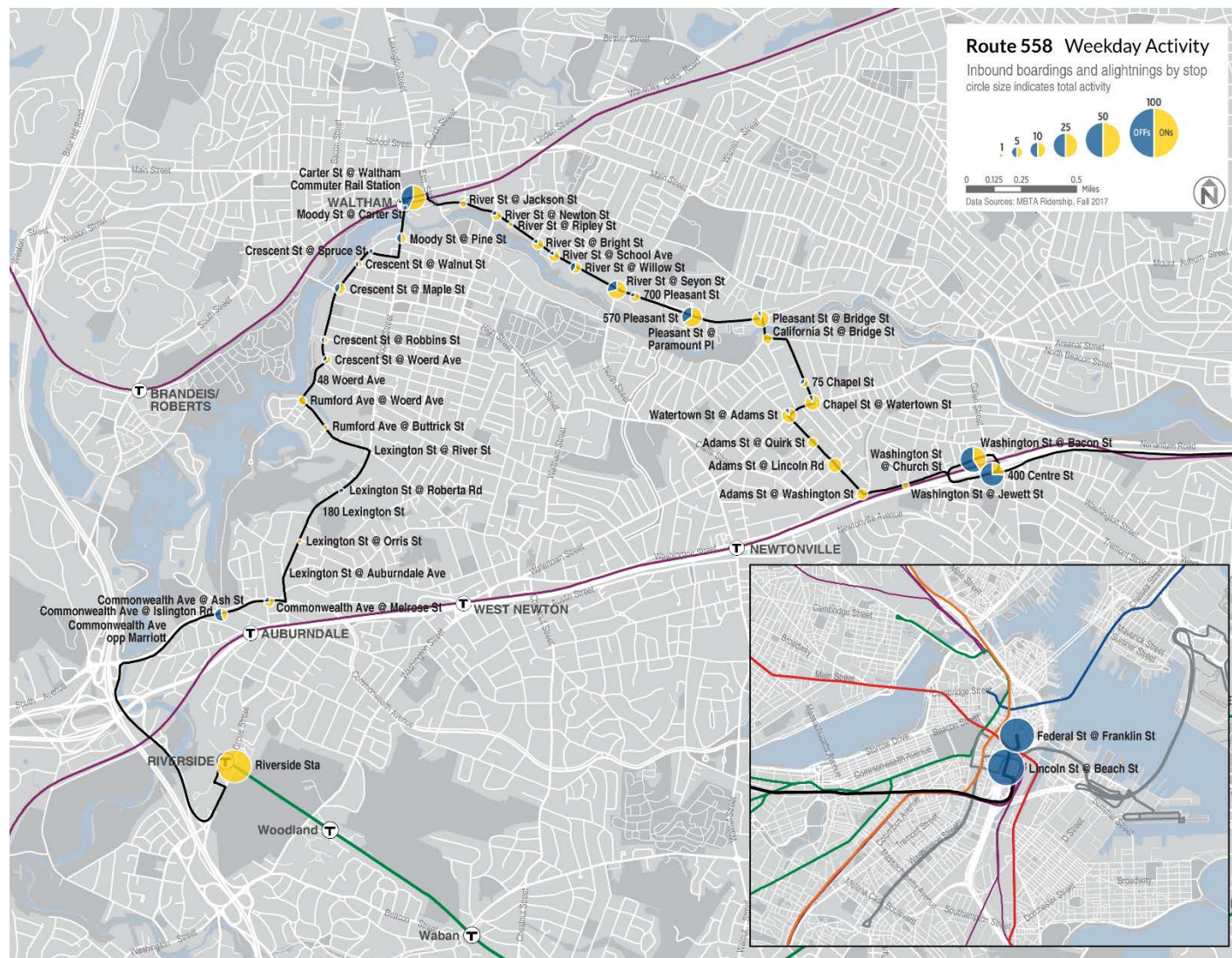


Figure 4 | Weekday Ridership by Trip: Inbound

