

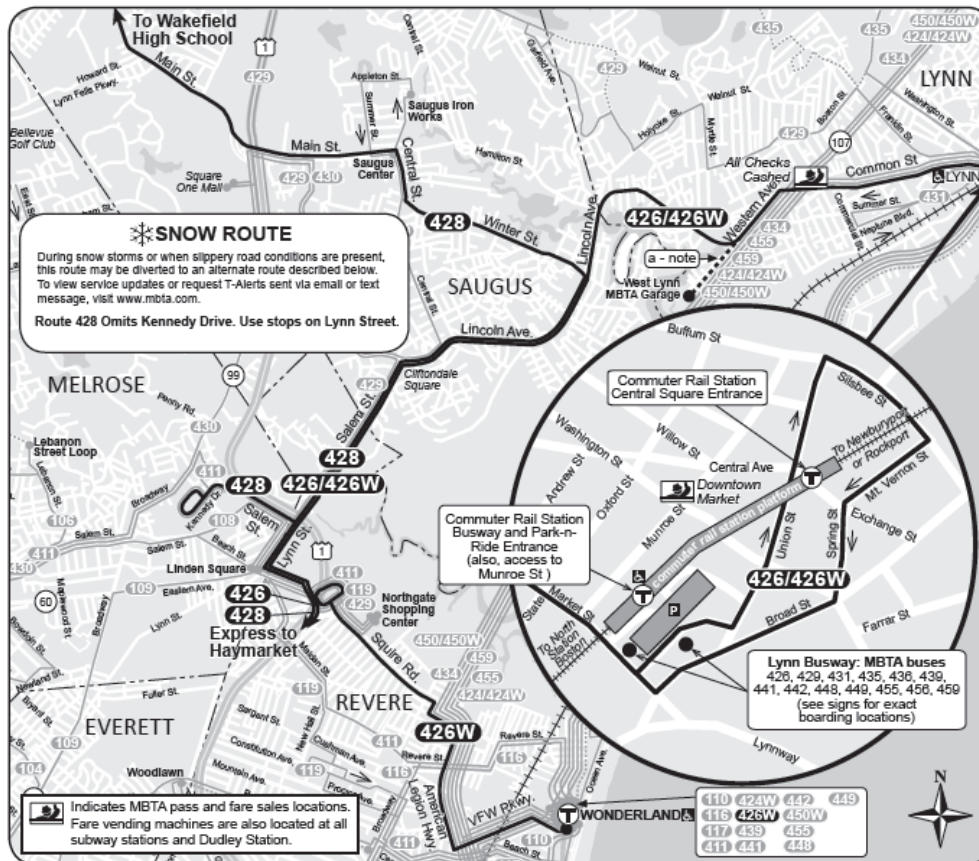
Route 428

Oaklandvale – Haymarket Station via Granada Highlands

Route Overview

Route 428 Oaklandvale – Haymarket Station via Granada Highlands is a Commuter route serving mostly residential areas in Wakefield and Saugus, between Wakefield High School on Farm Street in Wakefield and the Stop & Shop on Squire Road in Saugus, before going express on Northeast Expressway to its destination at Haymarket station. Route 428 features a short but important deviation to Altitude Apartments in Malden.

Figure 1 | Service Map

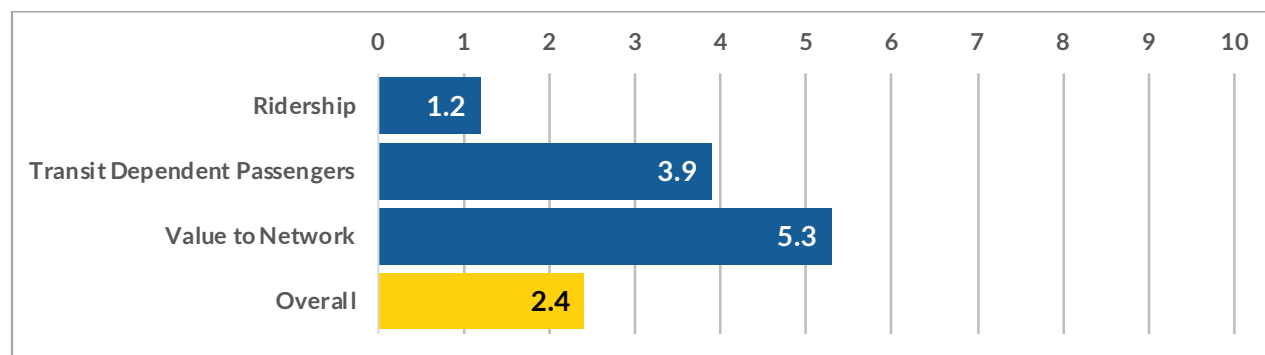


Network Importance

Route 428 has low importance within the overall system (see Figure 2). On a scale of 0 to 10, the route rates 1.2 in terms of ridership, 3.9 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% weighting to overall ridership and a 15% weight to both other measures, is 2.4.

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



Service Patterns

Schedule

Route 428 operates three trips at 40-minute intervals between 6:40 AM to 8:00 AM, and three trips at 35-minute intervals between 4:50 PM to 6:00 PM. (See Table 1). Route 428 meets the minimum span of service and frequency standards for commuter services.

Table 1 | Schedule Statistics

SERVICEDAY	SPAN OF SERVICE	FREQUENCY (RANGE)	FREQUENCY (AVERAGE)	DAILY TRIPS (INBOUND/OUTBOUND)
Monday-Friday	6:40 AM to 8:00 AM 4:40 PM to 6:00 PM			3/3
Sunrise	-	-	-	-
Early AM	6:40 AM to 6:59 AM	1 trip	-	1/0
AM Peak	7:00 AM to 8:00 AM	40 – 40	40	2/0
Midday Base	-	-	-	-
Midday School	-	-	-	-
PM Peak	4:40 PM to 6:00 PM	30 – 40	35	0/3
Evening	-	-	-	-
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.

Service Patterns

Route 428 operates only one service pattern on all days of the week (See Table 2).

- All inbound trips operate the full length of the route.
- All outbound trips operate the full length of the route.

Table 2 | Service Patterns

PATTERN	ORIGIN	DESTINATION	UNIQUE FEATURE	TRIPS PER WKD	TRIPS PER SAT	TRIPS PER SUN
INBOUND				3	-	-
428.0	Farm Street at Nahant Street - Wakefield	Haymarket Station	Via Altitude Apartments	3	-	-
OUTBOUND				3	-	-
428.0	Haymarket Station	Farm Street at Nahant Street - Wakefield	Via Altitude Apartments	3	-	-

Ridership

Route 428 serves 173 riders on weekdays, low by comparison to other MBTA commuter routes. The route does not operate on weekends.