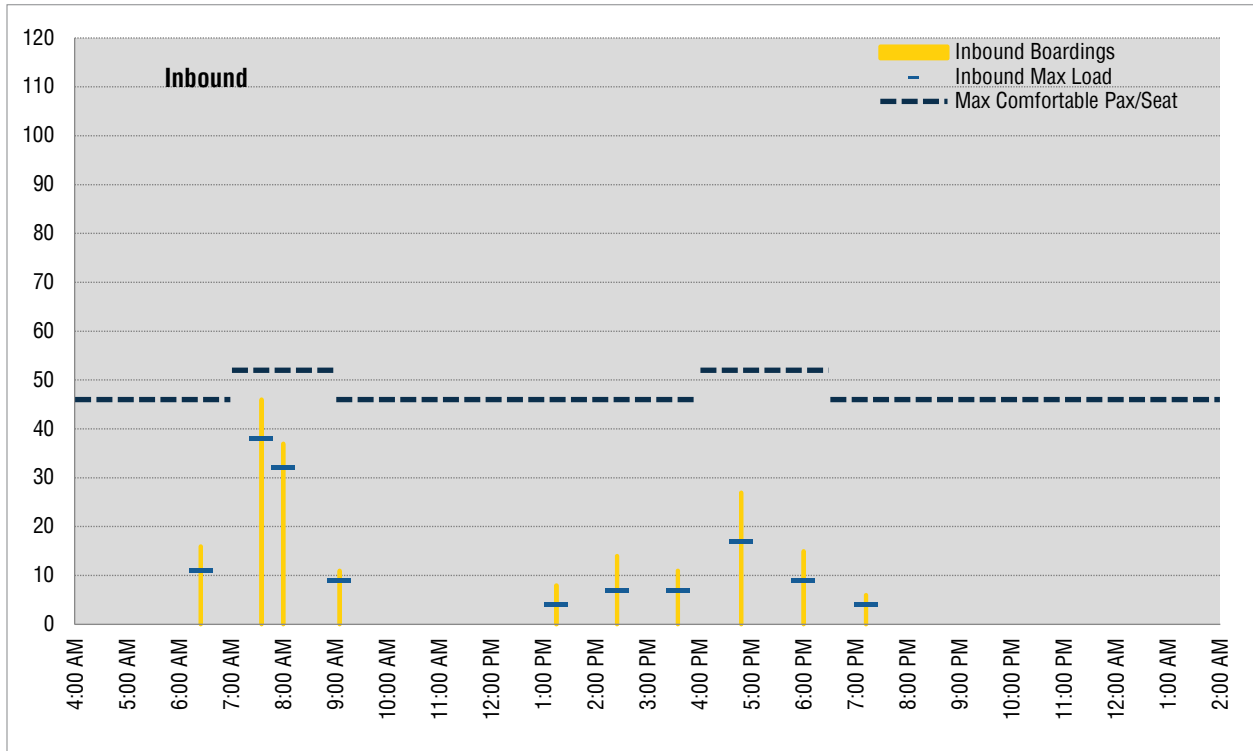
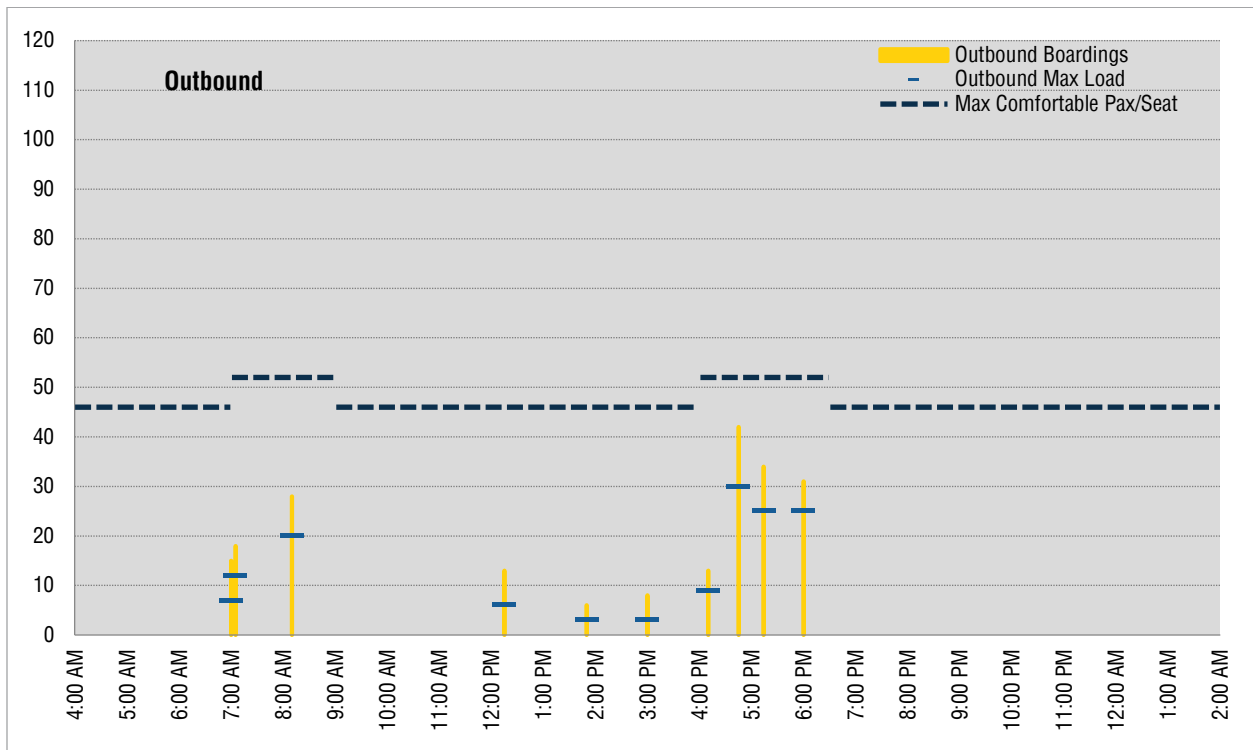