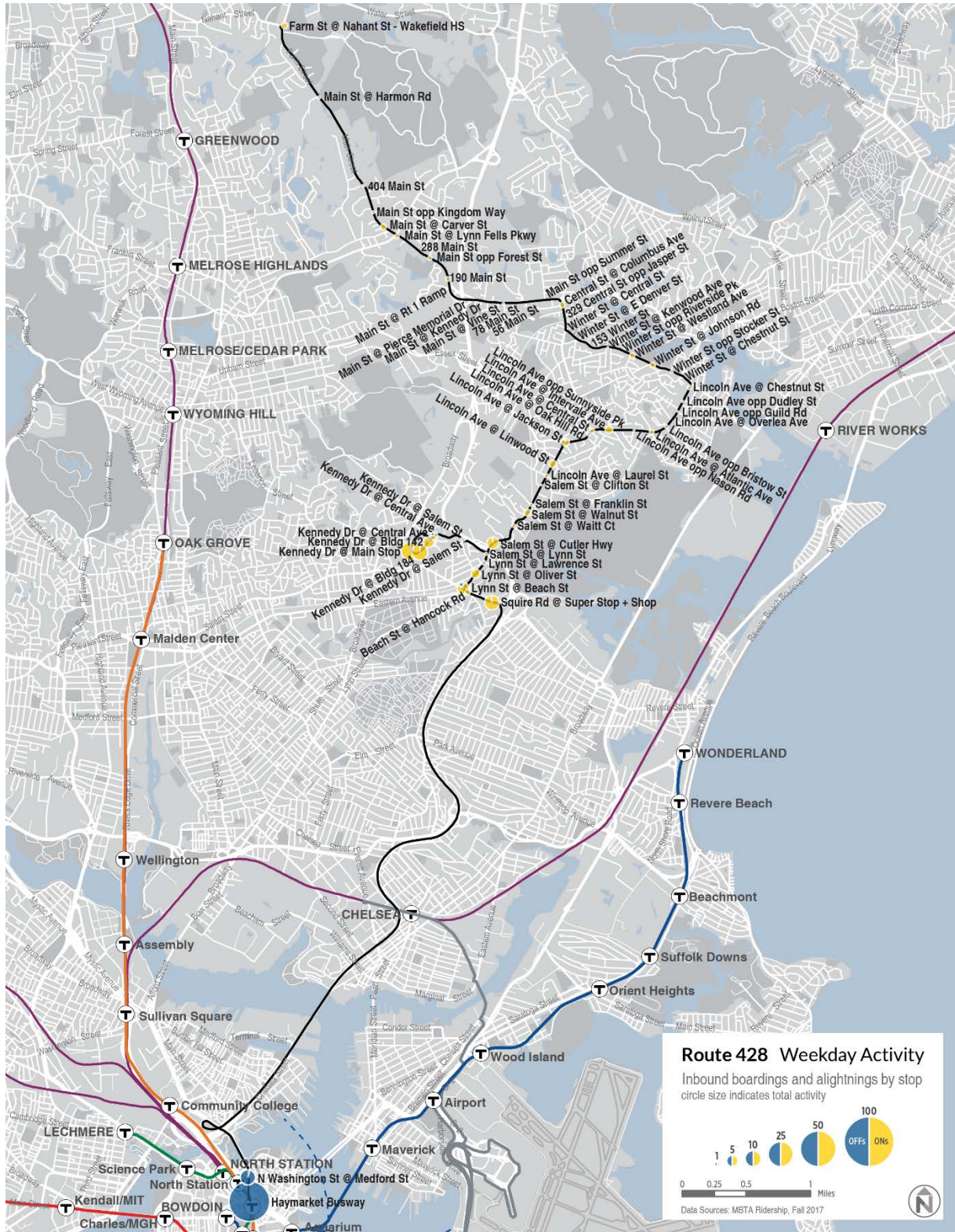
Ridership by Stop

On weekdays, Route 428 has low ridership at all stops along the route. The only higher activity stop on Route 428 is Haymarket Station, where nearly all passengers disembark. There is very little turnover along the route. Route 428 stops generate the following average ridership on weekdays heading inbound (Figure 3):

- 10 boardings at 27 stops between Wakefield High School and Winter Street/Chestnut Street
- 19 boardings at 19 stops between Lincoln Avenue/Chestnut Street and Salem Street/Cutler Highway
- 32 boardings at one alighting at the seven stops that make up the Kennedy Drive extension that primarily serves the Altitude Apartments complex in Malden
- 19 boardings and one alighting at the six stops between Salem Street/Lynn Street and the Stop & Shop on Squire Road (the last stops before going express)
- Nine alightings at N Washington Street/Medford Street
- 68 alightings at Haymarket

Outbound ridership patterns match the reverse of inbound ridership, with activity highest at Haymarket and along the Kennedy Drive extension that primarily serves the Altitude Apartments complex in Malden

Figure 3 | Weekday Inbound Ridership by Stop Map



Ridership by Trip

On weekdays, Route 428's runs three inbound trips in the morning and three outbound trips in the evening all serve moderate ridership:

- Inbound, the first trip of the day serves 37 passengers with a max load of 35 passengers. The successive trips decrease by about 10 passengers per trip, and serve 26 and 18 passengers, respectively. (Figure 4)
- Outbound, the first two trips serve 34 passengers. The last trip of the day serves 26 passengers. (Figure 5)