Figure 5 | Weekday Ridership by Trip: Outbound



On outbound trips (see Figure 5):

- The first trip from Newton Corner at 7:00 AM carries 15 passengers and the first outbound trip from downtown Boston carries 18 passengers.
- The outbound trip at 8:10 AM carries 28 passengers, which is the highest ridership trip in the AM.
- The four outbound trips between 12:15 and 4:15 PM carry three to 13 passengers.
- The three PM peak trips carry 31 to 42 passengers.

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 558, 100% of passenger minutes are in comfortable conditions, which is below the minimum standard (Table 4).

Table 3 | Passenger Time Spent Traveling in Comfortable Conditions

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

Reliability and Speed

Reliability

The Route 558’s on-time performance is very poor, with an overall reliability rate of 52%. As described below, most of the reliability problems are on outbound, when actual running times exceed scheduled times.

Table 4 | Reliability

SERVICE DAY	ORIGIN/MID-ROUTE ON-TIME PERFORMANCE	DESTINATION ON-TIME PERFORMANCE	OVERALL RELIABILITY	DROPPED TRIPS
Monday-Friday	51%	58%	52%	0%
Saturday	-	-	-	-
Sunday	-	-	-	-

Running Times

Inbound, AM trips operate close to schedule, while PM trips operate four to seven minutes behind schedule (see Figure 6). Outbound trips run late throughout the day, with actual running times averaging five minutes longer than scheduled times (see Figure 7).