Figure 4 | Weekday Ridership by Trip: Inbound

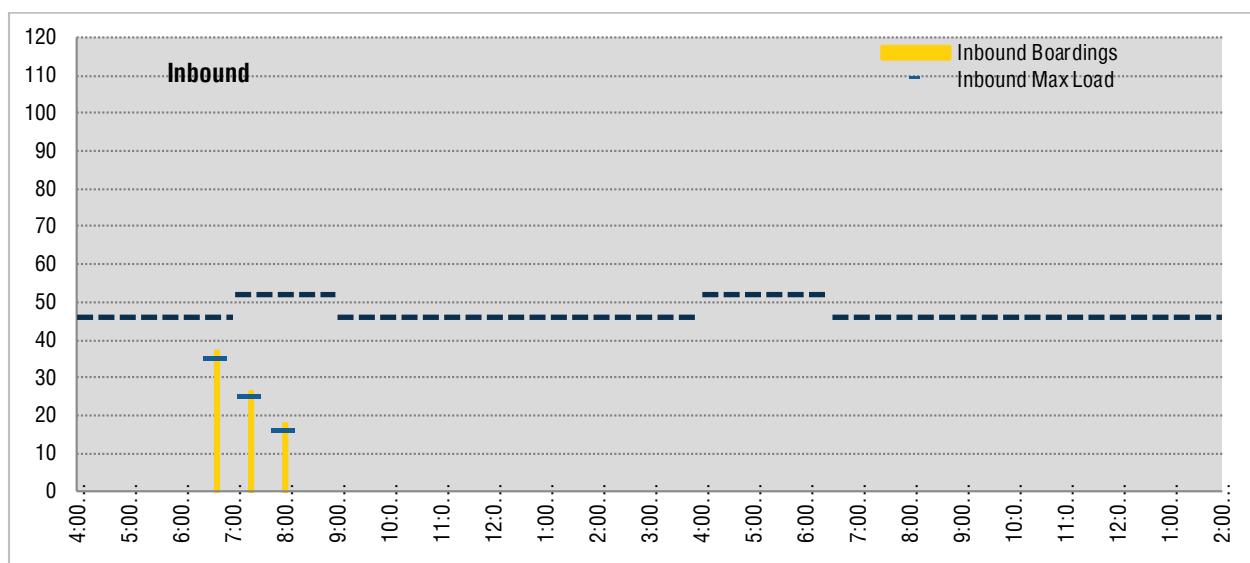
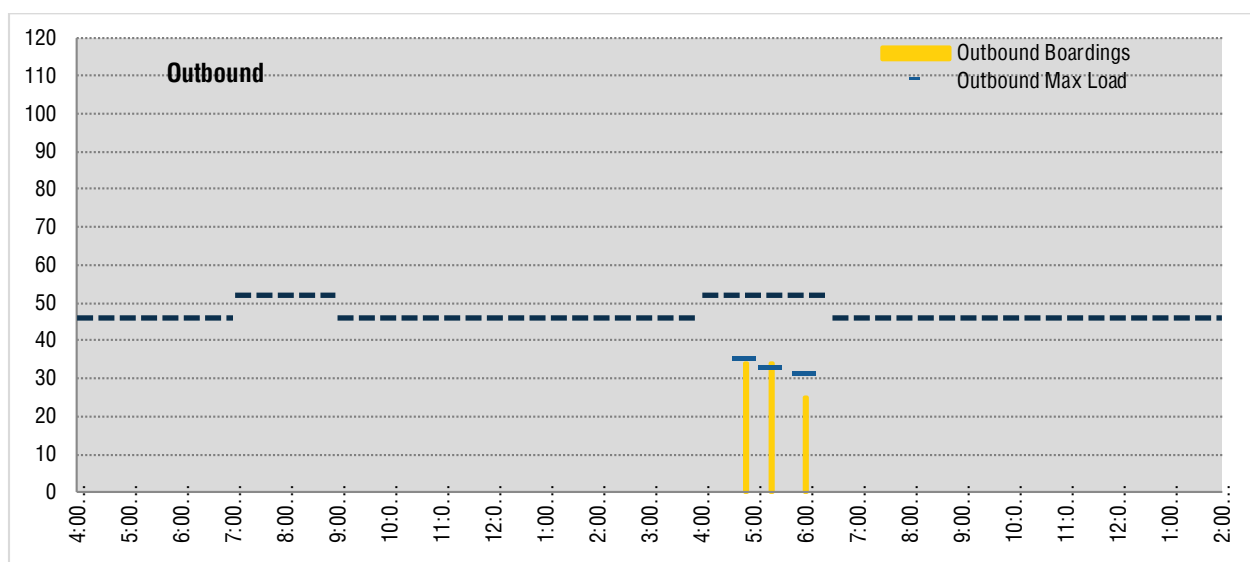


Figure 5 | Weekday Ridership by Trip: Outbound



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 428, 98.6% of passenger minutes are in comfortable conditions, which exceeds the minimum standard (see Table 4),

Table 3 | Passenger Time Spent Traveling in Comfortable Conditions

	WEEKDAYS	SATURDAYS	SUNDAYS
Minimum Standard	92%	92%	92%
Target	96%	96%	96%
Actual	98.6%	-	-

Reliability and Speed

Reliability

Route 428 leaves on time 46% of the time and arrives on time 53% of the time on weekdays. At a 46% overall reliability rate, it is among the least reliable services of all MBTA routes, and well below the standard set by the MBTA. Route 428 does not experience any dropped trips. (See Table 5)

Table 4 | Reliability

SERVICE DAY	ORIGIN/MID-ROUTE ON-TIME PERFORMANCE	DESTINATION ON-TIME PERFORMANCE	OVERALL RELIABILITY	DROPPED TRIPS
Monday-Friday	45%	53%	46%	0%
Saturday	-	-	-	-
Sunday	-	-	-	-

Running Times

In the inbound direction, each of Route 428's trips exceed scheduled running times by about 2-8 minutes. In the outbound direction, each of Route 428's trips run ahead of schedule by about 2-14 minutes. (See Figure 6 and Figure 7)