Figure 6 | Scheduled & Median Travel Time by Trip: Route 558 Inbound

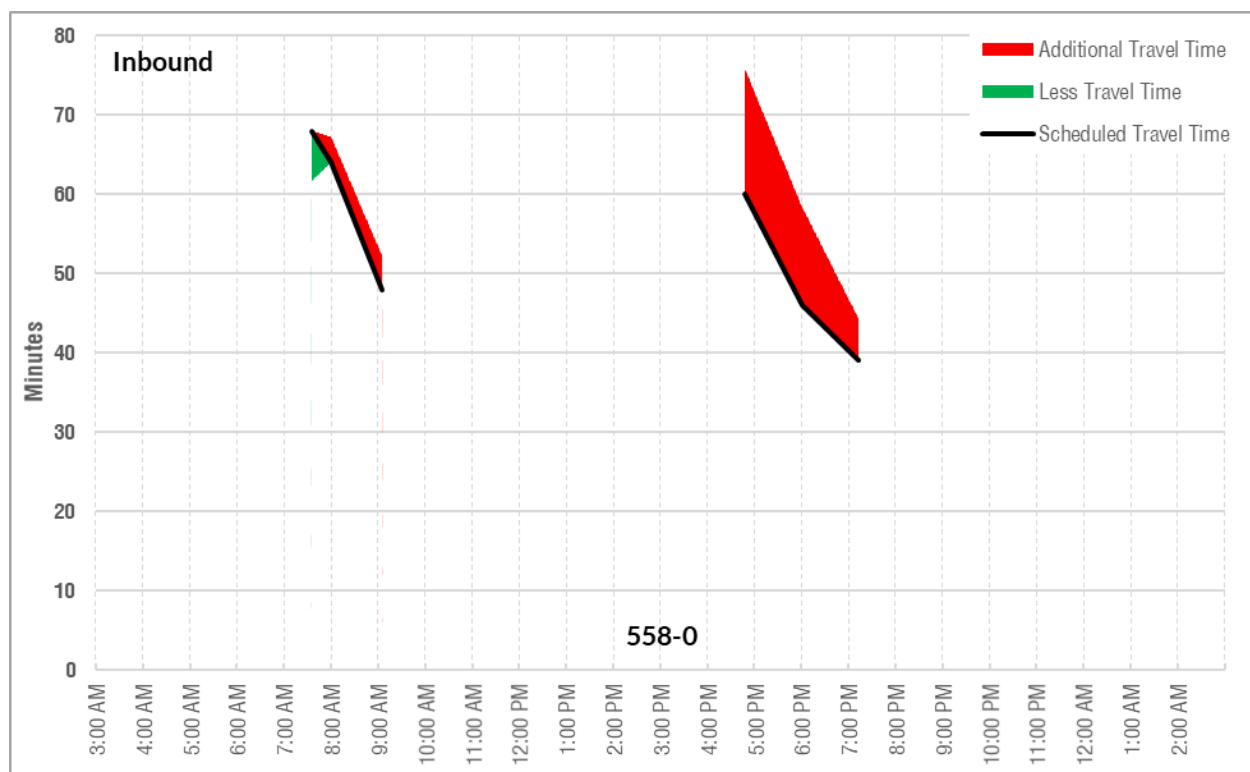
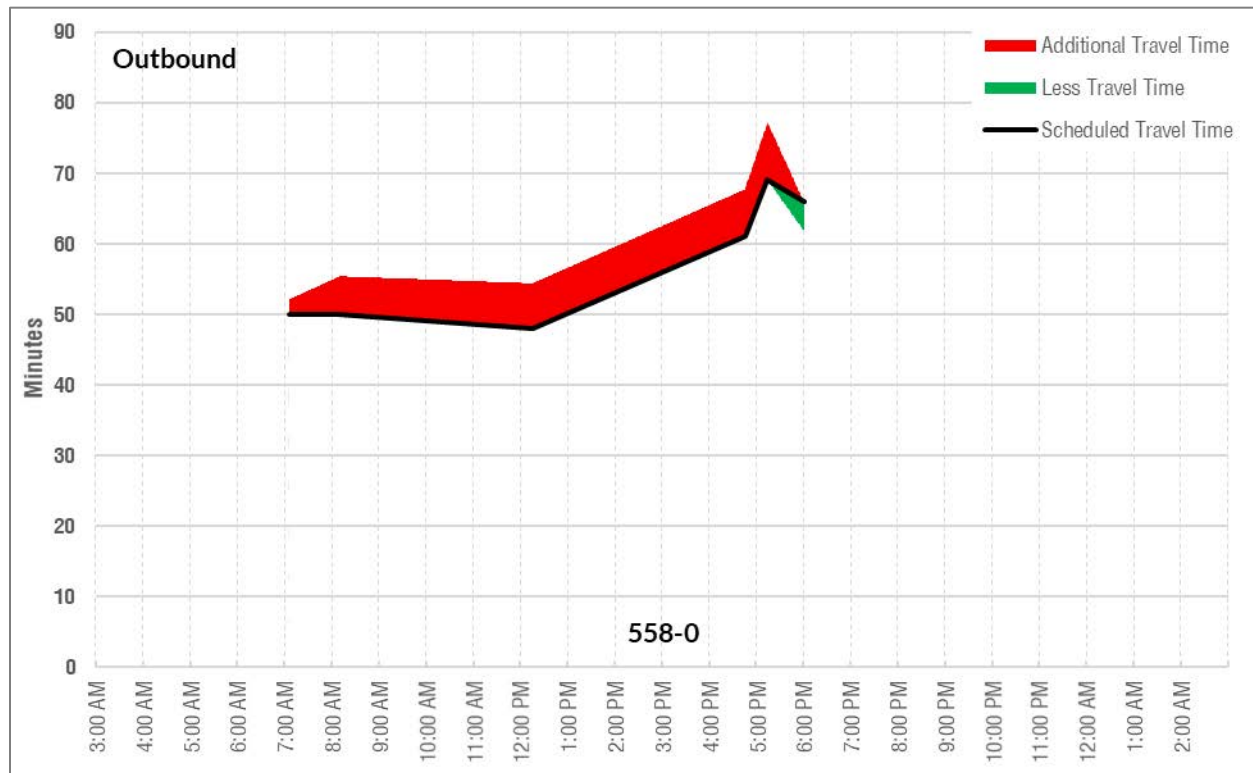


Figure 7 | Scheduled & Median Travel Time by Trip: Route 558 Outbound



Stop Spacing

Stop spacing along the Route 558 varies. While most portions of the route have a stop spacing of four to five stops per mile, several segments of the route have stops that are closer than 500 feet. For example, 75 feet separate the outbound stops at 161 Lexington Street and 181 Lexington Street, and the River Street corridor has an average stop spacing of 500 feet. In addition, seven stops have no activity. Stop consolidation in these areas could improve travel times.

Summary

While Route 558 is classified as a commuter route, it is more accurately a hybrid of a commuter route and a local route. Its predominant peak period service between Riverside Station and downtown Boston provides both commuter and local service, while its midday service between Riverside Station and Newton Corner provides mostly local service. Major service issues are related to its inconvenient schedule which spaces many trips 70 minutes apart.