Figure 6 | Scheduled & Median Travel Time by Trip: Route 42: Inbound

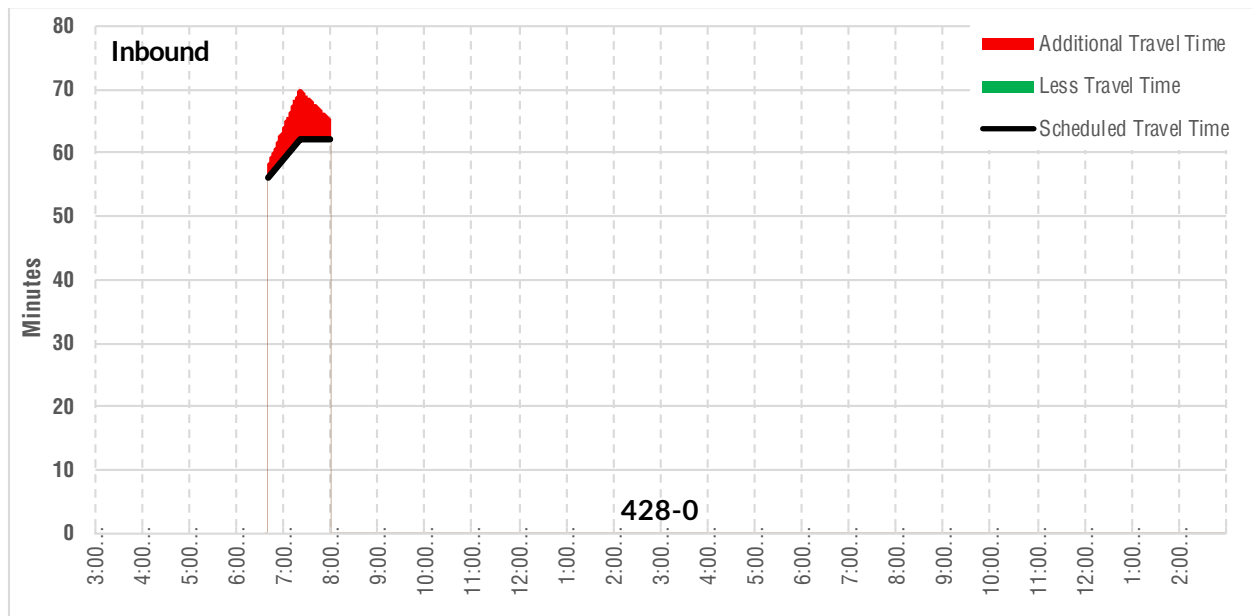
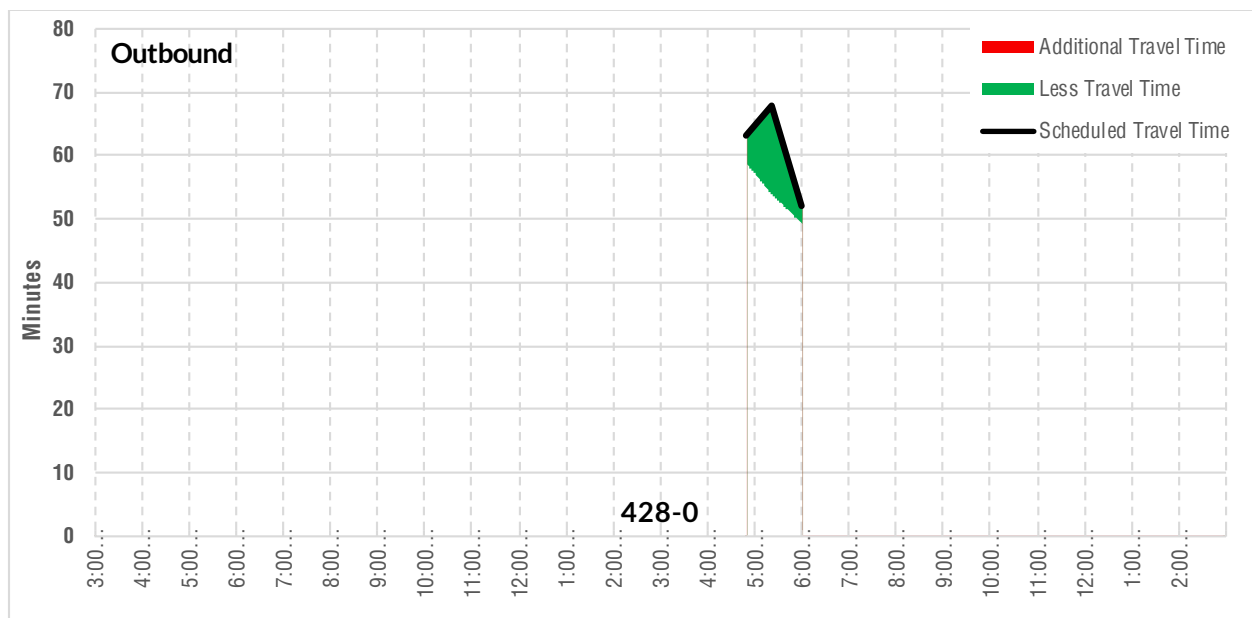


Figure 7 | Scheduled & Median Travel Time by Trip: Route 428 Outbound



Stop Spacing

Prior to going express, the average stop spacing along Route 428 is about 800 feet, which is an appropriate distance according to MBTA's standard of about 800-1300 feet between stops. However, some stops, particularly in low-ridership areas, are much closer together, which indicates that some stops could be discontinued.

Summary

The primary strengths of Route 428 are its partial express service, its coverage of an area lacking other transit options, and its direct connection to downtown Boston. The key challenges of Route 428 are its low on-time performance, its relatively high number of stops along its core service area, its limited service frequencies, and overall low ridership. Additionally, a significant portion of the route is shared with the Route 426, limiting the potential ridership market for the Route 428.